HANDBOOK OF TERMINOLOGY

VOLUME 2

Terminology in the Arab world

EDITED BY

ABIED ALSULAIMAN

AHMED ALLAITHY

JOHN BENJAMINS PUBLISHING COMPANY

Handbook of Terminology, Volume 2
Terminology in the Arab world

Handbook of Terminology

ISSN 2352-1821

The *Handbook of Terminology* (*HOT*) aims at disseminating knowledge about terminology (management) and at providing easy access to a large range of topics, traditions, best practices, and methods to a broad audience: students, researchers, professionals and lecturers in Terminology, scholars and experts from other disciplines, such as linguistics, life sciences, metrology, chemistry, law studies, machine engineering, and any other expert domain. In addition, the *HOT* addresses experts in (multilingual) terminology, translation, interpreting, localization, editing, etc., such as communication specialists, translators, scientists, editors, public servants, brand managers, engineers, and (intercultural) organization specialists.

All chapters are written by specialists in the different subfields and are peer-reviewed.

Volume 2

Handbook of Terminology. Terminology in the Arab world
Edited by Abied Alsulaiman and Ahmed Allaithy

Handbook of Terminology

Volume 2

Terminology in the Arab world

Edited by

Abied Alsulaiman
KU Leuven

Ahmed Allaithy
American University of Sharjah

Linguistic Editor

Kara Warburton

Assistant Editor

Karima Tegnougui
KU Leuven

John Benjamins Publishing Company
Amsterdam / Philadelphia

DOI 10.1075/hot.2

Cataloging-in-Publication Data available from Library of Congress:
LCCN 2014024922

ISBN 978 90 272 0198 0 (HB)
ISBN 978 90 272 6306 3 (E-BOOK)

John Benjamins Publishing Company · https://benjamins.com

Table of contents

Introduction

Ahmed Allaithy & Abied Alsulaiman

The Prophet Muhammad's immigration from Mecca to Medina in 622 CE marks the beginning of a decisive era in the history of mankind. Within a few decades, the rising Muslim nation managed to march from Arabia to almost every corner of the known world at the time. The Arabs, who had virtually no contribution to human civilization for centuries before the advent of Islam (c. 609 CE), successfully embarked on an unprecedented journey that transformed the entire world in almost all fields. For centuries to come, the language of knowledge and science was no other than Arabic. No work of any value was produced in any other language. Centers for learning and enlightenment spread across the Islamic empire promoting both Islam and scholarship in general. The scholarly contribution of the Islamic empire was indeed unparalleled in terms of content, depth, value and relevance for the advancement of human civilization.

The achievements of that Arab-Islamic empire had taken the world by surprise especially since the Arabs of the pre-Islamic era were generally an illiterate nation. Their intellectual contribution during that period of *Jāhiliyyah* (c. 500 BCE – 599 CE) was limited to poetry and rudimentary rhymed prose narratives, with localized impact confined to Arabia only. It is true that they were the unchallenged masters of eloquence, but only within the confines of their Arabic language and the borders of Arabia. Their talents were kept local until Islam overtook the world.

It is of great importance to note that the first revealed Āyah (verse) of the Qur'an to the illiterate Prophet Muhammad was a command to 'read' and acknowledge the Lord, God, to be the Creator of mankind. (Q96:1). The connection between the earthly mundane and the heavenly divine is then established for good. "The reader of the Qur'an is invited and indeed urged in many places to ponder upon everything around them, to try to understand and appreciate God's creation." (Allaithy, 2014, p. 1). Reading or reciting could only be achieved through learning. The divine command to 'read' clearly indicated that 'learning' was a key to understanding the universe and its Creator. Indeed, Qur'anic Ayahs were revealed covering all aspects of life and carving a straight path for success in this world and the afterlife. Not only did the scholars and scientists of old benefit from the Qur'anic references to advance in their fields, but many sciences developed as direct result of the revelation of the Qur'an.

Encouraging literacy and eradicating illiteracy were on the top of the list of the priority tasks shouldered by the Prophet Muhammad. In Ramadan, 2 AH, the early

https://doi.org/10.1075/hot.2.01all

Muslims won their first armed fight, the battle of Badr, against the Meccans and captured 70 of them. Later on, those captives were allowed to ransom themselves if they wished to be set free. Those of limited or no financial means but were literate could ransom themselves through teaching ten Muslims how to read and write (Ibn Ḥanbal, 1993, v.3, no. 2216, p.20). This was a step of phenomenal magnitude in terms of highlighting the importance of learning.

The teachings of the Prophet Muhammad and the efforts by early Muslims accelerated learning so quickly that within seven years of the Qur'an's compilation under the Caliph ʿUtmān ibn ʿAffān in 30 AH, as reported by al-Masʾūdi, hundreds of copies had been produced and came into use by the Muslim population (Allaithy, 2005, p. 54). With the expansion of the Islamic empire under the Umayyads (661-750) and the Abbasids (750-1258), many nations became part of the Islamic Caliphate. This brought intellectual richness, diversity and human genius under one umbrella.

The scientific achievements made during the Muslim's Golden Age would not have been possible without translation. The translators played a major role in these remarkable intellectual and cultural developments by opening lines of communication with other nations, languages, and cultures. Without translators, it is controversial if the Arab-Islamic Empire would have had such a global impact as the one achieved, and most likely, its development would have been much more regionally constrained.

With the newly developed body of Arabic knowledge, produced by both Arabs and non-Arabs, the world witnessed phenomenal advancements in almost all fields. Arabic disciplines based solely or partly on the study of the Qur'an included grammar and lexicography (works of al-Du'ali, al-Ḫalīl, etc.), biography (Sīrah), theology (Tafsīr, Ḥadīth), philosophy (Kalām or scholasticism) and law (Sharia, Fiqh or Islamic Jurisprudence), to name but a few. While most such disciplines had no recourse to anything outside the Arabic language and culture, philosophy also took inspiration from works in Greek and other languages, which were translated into Arabic. It is undoubtedly the Arabs who must be "credited with initiating the first organized, large-scale translation activity in history. This activity started during the reign of the Umayyads … and reached its zenith under the Abbasids …, particularly during the reign of Al-Ma'mūn (813–33), known as the Golden Era of translation." (Baker & Hanna 2009, p. 330). It was in this particular era that the renowned Bayt al-Ḥikmah, or House of Wisdom, was established and many works from Greek, Syriac, Pahlavi and Sanskrit were translated into Arabic and formed a strong basis for substantial intellectual and scientific leaps in areas such as medicine, astronomy, mathematics, pharmacy, botany, zoology, and architecture. This Golden Era of translation "was followed by a rich period of original writing in many fields … The flowering of knowledge that took place in the Islamic world during the tenth and eleventh centuries and that later provided the impetus for the development of all branches of knowledge in the West, including natural science and philosophy, could not have taken place had it not been

for the intense programme of translation carried out under the Abbasids." (Baker & Hanna 2009, p. 333).

For centuries that followed, most knowledge worthy of mention produced in the Arab world was produced in Arabic by scholars and scientists who lived under the Islamic Caliphate. This is strangely confirmed by the fact that some Latin works were claimed to be translations from Arabic, just to elevate their status and draw more attention to them. Commenting on *Serapion Junior Or Ibn Serābi*, of the first half of the twelfth century, Sarton states: "It is very probable that the treatise on simples, which has come down to us under his name and is best known in its Latin form, was originally written in Arabic. … However, it has been claimed that the Latin text was an original passed off as a translation from the Arabic *for the sake of prestige*." (our emphasis) (Sarton 1975, v. II, Part 1, p. 133).

As birds soar up in the sky only to come down, so the case was for the Arabic-Islamic civilization which has been witnessing a steady decline since late twelfth century. While the reasons for such decline are worthy of discussion, it is best to leave them out of the current work. It is undeniable, however, that transfer of knowledge through translation has been facing complex obstacles and difficulties in the Arab world in particular. In spite of the efforts made by such projects and initiatives as the National Translation Centre (Egypt), the Council for Culture, Arts and Literature (Kuwait), and Tarjem and Kalima (UAE), it seems that achieving anything remotely similar to the glory of the Golden Era of translation requires much more concerted work. The absence of accurate statistics or reliable data about translation in the Arab world adds to this problem.

However, the efforts in the area of Arabic translation, lexicology and terminology studies are not to be underestimated. The idea for the current volume originated from the desire to introduce to the interested reader some works written with Arabic in mind. The contributions of Arab and/or Arabic-speaking scholars as well as those working with Arabic may be a step in the right direction by helping to bridge this existing gap in translation, terminology, lexicology and other related fields.

Chapter 1, by Al-Kasimi, is concerned with the history of Arabic lexicography and terminology. He starts by pointing out that one of the earliest Arabic disciplines was lexicography. As producers of original knowledge and technology, Arabic-speaking scholars and scientists named their discoveries and inventions with their own unique specialized terminology. Al-Kasimi takes us through a historical journey starting with Abu Al-'Aswad Al-Du'alī, the father of Arabic grammar, in the time of the Caliph, 'Alī Ibn 'Abī Ṭalib, the early seventh century, all the way to the present day. Creating the first dictionary of the Arabic language is widely acknowledged as an extremely complex undertaking, since Arabic words are based on the concept of radical letters, where words need to be taken back to their trilateral origin before they can be identified and entered as a dictionary entry. This, however, was not how the first Arabic dictionary

entries were ordered; rather al-Ḫalīl ibn Aḥmad al-Farāhīdī favoured a more complex method based on the point of articulation, starting from the depth of the throat all the way to the lips and nose. This not only reflects the genius of this Arabic lexicographer, but also his linguistic prowess and perfectionism. Tragically, al-Ḫalīl did not live long enough to finish his dictionary, but he fortunately left us with his book *Al-ᶜayn*.

Arabic lexicography went through different stages of change, notably to make dictionaries more accessible for both the specialized and the average user. Alphabetical order was used to this effect. However, as the root system is an integral part of Arabic words, early scholars ordered their entries according to the last letter, rather than the first. Another stage was adopting the now-commonly-used alphabetical order. Al-Kasimi goes on to outline the contributions of both Arab and non-Arab scholars in the field of lexicography, and traces the development of specialized dictionaries. He ends with a discussion about the current state of affairs in Arabic dictionary development and the efforts of language academies in different parts of the Arab world.

Aptly enough, Chapter 2 by Hassane Darir, Abdelhamid Zahid and Khalid Elyaboudi deals with terminology standardization. They note that the ultimate goal of the process of standardizing scientific or technical terms, like that of other industrial norms, is always quality control and assurance. After discussing the motivation for standardization, they examine core principles, problems and the various attempts made at standardizing Arabic terms. Since, according to the authors, the Arab world of some 423 million people is no longer a producer of technology, this entails that it is not party to the process of "naming". As a result, borrowed terms and neologisms abound in Arabic. It is very difficult for linguistic academies in the Arab World to keep up with the rapid pace of technological innovation. An added difficulty is that Arabicising foreign neologisms is not practiced in any concerted way. This represents a major obstacle in standardizing terminology. Finally, the paper proposes a method of evaluating terminology based upon objective criteria.

Chapter 3 by Hassan Hamzé continues in a similar vein as it considers some shared aspects and conflicting relationships between terminology and translation in Arabic. The difficulties of translating terms are discussed in relation to a misconception that considers western terminology philosophy, and its one-to-one relation between concept and term, to be the ideal. This misconception explains the Arabic translator's focus on linguistic aspects, rendering a complex conceptual transfer into no more than a transcoding operation. The scenario replays over and over with yet more terms and more translators, resulting in distorted and incomprehensible Arabic target texts.

In Chapter 4, Maria-Cornelia Wermuth and Heidi Verplaetse tackle Western medical terminology with reference to its Greek and Latin origins. They emphasize the fact that the transfer of specialized medical knowledge from specialists to lay persons entails de-terminologization strategies. For the language of medicine to be accessible

to the general populace a shift in register is required. In this respect the authors have argued that these two registers constitute the extreme ends of a continuum.

In Chapter 5, Kassem Sara describes the current state and development of health and medical terminology, and examines efforts and challenges related to standardization.

Moving on to the legal field, which reflects wide terminological variance due to the different legal systems used, Chapter 6, by Said Shiyab, sets out to examine the status of legal translation and terminology in the Arab World. Shiyab's work "explores the problems facing Arabic legal terminologists and translators such as lack of uniformity, general and specific differences within and across legal systems, and the ambiguity of the legal language, all of which contributes to the confusion surrounding this legal and culture-bound profession." The paper suggests strategies for dealing with legal terms that aim to preserve the semantic meaning of a given term while assimilating it into the target language and legal system.

Chapter 7, by Ahmed Allaithy, covers an important issue in relation to the Holy Qur'an. It aims to establish a methodology for determining the true meaning of Qur'anic terminology. It also reveals that Qur'anic term structure incorporates an inherent 'manual' outlining how the overall meaning should be derived and determined. This paper concludes with two original insightful contributions in this respect, which not only aids the process of understanding Qur'anic terminology but also facilitates translation thereof.

Chapter 8, by Khalid Elyaboudi, Abdelhamid Zahid and Hassane Darir, continues the genre of religious text translation. In this paper, the authors deal with mystical Sufi symbolism which expresses meanings and psychological sensations that are not within the expressive capacity of language. Orientalist approaches through Louis Massignon's model are considered. The lack of clarity when dealing with Sufi symbolism in relation to the Divine and their lexical equivalents represents a complex problem in translation especially in situations where the terms and symbols used by one Sufi differ from those used by another.

Looking ahead, Chapter 9, by Lahousseine Id-youss and Abied Alsulaiman, deals with software localization. Owing to the substantial importance of this area both economically and culturally, it is rampant with neologisms and thus represents fertile ground for research in the process of creating equivalents. As a case study, the localized version of Skype is analyzed to reveal the linguistic approach the localizer has adopted. The authors show that the prominent translation strategy is literal rendition. This problem is discussed and a solution proposed. The authors recommend that localizers cooperate with specialized linguists and terminologists in order to compensate for their sometimes limited knowledge of product functions and specific user interface terms.

This volume appropriately concludes, in Chapter 10, with an article on the topic of linguistic variability in Arabic. Helge Daniëls discusses a range of Arabic terms that refer to linguistic variability. Her basic assumption is that these terms are explicitly or implicitly informed by ideological attitudes concerning linguistic variability in Arabic in which a diglossic division is taken for granted. She also argues that diglossia describes the ways in which linguistic variability is *interpreted* in the Arabic linguistic community rather than the ways in which it is *produced*.

To conclude, this unprecedented collection of scholarly works tackles historical, theoretical and applied issues covering a wide range of topics in the area of Arabic translation and terminology studies. We trust that its importance to these fields will be appreciated, since our esteemed scholars have demonstrated that Arabic translation and terminology has a long-standing tradition and, energized by recent successes and developments, great promise for the future.

References

Allaithy, Ahmed. (2005). *What Everyone Should Know About the Qur'an*. Antwerp: Garant.

Allaithy, Ahmed. (2014). *Qur'anic Term Translation: A Semantic Study from Arabic Perspective.* Antwerpen-Apeldoorn: Garant Publishers.

Baker, Mona, and Sameh Fekhry Hanna. 2009. *Arabic Tradition* in *Routledge Encyclopedia of Translation Studies*. London & New York: Routledge.

Ibn Hanbal, Ahmad. (1995). *Al-Musnad*. Tahqiq: Ahmed Muhammad Shakir and Hamzah al-Zein. Cairo: Dar al-Hadith.

Sarton, George. (1975). *Introduction to the History of Science*. Volume II, Part I. New York: Krieger.

CHAPTER 1

The history of Arabic lexicography and terminology

Ali M. Al-Kasimi

After the death of the Prophet Mohammad in 632 A.D., Moslem scholars were in need of understanding certain verses in the Holy Qur'an and some of the Prophet's oral tradition and sayings. This need motivated a linguistic movement including grammar and lexicography.

In the eighth century, Arabic linguists used to leave cities such as Basra and Kūfa for the desert to meet the Bedouins and record their "pure" language, which was not influenced by the non-Arabic-speaking, new converts to Islam who had settled in the cities.

Based upon their manual corpus, those linguists produced several monographs or specialized vocabularies on various topics such as: men, horses, camels, houses, weapons, snakes, plants, etc., before they embarked upon compiling a full-fledged dictionary. One can safely say that terminology preceded lexicography in the history of Arabic linguistics.

As Islam expanded from Gaul in Europe to Turkistan in just one century after the Prophet's death and Arabic became the world's language, Arabic dictionaries and terminologies, monolingual and bilingual, were compiled in various parts of the world.

Through the ages, Arabic lexicography underwent quantitative and qualitative changes, notably in the following areas:

a. arrangements of entries: phonetically-based alphabetical arrangement with root permutation, normal alphabetical order with root permutation, rhyme order, thematic arrangement, ordinary alphabetical arrangement of roots, alphabetical arrangement of words, combinations of those arrangements, etc.;
b. arrangements of sub-entries;
c. arrangements of the senses of the entry word;
d. definitions of entries;
e. the inclusion of encyclopedic information.

Although Arabic speakers have produced about two thousand dictionaries of all sorts and varieties, there is not yet any dictionary that documents the historical changes in the Arabic language. In the twentieth century, there have been a few unsuccessful attempts to compile such a dictionary. However, at present, there are two hopeful projects using computerized text corpora: (1) the Federation of Arab Academies'

https://doi.org/10.1075/hot.2.02alk

Historical Dictionary of the Arabic Language in Cairo and (2) the Doha Historical Dictionary of the Arabic Language in Qatar.

Keywords: Arabic grammar, Arabic lexicography, Arabic terminology, Arabic dictionaries

1. Introduction

The birth of Islam in 610 A.D. gave a great impetus to learning in general and the Arabic language in particular, as the Holy Qur'an was revealed to the Prophet Mohammad in Arabic. The first verse of the Qur'an is the following:

> Read: In the name of thy Lord who createth,
> Createth man from a clot.
> Who teacheth by the pen,
> Teacheth man that which he knew not (Qur'an 96, 1–4)

After the death of the Prophet in 632 A.D., Moslem scholars felt the need to understand the meaning of certain words and expressions in the Qur'an and the Prophet's oral tradition and sayings. This need was a basic motive for the emergence of linguistic studies.

Within one century, Islam expanded from Gaul in Europe to the frontiers of India and Chinese Turkistan. This rapid expansion was not achieved through military power, rather by the humanitarian values Islam advocated: one nation, peace, brotherhood, justice and learning.

The relationship between Arabic linguistic research and the devotion to Islam is well illustrated by Al-Ṯaᶜālibī (961–1083), who was a non-Arabic linguist, in his well-known Thesaurus *Fiqh Al-luġa*, one of the early dictionaries of synonyms in Arabic:

> Whoever loves God Most High loves His Prophet…and whoever loves the Arab Prophet, loves the Arabs. And whoever loves the Arabs loves the Arabic language, in which the most excellent of books was revealed to the most excellent of the Arabs and non-Arabs. And whoever loves Arabic must busy himself with it and apply himself assiduously to it … (Al-Ṯaᶜālibī 1996, 5)

Before we embark upon the history of Arabic lexicography, we would like to mention three contributing factors:

1. Moslems of all countries learned Arabic to be able to recite the Qur'an, say their daily prayers and perform their religious rituals. An Arabic linguistic movement spread all over the Moslem world. Therefore, when we say "Arabic linguists, lexicographers, or terminologists", we need to include followers of the Moslem faith, who are not all native speakers of Arabic. European orientalists have also played a part in Arabic lexicography and some even compiled Arabic dictionaries;

2. In the history of Arabic culture, women have played a remarkable role. There have been female scholars, singers, musicians, poets and rulers. However, there is little record of their role in lexicography. For instance, a contemporary scholar compiled a reference book in six volumes, entitled *Aʿlām Al-nisā'* ('Famous Women') which provides short biographies of hundreds of famous Arabic or Muslim women throughout history (Kaḥḥāla 1982). Yet this comprehensive reference about Arabic women does not include a single lexicographer;
3. In the ancient educational system, dictionaries were referred to by laymen to understand difficult words, but they were actually memorized by heart by students specializing in Arabic and linguistics.

2. Beginnings of grammar

Abū Al-'Aswad Al-Du'alī (about 603–688) is considered to be the father of Arabic grammar. He was a devout follower of the 4th Caliph, *ʿAlī Ibn 'Abī Ṭālib*, who instructed him to add vowels to the writing of the Holy Qur'an to make it easier to recite and understand. Al-Du'alī and his students laid down the basis of Arabic grammar (Ould Bah 1996, 19).

During the second half of the seventh century and the eighth century, Arabic linguists, such as ʿAbdullah 'Ibn 'Abī 'Isḥāq (about 648–735) and Al-Halīl 'Ibn 'Aḥmad Al-Farāhidī (718–786), would frequently leave their homes in the cites of Basrah and Kūfa and travel to the desert. Over a period of months, they would record the "pure" language of the Bedouins, which was not influenced by non-Arabic, recent converts to Islam who had settled in the cities. Upon their return to their homes, they embarked on analyzing their corpus.

The Arabic linguists' goals and methodology were similar to those of contemporary western linguists: i.e. describe the language and analyze its grammar scientifically and systematically. They used the immediate constituent analysis and other effective techniques. In their view, a grammar comprised sound, structure, meaning and the relationship between language and thought, and between thought and form. They considered syntax and semantics as interrelated and interdependent components of language (Ḥamad 1992, 16–17).

Their description of language and its grammar rises from the intrinsic features and structural characteristics of the Arabic language itself and was not influenced by any foreign model. In his *A Short History of Linguistics*, Robin (1967, 99) asserts that:

> The Arab linguists developed their own insights in the systematization of their language, and in no way imposed Greek models on it as the Latin grammarians had been led to.

3. Beginnings of lexicography

The linguists of that early period classified their corpora in monographs under subject headings such as: Qualities of Man, Clothing, Horses, Sheep, Houses, Snakes, Weapons, etc. At the same time, they analyzed their corpora to describe the Arabic Language and determine its grammar. These linguists were instrumental in laying the foundations for modern lexicography.

The honor of compiling the first full-fledged Dictionary of the Arabic Language goes to Al-Ḫalīl ʾIbn ʾAḥmad Al-Farāhīdī.

3.1 Al-Ḫalīl ʾIbn ʾAḥmad Al-Farāhīdī

The father of Arabic Lexicography, Al-Farāhīdī, was a thought leader. He was the head of the school of linguistic theory of Basrah. His student Sībawaih (765–796) produced the first complete grammar of Arabic in a book entitled *Sībawaih's Book*. But this book, in reality, mainly explains Al-Farāhīdī's grammar and grammatical terminology (Yaqūt 1980, 16: 117).

Al-Farāhīdī's contribution to the development of Arabic writing facilitated reading in general and therefore the acquisition of knowledge. Al-Farāhīdī was a prominent scholar in several fields in addition to lexicography and linguistics: *Shariᶜa* ('Islamic jurisprudence'), mathematics, music, cryptology and poetry. He codified the first metrical system of Arabic poetry – and the only one used still today – bearing his name: *ʾAwzān Al-Ḫalīl* (Al-Ḫalīl's Meters').

The great stature of the father of Arabic lexicography boosted the development of this branch of knowledge, because as the African proverb says, "the roof of everything starts from the root" (Jamiu 2014, 60).

3.2 Al-Farāhīdī's dictionary

The title of Al-Farāhidī's dictionary was *Al-ᶜayn*. The entries were not arranged alphabetically, but rather according to an order of Arabic letters that he developed, which could be characterized as phonological. The letters were not arranged according to shape or form, but rather on points of articulation, starting with the gutturals and continuing upwards to the labials. The first letter in this phonological order is the letter *Al-ᶜayn*, hence the title.

4. Selection of entries

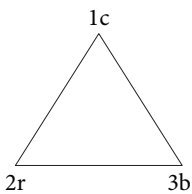
In the Arabic lexicographical tradition led by Al-Farāhīdī, lexicographers sought to include the highest number of words and meanings in dictionaries. In the introduction

to his dictionary *Al-qāmūs* ('The Ocean'), Al-Fayrūzabādī (1329–1414) wrote that, although the most popular dictionary of his time, *Al-ṣiḥāḥ* by Al-Jawhari (died 1003) unfortunately "missed half of the language or more" (Al-Fayrūzabādī 1986, 34).

Al-Farāhīdī was aware of the importance of including the maximum number of words and meanings that users might need. With this aim in mind, he designed a program by which he could count all possible roots in the Arabic language, even those neglected due to some phonological constraints. He found that Arabic words have four types of possible roots: (1) biliteral, (2) triliteral, (3) quadriliteral and (4) quinquiliteral, with the vast majority being triliteral (Al-Farāhīdī 1980, 48–49).

The program works as follows: each of the 28 letters of the Arabic alphabet are taken in rotation with other letters, and the roots containing that letter are noted. Then each root is permutated to generate all possible roots. When permutated, a biliteral root produces two roots, a triliteral root produces six, a quadriliteral 24 and a quinqiliteral 120.

The root, ع ر ب (ᶜ r b) can be permutated as follows:



1 + 2+ 3 = ᶜ r b ع ر ب
1 + 3+ 2 = ᶜb r ع ب ر
2 + 1+ 3 = r ᶜ b ر ع ب
2 + 3 + 1 = r b ᶜ ر ب ع
3 + 1 + 2 = b ᶜr ب ع ر
3 + 2 + 1 = b r ᶜ ب ر ع

(Al-Farāhīdī 1980, 59)

In the case of this root, all its permutations are used.

Certainly, this program was comprehensive, but it also resulted in listing many rare and even archaic words in the dictionary.

5. Arrangement of entries

Because Arabic is a derivational language, Al-Farāhīdī wisely chose that his dictionary entries should be made up of roots rather than words. The advantage of root arrangement is that it groups all a word's family in one main entry, which allows for shorter and clearer definitions, facilitates understanding, and realizes economy in the dictionary.

However, root arrangement also presents some difficulties. First, some users may not know the root of a difficult word they are looking for. Secondly, many foreign borrowed words do not have a known root, and they should be entered alphabetically.

The vast majority of Arabic dictionaries have adopted the root arrangement of entries. Word arrangement, however, is preferred for specialized dictionaries, because their entries are made up of terms. Root arrangement is useful to show the structural and semantic relationships among all the family words derived from the same root. As for terminological dictionaries, their entries are usually made up of single or compound nouns only, without any derivatives. So it is easier to use the word (term) arrangement.

At the turn of the twentieth century, certain scholastic dictionaries shifted to the word arrangement of entries, due to the influence of European dictionaries, and because the root arrangement caused difficulties to some students who could not derive the root out of the difficult words they wanted to look up in the dictionary.

Root arrangement has passed four distinct yet overlapping stages:

5.1 Phonologically-based alphabet with root permutation

Al-Farāhīdī arranged his roots according to the phonological order he invented during his research in the phonetics of Arabic. Then he divided his dictionary into chapters, one for each letter of this new phonologically-based alphabet. Each chapter was subsequently divided into sections according to the number of radicals in the roots: biliteral, triliteral, quadriliteral, or quinquiliteral. Inside each section, every root was permutated to produce the other possible roots.

Al-Farāhīdī's system is complicated and cumbersome. But for two centuries, Arabic lexicographers were not able to challenge Al-Farāhīdī's authority. On the contrary, *Al-ᶜayn* was so highly regarded that it was the subject of several abridgements, explanations and commentaries.

Notwithstanding its limitations, the system of *Al-ᶜayn* was imitated by ʾAbū ᶜAlī Al-Qālī (893–967), in his dictionary *Al-bāriᶜ*, Al-Azharī (893–981) in his dictionary *Al-tahd̲īb fi Al-luġa*, and the Andalusian lexicographer Ibn Sīda (1007–1066) in his dictionary *Al-muḥkam*.

5.2 Normal alphabetical order with root permutation

About two centuries after the publication of *Al-ᶜayn*, a prominent linguist and poet, Ibn Duraid, (873–933) was able to change its system partially. In his dictionary, *Ğamharat Al-luġa*, he replaced Al-Farāhīdī's phonological alphabet by the ordinary alphabet, explaining in his introduction that Al-Farāhidī's alphabet was too difficult for the layman. But Ibn Duraid was unable to avoid using Al-Farāhīdī's permutation

of roots nor of their grouping in each chapter according to the number of their radicals (Ahmad 1974, 37).

However, Ibn Duraid represented a new trend in the history of Arabic lexicography. As he was aiming at laymen, he selected his entries from among frequent popular words and discarded rare and obsolete ones, as stated in his introduction (Ibn Duraid 1987, 8).

5.3 Rhyme order

Al-Jawhari, who died in Nishapur, Iran in the year 1003 or thereabouts (in an unsuccessful attempt to fly using artificial wings, we might add), achieved a radical change in the arrangement of entries. In his six volume dictionary, *Al-ṣiḥāḥ*, he arranged the roots according to their final consonant, rather than their first consonant. Root arrangement by final consonant is called "Rhyme Order", because the arranged entries look like a poem whose lines end with the same letter, e.g. KTB, RKB, SLB, etc.

Some scholars think that Al-Jawharī was influenced by his uncle, the linguist Abu Ibrahīm Al-Fārābī (died 961) who used this method in the sub-sections of his vocabulary *Diwān Al-ʾadab*, but not in the macro arrangement of the vocabulary. But Al-Jawhari asserted, in the short introduction of his dictionary, that his arrangement was not anticipated (Al-Jawhari, 1:33). This claim was confirmed by ᶜAṭṭār, the editor of *Al-ṣiḥāḥ*, who wrote an extensive introduction to the dictionary. Other scholars thought that Al-Jawhari chose the rhyme arrangement because rhymed prose was popular at that time and because poets were always in need of rhymes. But ᶜAṭṭār attributed the rhyme arrangement of the dictionary to the fact that the changes in the Arabic words occurred mainly by adding affixes to the root whereas the end of the root remains the same, therefore it is easier to look for difficult words by using the final consonant of the root (Al-Jawhari, ᶜAṭṭār's introduction 1990, 122).

To make the dictionary easier and faster to use, Al-Jawhari, not only abolished Al-Farāhīdī's root permutation, but he also abandoned the division of each chapter into sections according to the number of radicals in each root. His dictionary was divided into 28 chapters, each represented one letter of the Arabic normal alphabet. In each chapter, the words ending with that particular letter are arranged alphabetically starting with their first letter and continuing to the last one.

Al-ṣiḥāḥ was so popular that it was translated several times into Persian and Turkish. And it was the subject of numerous abridgements and commentaries. Two great dictionaries in the history of Arabic lexicography, which are still popular in our present day, imitated its method of arrangement:

1. *Lisān Al-ᶜarab* ('The Arabs' Language') by the Egyptian scholar Ibn Manẓūr (1232–1311). It is an exhaustive encyclopedic dictionary in 20 volumes;

2. *Al-qāmūs* ('The Ocean') by Al-Fayrūzabādī (1329–1414), a Persian who studied in Baghdad, Damascus, Jerusalem and Cairo, then he was appointed as the Chief Justice in Yemen. His dictionary was so popular that its title has become a synonym of the word "dictionary" in modern Arabic.

5.4 Normal alphabetical arrangement

Nowadays, almost all Arabic dictionaries use normal alphabetical arrangement of roots. This type of arrangement was invented by Ibn Fāris (? – about 1004), a prolific Persian scholar who studied in Baghdad. Ibn Faris used this arrangement in his two dictionaries, *Al-maqāyīs* and *Al-muğmal*. According to this order, all roots are listed according to their first radical, then their second and third one. But Ibn Fāris divided his chapters into three sections: (1) biliteral roots, (2) triliteral roots, and (3) the roots of more than three radicals.

Further, Ibn Fāris is well remembered for his theory of the "Original meaning of the root". After each root, he gave one (or more) original meaning, then he tried to find the shades of that meaning in all the derivatives (Ibn Fāris 1991, 39). This theory is adopted now by The Academy of the Arabic Language in Cairo in its *Al-muᶜğam Al-kabīr* ('The Enlarged Dictionary') which is being compiled.

Ibn Fāris had another theory, according to which Arabic roots were originally biliteral. This theory was defended in the 20th century by the well-known Iraqi linguist, Anastās Marī Al-Karmalī (1866–1947).

Al-Zamaẖšarī (1075–1143) was able to perfect the alphabetical order in his one volume dictionary *Asās Al-balāġa* which paid special attention to metaphorical uses of words. He arranged all roots alphabetically regardless of the number of radicals. This is the arrangement used nowadays (Al-Zamẖšarī 1979, 2).

Indeed, this arrangement was adopted in almost all Arabic dictionaries compiled in the 19th and 20th centuries, of which the most famous are *Muḥīṭ Al-muḥīṭ* by the Lebanese scholar Butrus Al-Bustānī (1819–1883), *'Aqrab Al-mawārid* by the Lebanese poet and lexicographer Said Al-Šartūnī (1849–1912) and *Al-munğid* by Louis Maᶜlūf (1867–1946). Alphabetical arrangement is now approved by all academies of the Arabic language.

6. Arrangement of sub-entries

The arrangement of sub-entries under a given root was not systematic in the old dictionaries. Some of them started with the verb, others with the verbal noun. One might think that these two different approaches are due to the two famous schools of thought in Arabic linguistics: (1) the Basrah School and (2) the Kūfa School. The former claims

that the verbal noun is the origin of all derivatives, the latter that it is the verb. Each school has its own convincing evidence.

However, further investigation shows that the approach adopted is not necessarily related to a school of linguistic theory. Within the same dictionary, one can find sub-entries that begin with the verbal noun and others that begin with the verb. It seems that the lexicographer chose to start with the lexical class most familiar to the user: the verbal noun or the verb (in perfect tense).

Arabic lexicographers experimented with various arrangements of sub-entries until about the middle of the 20th century when the Academy of the Arabic Language in Cairo adopted the following new order of derivatives for its well-known dictionary *Al-muᶜğam Al-wasīṭ* ('The Intermediate Dictionary') (Academy of the Arabic Language 1972, 14–15):

- verbs come before nouns;
- verbs without a letter of increase come before verbs with letters of increase;
- verbs with letters of increase are arranged according to the number of letters of increase, starting with the smallest number;
- nouns are arranged alphabetically after the verbs.

Almost all modern Arabic dictionaries arrange their sub-entries accordingly.

7. The arrangement of senses

In spite of the progress made in semantics and information science, lexicographers face certain difficulties in deciding how to arrange the senses of polysemous words. In general, there are three types of arrangement of senses:

1. The historical order, where the different senses of a given word are listed according to the date of their appearance in the language, starting either with the oldest sense or the newest one. Historical dictionaries follow this order. (A historical dictionary of the Arabic language has not yet been produced);
2. The frequency order, in which the meanings of a given word are listed according to the frequency of their use in the language, from the most frequent meaning to the least frequent one. This order is favored by dictionaries for learners. With modern computational corpus linguistics, this can be achieved easily. But unfortunately, a computerized corpus of the Arabic language does not yet exist. Text corpora are currently being compiled in Cairo and Doha;
3. The logical order, in which meanings are arranged from concrete to abstract, from general to particular or special, etc.

Early Arabic lexicographers must have faced this problem. Al-Zamaẖšarī, who developed his dictionary, *ʾAsās Al-balāġa* ('The Basis of Rhetoric'), at a time when rhetoric was very popular, always started with the concrete literal sense of the word and then gave all its metaphorical uses. He explained this principle in his introduction (Al-Zamaẖšarī 1979, 7).

At present, there is no agreement on arrangement of the senses of a given word. The purpose of the dictionary is a major deciding factor. The Academy of the Arabic Language in Cairo adopted the logical order for its *Al-muᶜǧam Al-wasīṭ*. The Arab League Educational, Cultural and Scientific Organization (ALECSO) chose the frequency order in its dictionary, *Al-muᶜǧam Al-ʾasāsī*, which was compiled by a team of linguists under the coordination of the author of this article (ALECSO 1989, 59). The two historical dictionaries currently being developed in Cairo and Doha will have the senses arranged in a historical order (Al-Kasimi 2014, 429).

8. Types of information provided in Arabic dictionaries

8.1 Phonological information

Because of the differences between the written forms of English words and their pronunciations, most English dictionaries provide pronunciation information, in the form of phonetic or phonemic transcription, after each entry word to help the user pronounce it correctly. In the case of Arabic, this type of information is not necessary. If Arabic writing is fully vocalized (through the addition of vowels, which are not normally needed in writing), it becomes a kind of phonological writing, i.e. each letter represents a phoneme. All phonemic contrasts are recorded in the Arabic writing system (Al-Kasimi 1983, 37). That is why the vast majority of Arabic dictionaries, old and new, fully vocalize their entry words and provide no pronunciation information, as in all the entry words of the dictionary *Al-ᶜayn* (Al-Farāhīdī 1980).

Before the age of printing, dictionaries were written and then copied by hand. Miscopying resulted in a lot of phonological and orthographical errors in the earlier dictionaries, which could lead to mispronunciations. Fortunately, lexicographers were aware of those difficulties. Therefore, they sometimes added pronunciation information after the vocalized entry word, using one of two methods. These methods were introduced by Al-Qali (893–967) in his dictionary, *Al-bāriᶜ*, the original manuscript of which is unfortunately still lost. Al-Qali was born in Turkey, educated in Baghdad, and worked for many years as a professor and author in Córdoba. Two parts of the dictionary were published by Wilton, the librarian of the Oriental Library in the British Museum, in 1931. The pronunciation hints took one or both of the following forms:

a. Spelling out the short vowel after each consonant. For example: "*Al-fašaqu, bil-taḥrik wa 'l-šīn al-muᶜǧama*" ("*Al-fašaqu*", with a vowel and the dotted "*šīn*") (Al-Jawhari 1990, 1544);
b. Providing the model verb (the verb form or pattern) after the verb whose pronunciation is difficult. For example: "*naḫāsa*" as in "*naṣāra*" and "*ǧaᶜāla*" (Al-Fayrūzabādī 1986, 744). The model verbs are taught in grammar and morphology. Some lexicographers describe the model verbs in the introduction of their dictionaries, so that the users can refer to them.

Nowadays, publishing is much easier and errors in manual copying are a problem of the distant past. Nevertheless, even today errors can slip in to dictionaries during typing and desk-top publishing.

8.2 Grammatical information

Since Al-Farāhīdī, Arabic lexicographers adopted the principle that a dictionary is an index to grammar. In the introduction to his dictionary, *Al-ᶜayn*, Al-Farāhidī (1980) described the grammar and phonological system of the Arabic language. In this way, he avoided the need to repeat the rules in the entries. Only the exceptions to the rules were included at the entry level.

Most lexicographers followed that tradition. In the introduction to his abridged version of Al-Jauhari's *Muᶜǧam Al-ṣihāh*, Al-Rāzī (died after 1268) outlined the twenty major Arabic verb patterns (forms) and their conjugations. In the entries of the dictionary, simply the verb's pattern was indicated (Al-Razi 1967).

Some lexicographers did not include Arabic grammar in the introduction of their dictionary. They assumed that the dictionary user already knew the rules or had a grammar book to refer to. They only gave the exceptions to the rules in the entries. For example, they did not indicate that the noun "*qābila*" ('midwife') is feminine, because the suffix "*-a*" is a marker of feminine nouns. But in the case of the word "*šams*" ('sun'), they would add the label (feminine), because this word does not have the feminine suffix.

8.3 Encyclopedic information

By encyclopedic information, we mean proper nouns such as names of famous persons or places (countries, cities, mountains, rivers, etc.), outstanding events (holidays, wars, battles, inventions, etc.) and cultural products (titles of famous books, epics, novels, etc.).

Academies of the Arabic Language tend today to consider that a dictionary deals with common nouns which designate a class, and that proper nouns belong to encyclopedias rather than dictionaries.

However, the Arabic lexicographical tradition included proper nouns in dictionaries. Al-Farāhīdi's dictionary *Al-ᶜayn* contains a large number of proper names such as names of tribes, valleys, and villages. But this practice was at a limited scale. It was Al-Fayrūzabādī who expanded this practice by adding all sorts of proper names of places, tribes, horses, dogs, jinn, swords, etc.

There were few exceptions. Al-Razi in his abridged version of Al-Jawhari's Dictionary *Al-ṣiḥāḥ* eliminated proper names for the obvious reason of economy (Al-Kasimi 2003, 277).

The tradition of including proper names in dictionaries was respected until the 19th century. The Lebanese scholar, Faris Al-Šidyāq (1804–1888), published his well respected book, *Al-ǧāsūs ᶜalā Al-qāmūs* in which he criticized Al-Fayrūzabādī's Dictionary, *Al-qāmūs*, for certain defects, one of which was the inclusion of non-lexical items (such as proper nouns) in its entries.

Arabic dictionaries compiled in the second half of the 19th century and the 20th century excluded non-lexical items. This trend was finally approved by the Academy of the Arabic Language in Cairo when it excluded proper names from its dictionary *Al-muᶜǧam Al-wasīṭ* which was published in 1960. In its recent editions, Maᶜlūf's dictionary, *Al-munǧid*, added an appendix of biographical and geographical proper names (Maᶜlūf 1908, 19). This was also done by certain western dictionaries such as the famous French dictionary, *Larousse* (2008).

It goes without saying that one can avoid Al-Šidyāq's criticism if one compiles an encyclopedic dictionary like the first English *Encyclopedic Dictionary* that Robert Hunter published in London between 1872 and 1889. Most major old Arabic Dictionaries were encyclopedic. *Al-muᶜǧam Al-kabīr* ('The Enlarged Dictionary'), which is currently being compiled by the Academy of the Arabic Language in Cairo, is encyclopedic; it includes biographical and geographical information and scientific terminology.

Although ALECSO's dictionary, *Al-muᶜǧam Al-ᶜarabī Al-ʾasāsī* ('The Basic Arabic dictionary') is medium, not large in size, it was nevertheless decided to include the most frequent proper names. The reason for this is that this dictionary, being aimed at foreign students learning Arabic, has a pedagogical function (ALECSO 1989).

8.4 Illustrative quotations

Lexicographers use quotations to illustrate the sense of a word, its grammatical behavior or its cultural usage. The quotations should be clear, short, impressive and authoritative, i.e. uttered by a famous personality. If the quotations are not original but crafted by the lexicographer himself for educational purposes, they are more appropriately called "illustrative examples". Illustrative examples were not used in English until 1755 when Dr. Samuel Johnson used them in his *Dictionary of the English Language* (Sledd & Gwin 1955, 41–43).

Original quotations have been used intensively if not systematically in Arabic lexicography since the eighth century. The father of Arabic dictionaries Al-Farāhīdī used them in *Al-ᶜayn*, and lexicographers who followed continued the practice.

However, the quotations cited in *Al-ᶜayn* and other early dictionaries were not really meant to be illustrative. They were cited to prove that that word or that sense existed in Arabic. That is why the quotations were sometimes more difficult to understand than the given definitions. Hence, lexicographers frequently provided clarifications or explanations of the meaning of the quotations, with some sacrifice of economy in the dictionary size.

Al-Razī, who abridged the eight volume dictionary of *Al-ṣiḥāḥ* into one volume named *Muẖtār Al-ṣiḥāḥ*, had to reduce the number of the illustrative quotations to realize the necessary economies (Al-Kasimi 2003, 278–279).

9. Descriptive or prescriptive dictionaries

A descriptive dictionary describes a given language as it is used by its native speakers at present. A prescriptive one describes a language as it was used at a certain period of time preferably during its "golden age", not how it is actually spoken, and tells the users, through usage labels, how to speak the language correctly (Al-Kasimi 1983, 27–28).

Arabic dictionaries usually deal with the written variety of Arabic, and avoid the spoken one (Ferguson 1959, 336). Therefore, Arabic dictionaries are not completely or purely descriptive. A purely descriptive dictionary cannot be compiled for two reasons:

a. Diglossia: At present Arabic has two varieties: (1) the dialects used for ordinary daily conversations and (2) the literary Arabic "which is learnt largely by formal education and it is used for most written and formal spoken purposes but is not used by any sector of community for ordinary conversation" (Ferguson 1959, 336);
b. The Holy Qur'an: Although the Holy Qur'an was revealed more than 1,400 years ago, it is still recited daily and influences Arabic, spoken and written, at different levels: vocabulary, grammar and literary styles.

Old Arabic dictionaries were both descriptive and prescriptive. They are descriptive insofar as they are based on the Holy Quran, poetry, and materials gathered from the Bedouins. On the other hand, they are prescriptive because their objective was to help users speak standard Arabic correctly.

This binary role – prescription and description – is illustrated by the dictionary *Al-ǧamhara* by the poet and linguist Ibn Duraid (837–933), who fled Basrah during a popular rising and took refuge in South Arabia among the Bedouins. There, he recorded a corpus of conversations for his dictionary. The objective of his dictionary

is stated clearly in the introduction. It is to help the users to speak Arabic correctly, because "we have prescribed this dictionary (to our students) at a time when ignorance is spreading among the people…" (Ibn Duraid, the introduction).

Al-Jauharī's dictionary, *Al-ṣiḥāḥ*, is a similar example. In his introduction, he stated that he listed his entries "after obtaining them by thorough study in Iraq, and discussing them with true Arabs in their desert homelands" (Al-Jauharī).

The prescriptive trend in Arabic lexicography was strengthened by two factors:

1. The Golden Age of Arabic
   The majority of Old Arabic linguists and lexicographers considered that *ᶜaṣr al-iḥtiğāğ* (the Golden Age) of Arabic extended for about 300 years only: 150 years before Islam and 150 years after Islam, i.e. from the seventh century to the tenth century. Some other linguists and lexicographers extended the golden age to the twelfth century, but only for the desert dwellers not city residents whose language had been "corrupted" by the new non-Arabic, converts to Islam (Fajjal 1987, 342–355). Therefore, the quotations cited by those linguists and lexicographers are drawn from the reliable language sources of that period, which are the Holy Qur'an, the Profit's sayings and teachings, and classic poetry;
2. The Objective of Linguistic Studies
   As stated earlier, the objective of linguistic studies is to understand the Holy Qur'an and the Prophet's sayings and teachings. Therefore those texts were the highest models of good Arabic. And scholars, teachers and writers highly influenced by them with respect to style, structure and vocabulary.

These two factors led several lexicographers to produce a number of monographs or dictionaries under variations of the title *Laḥn Al-ᶜawām* or *ʾAḫtāʾ Al-ᶜawām* ('The mistakes of the laymen'). A large number of those "mistakes" were, in reality, mere language changes.

Not only dialects, but standard Arabic as well, underwent language change or development, which is accepted now by modern academies of the Arabic language.

Those books of "corrections" started appearing around the beginning of the ninth century. One of the earliest dictionaries of this type was *Laḥn Al-ᶜawām* by Ali Ibn Hamza Al-Kisaʾī (737–805) who was the head of the Kūfa school of thought in Grammar (Iqbal 1987, 66).

One of the most famous books of "corrections" or "*Al-laḥn*" is *ʾIṣlāḥ Al-manṭiq* by Ibn Al-Sikīt (802–858), which provoked a lot of commentaries, abridgements, explanations, and debate (Ibn Al-Sikīt 1987). One such explanation, *Tahḏīb ʾIṣlāḥ Al-manṭiq* by Al-Tabrīzī (1030–1109), a published work of more than a thousand pages, became more famous than the original (Al-Tabrīzī, 1983).

The contemporary Moroccan scholar and statesman, Abdulhadi Boutaleb (1923–2009), who had occupied, among other responsibilities, the post of Minister of

Information, noticed that the media made a lot of language mistakes. So, he compiled *Muᶜğam Taṣḥiḥ Luġat Al-ʾiᶜlām* ('Dictionary for Correcting the Media Language'). In his short introduction, he called for the protection of language from "corruption", just as we protect society from the same thing (Boutaleb 2006, 2).

At present, the most well-known dictionary of this type is *Muᶜğam Al-ʾaġlāṭ Al-luġawiya Al-muᶜāṣira* ('Dictionary of Contemporary Language Mistakes') by Mohammed Al-ᶜAdnanī, which has had several printings. Interestingly, the author points out that many of the words listed as mistakes are not really mistakes. Some are correct derivations of a root, others are words that were used by prominent writers or poets in the golden age of Arabic, and yet others are just foreign borrowed words which have been approved by academies of the Arabic language (Al-ᶜAdnānī 1984).

During the period of deterioration of the Arabic culture (from about the 12th century to the 19th century), Arabic lexicographers gave up the tradition of travelling to the Arabian desert, meeting Bedouins and recording their speech. Instead, they collected their entries and definitions from precedent dictionaries and made some changes and improvements here and there. Their quotations were drawn from the golden age as cited in earlier dictionaries. So, the dictionaries of the period of deterioration were prescriptive completely. They did not describe the language usage of their time, but of the golden age.

This applies to all dictionaries of the deterioration period including several-volume dictionaries such as *Lisān Al-ᶜarab* by Ibn Manẓūr (1232–1311), an Egyptian scholar who worked as a judge in Tripoli. This dictionary is considered to be the most reliable dictionary in Arabic. As a matter of fact, the author collected his materials from the earlier dictionaries such as *Tahḏīb Al-luġa*, *Al-Muḥkam* and *Al-ṣiḥāḥ*, as he admitted. His only contribution was an improved arrangement of entries and the addition of explanations and clarifications (Ibn Manẓūr 1994, 7–8).

One of the largest dictionaries in Arabic is *Tāğ Al-ᶜarūs* by Murtaḍa Al-Zabīdī (1732–1790), a great scholar whose family immigrated from the city of Wasiṭ in Iraq to the city of Belgram in India where he was born. He also lived for periods in Yemen and in Egypt.

Al-Zabīdī's dictionary was considered the biggest Arabic dictionary, comprising tens of volumes. But it is, in reality, an exhaustive explanation of Al-Fayrūzabādī's dictionary, *Al-qāmūs Al-muḥīṭ*, which was completed about four centuries earlier. Its full title is *Tāğ Al-ᶜarūs min ğawāhir Al-qāmūs* ('The Bride's Crown which is Made of the Jewels of Al-qāmūs').

10. Western contribution to Arabic lexicography

After the Europeans made contact with the Arabs in Andalusia (711–1492) and through the Crusades Wars in the Middle East (1095–1291), two movements took place in

Europe: (1) Orientalism and (2) translation of major Arabic works. These two movements resulted in the birth of Arabic lexicography in Europe. Several professors of Arabic and/or oriental languages at European universities compiled Arabic dictionaries, mainly bilingual: Arabic-Latin and later on Arabic- European languages. However those dictionaries were usually based on a certain Arabic dictionary with consultation of other Arabic dictionaries.

The following are some of the outstanding Western scholars who contributed to Arabic lexicography:

1. William Bedwell (1562–1632), a British professor who compiled an Arabic dictionary in seven volumes, but which was never published;
2. Jacobus Golius (1596–1667), a Professor in Leiden, who published his one volume *Lexicon Arabico – Latinum* in 1653;
3. Georg Wilhelm Freytag, (1788–1861) who published his *Lexicon Arabico-Latinum* in four volumes in Halle between 1830 and 1837;
4. Edward Lane (1801–1876), a British Arabist who translated *The One Thousand and One Nights* into English and compiled an *Arabic-English Lexicon*;
5. Reinhart Dozy (1820–1883), a Dutch scholar of French origin and a prominent historian of Islam and Arabic especially in Spain. His lexicographical works include: *Dictionnaire détaillé des nom des vêtements chez les Arabes* (1845), *Supplément aux dictionnaires arabes* (1877–1881, 2 volumes), and *Glossaire des mots espagnols et portugais, dérivés de l'arabe* (1861) as well as a similar list of Dutch words derived from Arabic;
6. August Fischer (1865–1949), a German Arabist who tried to compile a historical dictionary of Arabic with the help of the Academy of the Arabic Language in Cairo, of which he was a member. But the project was not finished because of the eruption of the Second World War and Fischer's illness. The Academy published only the introduction and part of the letter "*A*"
7. Hans Wehr (1909–1981), a German Arabist and author of the Arabic-German dictionary *Arabisches Wörterbuch für die Schriftsprache der Gegenwart* (1952) which was edited in English by the American linguist J. Milton Cowan (1907–1993) as *Hans Wehr Dictionary of Modern Written Arabic*. The latter dictionary is widely used in the Arab World and in the U.S.A. (Haywood 1956, 123).

11. Specialized terminological dictionaries

It was said earlier that Arabic lexicography started with specialized glossaries on certain topics such as men, horses, snakes, weapons, etc.

Research and Publications flourished in the eighth century, as a result of the growth of Islamic culture and the policy of encouragement adopted by the Abbasid

Caliphs, especially Harūn Al-Rašīd (763–809) and his son Al-Ma'mūn (786–833). *Bayt Al-ḥikma* ('House of Wisdom') was founded in Baghdad in the beginning of the 9th Century. It was an Academy for research, writing and translating Greek Philosophy, Indian Science and Persian Literature.

In that époque, terminology was paid notable attention as it was an important tool of scientific research and essential part of scientific methodology. Scholars noticed that a certain term might change its meaning from one field of knowledge to another. They found that it was useful to compile terminological dictionaries for the benefit of their students and the laymen.

Those terminological dictionaries were of two types:

1. Special dictionaries limited to the terminology of one field of knowledge such as linguistics, philosophy, logic, Islamic jurisprudence, medicine, etc.
2. General terminological dictionaries which contained terminologies of all or several fields of knowledge.

Makers of those dictionaries faced no problem in choosing the type of arrangement of entries. They simply arranged their terms alphabetically. The root arrangement was of no use here, as these dictionaries did not deal with the root derivatives, rather only the term itself.

It will be useful to cite few examples of those dictionaries.

11.1 Special dictionaries

11.1.1 Fī ḥudūd Al-'ašyā' wa Rusūmihā

Fī ḥudūd Al-'ašyā' wa Rusūmihā ('On the Definition and Description of Things'), was written by Al-Kindī (known in Latin as *Alkindus*). Al-Kindī (805–873) was the first real philosopher in the history of Islam. He was chemist, physicist, mathematician, astronomer, physician, musician and cryptologist. He was born in Kūfa, Iraq where his father was the governor of the Kūfa District (Central Iraq). Caliph Al-Ma'mūn chose him to be the General Supervisor of the Academy *Bayt Al-ḥikma* in Baghdad.

This work, which could be considered the first terminological dictionary in Arabic, contains about one hundred terms of philosophy and related subjects such as logic, Islamic speculative theology, mathematics and morals. A great number of those terms were coined by Al-Kindī himself or translated by him from Greek. His definitions were short and precise.

When Al-Kindī dealt with Greek terms, he adopted two methods to render them into Arabic:

1. Translating their meanings into Arabic;
2. Borrowing the Greek terms themselves and writing them with Arabic letters.

His deep knowledge of the Arabic language enabled him to cite the exact Arabic equivalent of the Greek term. Sometimes he reactivated certain archaic or obsolete Arabic words and gave them a new meaning. The famous word, "*huwiya*" ('identity') was coined by Al-Kindī by compounding two items: (1) the 3rd person pronoun "*huwa*" ('He') and (2) the noun sufix "*-iya*" (Abu Rīda 1950, 19–20).

11.1.2 Kitāb Al-ḥurūf

Kitāb Al-ḥurūf (Book of Letters) was written by Al-Fārābī (In Latin: *Alpharabius*). Al-Fārābī (872–950) was born in Farab, Kazakhistan, completed his higher studies in Baghdad, Iraq and settled down and died in Damascus, Syria. His father was a military general. He was a philosopher and a medical doctor. Students of philosophy called him "the second teacher" because he explained and annotated Aristotle's works on Logic, implying that Aristotle was the first teacher.

Many of his books, such as *ᶜUyūn Al-masā'il* and *'Iḥṣā' Al-ᶜulūm*, contained certain terminology and their definitions. But his most important work on terminology was *Kitāb al-ḥurūf*, which was edited with an important introduction by Muhsin Mahdi (1926–2007), an Iraqi-American Professor at Harvard University (Al-Fārābī 1970, 1–15).

In this book, Al-Fārābī discussed the problems of the philosophical language and how scientific terms in general and philosophical terms in particular are coined. The 25th chapter of this book, which is entitled *The invention of names and their translation*, dealt with most of the terminological problems the author and Al-Kindī before him faced. One of those problems was homophony of terms, i.e. the same terms designate different concepts in different sciences. This phenomenon could not be avoided then; language symbols are limited and meanings and concepts are unlimited.

11.1.3 Risālat Al-ḥudūd

The author of this work, Ibn Sīnā (980–1037) (known in Latin as *Avicenna*), was born in Bukhara (Buhārā), Uzbekistan and died in Hamadan, Iran (Ibn Sīnā, 1978). He was the greatest scholar of his time in medicine and philosophy. During the Middle Ages, European scholars qualified him as "the Father of Modern Medicine". His book, *Al-qānūn fī Al-ṭib* was taught at the European universities until mid-17th century. His monograph, *Risālat Al-ḥudūd*, contained about 75 definitions of philosophical terms based mainly on Aristotle's approach of definition. In his introduction, he pointed out the difficulties of writing good definitions and admitted that he was rarely able to produce precise ones. That might explain why his definitions in this book were somewhat too long compared with Al-Kindī's precise ones. Some of his definitions took several pages, as for the terms "self" and "reason" (Al-Ahwānī 1998, 40).

11.1.4 'Iḫwān Al-ṣafā's monograph

Terminological dictionaries were not always published as separate books. Sometimes terminological glossaries were included in another book, explaining its terminology.

In the 10th Century, an intellectual secret movement or group in Basra, Iraq, published under the pen name of *'Iḫwān Al-ṣafā* ('Purity Brotherhood') a series of monographs gathered in a multi volume book entitled *Rasā'il 'Iḫwān Al-ṣafā'* ('Monographs of Purity Brotherhood') advocating their *'Ismāᶜilī* sect's points of view with a lot of thoughts drawn from Greek and other philosophies. They dedicated the 41st monograph entitled *Risālat Al-ḥudūd wa Al-rusūm* ('Monograph of Definitions and Descriptions') to the terminology of the whole series. This particular monograph contained 250 terms and definitions ('Iḫwān Al-safā' 2004, monograph 41).

11.1.5 Al-mubīn

Sayf Al-Dīn Al-Āmidī (1156–1233) was born in Āmid (today: Dyarbakr, Turkey), studied in Baghdad, Iraq, worked as a dean of a college in Egypt and died in Damascus, Syria. He was a prominent scholar of jurisprudence, *Al-kalām* (Islamic speculative theology) and philosophy. The complete title of this dictionary was *Al-mubīn fī Šarḥ 'Alfāẓ Al-ḥukamā' wa Al-mutakalimīn* ('The Clear Book on Explaining the Terminology of Philosophers and Theologists') (Al-Āmidī 2009, 41). It contained about 223 terms and definitions. In Al-Āmidī's time, Al-kalām had become closer to philosophy than to *'Uṣūl Al-fiqh* (Theoretical Basis of Islamic Jurisprudence). That is why the terminology of this dictionary is specialized in *Al-kalām*, philosophy and logic.

The importance of this dictionary lies in the arrangement of its terms. The author did not choose the root arrangement nor the alphabetical arrangement, rather the conceptual arrangement, which depends on the logical and ontological relationships among concepts. To non-specialists, his arrangement looks chaotic. I always thought that the conceptual arrangement in lexicography was the fruit of the science of terminology in the 20th Century, until I studied Al-Āmidī's dictionary. In this type of arrangement, the relatedness between terms is not lost. That is why his definitions are short, precise and require less effort to grasp.

11.2 General terminological dictionaries

A general terminological dictionary attempts to define terms that belong to various fields of knowledge, for the benefit of laymen, students, writers and men of letters. The dictionaries described in the next sections are considered among the oldest.

11.2.1 Mafātīḥ Al-ᶜulūm

Mohammad Al-Ḫawārizmī (about 778–850) – Latinized as *Algoritmi* – was born in Khawarizm (Ḫawarizm), Uzbekistan and died in Baghdad, Iraq. He was a great mathematician, astronomer, geographer, linguist and the founder of Algebra. His book, *Al-ğabr wa Al-muqābala* ('The Compendious Book on Calculation by Completion and Balancing') was translated into Latin in 1135, and hence several scientific terms such as "Algebra" and "Zero" were introduced into Latin and other European languages.

In his introduction to his terminological dictionary, *Mafātīḥ Al-ᶜulūm* ('Keys of Sciences'), Al-Ḥawārizmī emphasized the importance of terminology as a basic tool to scientific research. He pointed out that a term might have several meanings in different sciences. That is why a general terminological dictionary is useful for students and laymen.

Al-Ḥawarzmi divided his dictionary into two parts: the first is devoted to *Fiqh* ('Islamic Jurisprudence'), speech, grammar, writing and administration, poetry and metrics and history; the second part to philosophy, logic, medicine, mathematics, geometry, astronomy, music, mechanical engineering, and chemistry. This work could be considered as one of the early attempts to classify fields of knowledge.

11.2.2 Al-taᶜrīfāt

The second important general terminological dictionary in the history of Arabic lexicography is *Al-taᶜrīfāt* ('The Definitions'), by Al-Šarīf Al-Jurjānī (1339–1413), who was a great scholar specialized in astronomy, *Fiqh*, philosophy, music and linguistics. He had special interest in classification of sciences. *Al-taᶜrifāt* is considered now the most important book of his 50 works. Al-Jurjānī arranged all the terms in this book alphabetically, regardless of their field of knowledge. He paid special attention to the terminology of Islamic studies and Sophism. Although *Al-taᶜrīfāt* covered fewer fields of knowledge than Al-Ḥawārizmī's *Mafātīh Al-ᶜulūm*, it has more definitions, and the definitions are more precise (Al-Jurjānī 1983).

11.2.3 Al-kulliyāt

Written by the Turkish scholar and Judge Abu Al-Baqā' Al-Kafawī (d. 1094), this dictionary provided mostly comprehensive definitions to the terminology of Islamic jurisprudence, theology, linguistics, and philosophy.

11.2.4 The Indians' contributions

Several dictionaries of this genre were compiled in the following centuries, especially in the 18th century. Here we describe two of the most important general terminological dictionaries.

Kaššāf 'Iṣṭilāḥāt Al-funūn wa Al-ᶜulūm ('Glossary of professional and Scientific Terminology'), by Mohammad Ali Al-Tahānawī (d. after 1745), a son of the greatest Islamic Scholar of his time in India (Al-Tahānawī, 1996). This encyclopedic dictionary is still useful to students and researchers, thanks to its comprehensive and precise definitions. This dictionary was in two parts: the first contained Arabic terminology, the second non Arabic terminology.

Ğāmiᶜ Al-ᶜulūm fī 'Iṣṭilaḥāt Al-funūn which is known as *Dustūr Al-ᶜulamā'* ('The Scholars' Consitution'), by an Indian Judge called Abd Al-Nabī Bin Abd Al-Rasūl Al-Aḥmednakrī Al-Hindi (Al-Aḥmadnakrī, 1997), whose dates of birth and death are

unfortunately unknown, but he was a contemporary to Al-Tahānawī. This dictionary contained some Persian texts, and its arrangement of entries was much easier than other similar terminological dictionaries and more comprehensive as well.

The making of general terminological dictionaries has continued throughout the ages. A contemporary Moroccan scholar, Dr. Mohammad Al-Kattānī (born 1935) recently dedicated ten years compiling an encyclopedic dictionary of the terminology of Arabic cultural heritage, entitled *Mawsūᶜat Al-muṣṭalaḥ fī Al-turāṯ Al-ᶜarabī: Al-dīnī, Al-ᶜilmī, Al-ʾadabī* ('Encyclopedia of Terminology in Arabic Heritage: Religious, Scientific and Literary'), (Al-Kattani, 2012). This dictionary comprises three large volumes, 3,334 pages and about 5,000 terms defined as they were used in language, Islamic studies, history, geography, physics, chemistry, astronomy, etc.

12. Arabic dictionaries at present

Al-nahḍa Al-ᶜarabiyya ('The Arab awakening or renaissance') was a cultural and political movement in the Middle East during the 19th and early 20th centuries. It aimed at the independence of the Arabic countries, their unity, and development. Arabic-speaking Christians, who were educated in the Western missionary schools in Syria, Lebanon, Palestine and Egypt, played an important role in this awakening. This movement used the revival of the Arabic language and traditions as means of enhancing the Arabs' national feelings. Hence, the making of dictionaries was given a new impetus. Several dictionaries were compiled by Lebanese scholars during the 19th and 20th centuries such as: *Qaṭr Al-muḥīṭ* by Butrus Al-Bustanī (1819–1883) and the best seller dictionary *Al-munǧid* (1908) by the Lebanese Jesuit priest, Louis Maᶜlūf (1867–1946). This dictionary has been reprinted more than 40 times.

Lebanese and Egyptian scholars produced several bilingual dictionaries, mainly English-Arabic and French-Arabic. The outstanding Lebanese translator, Munir Baalabaki (1918–1999) produced his best-selling English-Arabic dictionary *Al-mawrid* (1967), which has been reprinted numerous times and was recently updated by his son, Ramzi Baalabaki, (born 1951). Baalabaki is a professor at the American University of Beirut (AUB) and author of a highly authoritative book on *The Arabic Lexicographical Tradition* from the 8th to the 18th Century (Baalabaki 2014).

The founding of Arabic Language Academies in Damascus, Cairo and Baghdad in the first half of the 20th Century enhanced the making of Arabic dictionaries of all types, monolingual and bilingual, general purpose and terminological, etc.

Special attention has been paid to terminological dictionaries of modern sciences after the independence of most Arabic countries in the mid-20th century, in order to Arabize teaching and administration which had been carried out in the colonialists' languages: English, French or Italian. Arabic Language Academies have several

specialized committees working on coining Arabic terminologies in various fields of knowledge and have published numerous terminological dictionaries.

In 1962, Morocco founded the Bureau of Coordination of arabization in Rabat to ensure the standardization and unification of Arabic terminology. This Bureau was soon adopted by The Arab League as an official organ of the Arab League Educational, Cultural and Scientific Organization (ALECSO). Depending on the terminology made by the Arabic Academies, Arabic universities and various specialized organizations, the Bureau has compiled so far more than 40 specialized unified dictionaries in various fields of knowledge, providing hundreds of thousands of terms. These terms are available in an online terminology bank: www.arabization.org.ma.

Two promising projects to compile historical dictionaries of the Arabic language have been launched recently in Cairo (by the Federation of the Arabic Academies) and in Doha (by the government of Qatar). Both projects are using modern lexicographical methods based on a computerized text corpus.

13. Conclusion

The Arabic World was the cradle of lexicography. The oldest dictionaries were made in Sumer and Egypt (Haywood 1956, 5–7). The Arabic language is now an international language and one of the six official languages of the United Nations. Arabic lexicography has a rich history, has produced a great number of dictionaries of all types and will undoubtedly enjoy a promising future.

Acknowledgment

The author would like to thank Prof. Maureen Crisick, who was kind enough to review this paper.

References

Abu Rīda, Mohammad Abd Al-Hadi. 1950. *Rasā'il Al-Kindī Al-falsafiyya* (*Al-Kindi's Philosphical Monographs*). Cairo: Dār Al-fikr Al-ᶜarabī.

Academy Academy of the Arabic Language. 1972. *Al-muᶜğam Al-wasīṭ*. 2nd ed. Cairo: Academy of the Arabic Language.

Aḥmad, Abd Al-Samiᶜ. 1974. *Al-maᶜāğim Al-ᶜarabiya*. 2nd ed. Cairo: Dār Al-fikr Al-ᶜarabī.

Al-ᶜAdnanī, Mohammed. 1984. *Muᶜğam Al-'aġlāṭ Al-luġawiya Al-muᶜāṣira*. Beirut: Kitāb *Al-hurūf* Librairie du Liban.

Al-Aḥmadnakrī, Abd Al-Nabī Ibn Abd Al-Rasūl. 1997. *Dustūr Al-ᶜulamā'*. Beirut: Librairie du Liban.

Al-Ahwānī, Ahmed Fu'ād. 1998. *Ibn Sīnā*. Cairo: Dār Al-maᶜārif.

Al-Āmidī, Saif Al-Dīn. 2009. *Al-mubīn*. Edited by Hasan Al-Šafiᶜī. Cairo: Maktabat Wahba.
ALECSO. 1989. *Al-muᶜğam Al-ᶜarabī Al-ʾasāsī*. Coord. by ᶜAli Al-Kasimi. Tunis: ALECSO.
Al-Fārābī. 1970. *Kitāb Al-ḥurūf*. Edited by Muhsin Mahdi. Beirut: Dār Al-mašriq.
Al-Farāhīdī. 1980. *Al-ᶜayn*, Vol. 1, Edited by Maẖzūmi and Sāmrrāʾī. Baghdad: Al-Rashid Publications.
Al-Fayrūzabādī. 1986. *Al-qāmūs Al-muḥīṭ*. Beirut: Al-Risāla Foundation.
Al-Ḥamawi, Yaqūt. 1980. *Muᶜğam Al-buldān*. 3rd ed., 7 vols. Beirut: Dār Al-fikr.
Al-Jawhari, Ismāᶜīl. 1990. *Al-ṣiḥāḥ*. Edited by Aḥmad ᶜAṭṭār. Beirut: Dār Al-ᶜilm Liʾl-malāyīn.
Al-Jurjānī, Al-Šarīf. 1983. *Kitāb Al-taᶜrīfāt*. Beirut: Dār Al-kutub Al-ᶜilmiya.
Al-Kasimi, Ali. 1983. *Linguistic and Bilingual Dictionaries*. Leiden: E.J. Brill.
Al-Kasimi, Ali. 2003. *Al-muᶜğamiyya Al-ᶜarabiyya*. Beirut: Librairie du Liban.
Al-Kasimi, Ali. 2014. *Ṣinaᶜat Al-muᶜğam Al-tārixī*. Beirut: Librairie du Liban.
Al-Kattani, Mohammad. 2012. *Mawsūᶜat Al-muṣṭalaḥ fī Al-turāṯ Al-ᶜarabī: Al-dinī, Al-ᶜilmī, Al-ʾadabī*. Casablanca: Dār Al-ṯaqāfa.
Al-Razī. 1967. *Muḫtār Al-ṣiḥāḥ*. Beirut: Dār Al-kitāb Al-ᶜarabī.
Al-Tabrīzī, Al-Ḫaṭīb. 1983. *Taḥḏīb ʾIslāḥ Al-manṭiq*. Beirut: Dār Al-ʾĀfāq Al-Ğadīda.
Al-Ṯaᶜālibī. 1996. *Fiqh Al-luġa*. Edited by Faʾiz Mohammad and Emile Yaᶜqūb. Translated by John Haywood. Beirut: Dār Al-kitāb Al-ᶜarabī.
Al-Tahānawī, Mohammad Ali. 1996. *Kaššāf Iṣṭilāḥāt Alf-unūn wa Al-ᶜulūm*. Beirut: Labrairie du Liban.
Al-Zamaẖšarī. 1979. *ʾAsās Al-balāġa*. Edited by Abd Al-Raḥim Maḥmūd. Beirut: Dār Al-maᶜrifa.
Baalabaki, Ramzi. 2014. *The Arabic Lexicographical Tradition: From the 2nd/8th to the 12th/18th Century*. Leiden: E.J. Brill.
Boutaleb, AbdulHadi. 2006. *Muᶜğam Taṣḥiḥ luġat Al-ʾiᶜlām*. Beurut: Librairie du Liban.
Fajjāl, Mahmūd. 1987. *Al-iḥtiğāğ fī Al-ᶜarabiya in Al-ᶜarab*, Vol. 5, 23rd year.
Ferguson, Charles A. 1959. "Diglossia." *Word*, 15 (2): 325–340. https://doi.org/10.1080/00437956.1959.11659702
Ḥamad, Abdullah. 1992. "Some Remarks on the Conceptual Foundations of the Arabic Linguistic Tadition." *Al-lisān Al-ᶜarabī*, 36.
Haywood, John A. 1956. *Arabic Lexicography: Its History, and Its Place in the General History of Lexicography*. Leiden: E.J. Brill.
Ibn Al-Sikīt. ʾIslaḥ. *Islaḥ Al-mantiq*. Edited by Aḥmad Šakir and ᶜAbdessalām Harūn. Cairo: Dār Al-maᶜārif.
Ibn Duraid, Mohammad. 1987. *Ğamharat Al-luġa*. Edited by Ramzi Baalabaki. Beirut: Dār Al-ᶜilm Liʾl-malāyīn.
Ibn Faris, Ahmad. 1991. *Al-Maqayīs*. Edited by ᶜAbd Al-Salām Hārun. Beirut: Dār Al-Ğīl.
Ibn Manẓūr. 1994. *Lisān Al-ᶜarab*. 3rd ed. Beirūt: Dār Ṣadir.
Ibn Sīnā. 1978. *Tisᶜ Rasāʾil fī Al-ḥikma wa Al-ṭabiᶜiyāt*. Edited by Al-ᶜabd. Cairo: Al-nahḍa Al-ᶜarabiya.
Iẖwān Al-ṣafāʾ. 2004. *Rasāʾil Iẖwān Al-ṣafāʾ*. Beirut: Dār Ṣādir.
Iqbāl, Aḥmad Al-Šarqawī. 1987. *Muᶜğam Al-maᶜāğim*. Beirut: Dār Al-ġarb Al-ʾislāmī.
Jamiu, Fatai Owolabi. 2014. "Science of Arabic Lexicography: A Survey of Its Emergence and Evolution." *Journal of Education and Practice* 5 (14): 60–65.
Kaḥḥāla, ᶜOmar Riḍā. 1982. *Aᶜlām A-lnisāʾ*. 4th ed. Beirut: Muʾassasat Alrisāla.
Larousse. 2008. *Larousse des noms propres*. Paris: Larousse.
Maᶜlūf, Louis. 1908. *Al-munğid*. Beirut: Dār Al-Mašriq.
Ould Bah, Mohammad El Moukhtar. 1996. *Tārix Al-naḥw Al-ᶜarabī* (*History of Arabic Grammar*). Rabat: ISESCO.
Robins, Robert Henry. 1967. *A Short History of Linguistics*. London: Longmans.

Sledd, James H., and Gwin J. Kolb. 1955. *Dr. Johnson's Dictionary: Essays in the Biography of a Book*. Chicago: The University of Chicago Press.

The Glorious Quran. Translated by Marmaduke Pickthall.

CHAPTER 2

Terminology standardization in the Arab world

The quest for a model of term evaluation

Hassane Darir, Abdelhamid Zahid & Khalid Elyaboudi

Standardization is a polysemous term. It refers at the same time to the standardization of terms used in scientific and technical fields as well as the process of elaborating *standards* (or norms) in industry and other economic sectors. In fact, most people immediately think about *ISO standards* when they hear the term standardization. However, an encyclopedia devoted to scientific, legal, Sufi and technical terminology aims primarily to standardize terms, and this is the focus of the present paper. Whether standardizing terminology itself or standardizing the principles and techniques of managing terminology the ultimate goal of the process is always quality control and assurance. In the Arab World, the standardization of the terminology belonging to a particular subject field, be it a science (such as chemistry, linguistics and physics), art (such as painting), doctrine (such as Marxism) or vocation (such air-traffic and agriculture), attracts more attention than the standardization of terminological principles and techniques or the elaboration of industrial standards. Indeed, whether in language academies, specialized periodicals or in conferences organized by language academies, the Bureau for the Coordination of arabization in the Arab World (BCAAW) or by universities, the terminological issues and problems in the Arab world are greatly discussed.

This article discusses standardization particularly with respect to the Arab World and examines its motivations, core principles, and problems. It also outlines the various attempts that both specialized institutions and individuals have made to standardize Arabic terms (e.g. Lakhdar Ghazal 1977; Hamzaoui 1986a; Heliel 1987 and Darir 2004). The aim is to suggest guidelines that, with further elaboration, could serve as a comprehensive model for the standardization of terms not only in Arabic but also in other languages.

Keywords: Arabic terminology, standardization in the Arab world, standardization of Arabic scientific and technical terms, terminology standards an norms, ISO standards, models for the standardization

https://doi.org/10.1075/hot.2.03dar

1. Introduction: The problem

The issue of standardizing Arabic terms has been repeatedly discussed in language academies, periodicals and conferences to the extent that some may wonder whether there is still room for further investigation. In reality, the terminological situation in the Arab world is so complex and diverse that it can be compared to a Tower of Babel. Terminology standardization in Arabic is therefore far from complete and justifies further methodological investigation. The proliferation of synonymous terms in Arabic is caused (a) by linguistic factors, and (b) by the diversity and non-systematic nature of methods of word formation. The use of term evaluation criteria that identify terms that serve terminological purposes most effectively, and therefore are most likely to survive, will help to reduce the incidence of non-motivated synonyms.

Every scientist knows that one of the requirements of a strict science is a well-defined and agreed-upon terminology. But frequently modern Arabic writings dealing with various branches of knowledge do not show any conformity or rigor in their terminology. The standardization of Arabic terms is certainly no small undertaking. There are hundreds, if not thousands of foreign terms that enter the Arabic language each year, and coping with them can be overwhelming. Specialists ascertain that each day more than 50 new terms appear (Al-Kasimi 1987a, 77). Al-Khatib (1992, 164) reports that at least 5,000 terms are coined every five years in the domains of civilization and general culture, terms that are relevant to the layman and are not restricted to specialists. Some estimate that there are 2,500,000 terms in circulation today (*Encyclopedia Universalis*). Felber (1980b, 67) and Al-Kasimi (1980a, 8) estimated that there are more than four million concepts for electrical engineering alone, while the most comprehensive dictionary in any language does not exceed 600,000 words. Indeed, as of 1989, there were 616,500 words in *The Oxford English Dictionary*, the largest dictionary in the English language. Obviously, dictionaries can cover only a small portion of the number of terminological concepts in the realm of human knowledge. This results in a discrepancy between the number of recognizable concepts and that of available terms in any language and the subsequent problem of polysemy.

When a concept originates in one linguistic community, translating the original term into other languages (including Arabic) can be a real challenge. Multiple translators come up with their own unique formulation, which results in synonyms.. Frequently an Arab translator or lexicographer is faced with one of two situations: (1) either an adequate Arabic equivalent term doesn't yet exist, or (2) there is a set of competing terms already in use, none of which has gained total or even partial agreement among the users. Both these situations occur within a single country. When we consider the whole Arab world, the incidence of these problems is even higher.

Al-Kasimi (1978, 15) observed that "In spite of the Arab's pride in the Arabic language as one of the oldest and richest international languages, we admit that it faces

a serious problem resulting from a considerable shortage in technical and scientific terminology". This feeling is shared by many other scholars. But equally interesting is the other aspect of the aforementioned terminological situation: competing terms. Indeed, the abundance of synonyms or pseudo-synonyms for general words is sometimes paralleled by a multiplicity of terms referring to the same concept in modern Arabic, which violates the principle of one concept-one term (the univocity principle). This situation is further aggravated by the lack of proper scientific definitions in classical Arabic (As-Sāmarrā'ī 1982, 114)

The examples are really too numerous to be given here. Even within our own field (linguistics), terms such as "semiotics", "morpheme", "linguistics", "phonology", "pharyngeal", etc. have sometimes been translated by more than ten terms (Darir 1993, 155). This terminological confusion has also been observed by Al-Khatib (1983, 87) in his study of five botanical dictionaries, by Heliel (1987a, 50), Darir (1993, 155) and Esber (1998, 3) in the field of linguistics and by Lakhdar Ghazal (1977, 19–32), Abou Abdou (1984), Al-Hilālī (1988, 219–240), Al-Khatib (1997, 9–32) and Messaoudi (1997, 34–39) in their contrastive studies of different scientific fields. To add to the terminological confusion caused by synonyms, some Arabic terms are used interchangeably to refer to a multitude of concepts in modern scientific literature (polysemy). For instance, "*manša*' ", "*muḥtaraf*", "*warša*", "*mašġal*", "*maṣna*ʿ" and "*maʿmal*" are all used equally and interchangeably as translations for "factory", "workshop", "atelier", "plant" and "mill" (Al-Khatib 1997, 28).[1]

As a matter of fact, if there is little internal terminological consistency inside a particular specialty, there is even less terminological consistency when one compares terms across different or even related disciplines. The same concept may be labelled differently in different but related fields. For instance, the terms "pharyngeal" and "nasal" are translated respectively as "bulʿūmī and "'anfī" in the *Unified Medical Dictionary* but as "*maḥḍḥalqī*" and "*ẖayšūmī*" in the *Unified Dictionary of Linguistic Terms* even though the two dictionaries are sponsored by the same authority: the BCAAW. Al-Hilālī (1988, 223–240) provides concrete examples of the terminological confusion and proliferation in three related sciences: (1) medicine, (2) zoology and (3) botany. He shows how a single concept (and term) in a foreign language is translated into Arabic by different terms in the three sciences. For instance, the term "degeneration" is translated as "*tanakkus*", "*inḥiṭāṭ*", and "*iḍmiḥlāl*" in the *Unified Medical Dictionary*, the *Dictionary of Botanical Terms* and the *Dictionary of Zoological Terms* respectively. In a larger survey of dictionaries Al-Hilālī (1995, 63) carried out in 1995, the same term "degeneration" has 17 Arabic equivalents.

1. For more examples, see Lakhdar Ghazal (1977, 24–31).

In literature, this abundance of terms would be considered blissful but in strict sciences, it is a curse. It is as though Arab scientists do not confer with their colleagues about terminology. This is a sad state of affairs since Arabic is a unifying force throughout the Arab world. Any linguistic disagreement will only weaken its ability to fulfil this important role. Communication between the different parts of the Arab world is hindered.

Ultimately, accuracy as one of the requirements of scientific terminology is often missing. Many attempts have been made by scholars, committees, and institutions to rectify the problems. Presently, Arabic resolves problems of the shortage of scientific and technical vocabulary in two different ways (Ḥamād 1983, 8): (1) through the language and scientific academies, associations and institutions, which respect Arabic linguistic norms while transferring foreign terms, and (2) through newspapers, radio, television or the mass media in general, which are not always concerned about the *purity* of Arabic in their search for simple and easy solutions to practical problems nor are they conscious of the principles and methods of terminological work. What is needed is a third way that combines the advantages of the above two methods: (3) the careful consideration and strictness of the language academies and the quick and practical approach of the mass media. The third way is necessary to address two concerns: on the one hand, the increasing terminological stock engendered by ever growing technical and scientific innovation and, on the other hand, the *integrity* and *purity* of Arabic. In today's globalized world, terms that refer to new concepts have to be introduced into Arabic as a living, international language that enjoys a rich linguistic, cultural and scientific heritage. What is also needed is bridging the gap between the standard and the dialectal varieties and between term users and term producers so that the terminologies of different sciences become unified within and between Arab countries. Unfortunately, the situation is far from being totally satisfactory and a lot of work has to be done not only to provide adequate new terms but also to standardize those that are already in existence.

The lack of standardization of terms in Arabic causes serious problems in communication among specialists, between one Arabic state and another, and within international organizations that adopt Arabic as a working language on the basis that it is common to all Arab states. Left unchecked, in the long term, Arabic could even evolve into several distinct languages (Al-Ḥamad 1995, 174–175).

2. Causes of the terminological problem

Various reasons have been advanced to explain the almost chaotic state of Arabic in the scientific and technical domains. Al-Kasimi's 1978 article *Problems of Technical Terminology in Arabic Lexicography* still provides the most detailed account. Al-Kasimi

(1978, 16) distinguishes between "various linguistic and organizational factors that contribute to this chaotic situation" of Arabic terminology. "Linguistic problems are either due to the Arabic language itself (intra-lingual) or to the source language, i.e. the language from which Arabic borrows or translates (inter-lingual)".

In Al-Kasimi's opinion (1978, 16–21), intra-lingual problems include diglossia, multiplicity of dialects, and the richness of Arabic vocabulary. The profusion of synonymy, for instance, is a historically documented fact. Many traditional terms are characterized by vague definitions and, often, play the role of synonyms. For instance, both "*al-ḥanǧara*" and "*al-ḥalq*" can stand as possible translations of "larynx" (Hamzaoui 1986b, 50). Inter-lingual problems, on the other hand, refer to the multiplicity of linguistic sources from which Arabic borrows terms as well as synonymy and polysemy in the source language. Organizational problems include the multiplicity of term producers as explained above, factors relating to Arabic scientific heritage, and the problem of what new terms should be considered acceptable in Arabic. With respect to the multiplicity of linguistic sources, there are striking examples as in the case of "*ṭamāṭim*", which is an arabization of English "tomato" or French "tomate" and "*banadūra*", which is an arabization of the Italian "Pomma Dora" common in Syria and Lebanon (Al-Khatib 1983, 97; Al-Khatib 1997, 10). Another example is the coexistence of "*nitrūǧīn*" from English "nitrogen" and "*azūt*" from French "azote" (Al- Khatib 1982, 747). In linguistics, the French term "accent" and the English "stress", which are synonymous, have given us in Arabic "*nabr*" and "'*irtikāz*" respectively (Hamzaoui 1986b, 51). Thus, loan translation results in different terms in Arabic referring to the same concept. A good example of the pitfalls of calques is provided by the term "*tiyār mubāšir*", which is patterned on the English term "direct current", and "*tiyār mustamir*", which follows the French term "*courant continu*" (Abou Abdou 1984, 65).

Even if we restrict ourselves to only one source language, cases of synonymy and polysemy in that language are likely to transfer into the target language (ᶜOmar 1989, 16–17). Examples of synonymous terms in English include: high/closed, low/open, soft palate/velum in phonetics and componential analysis/feature analysis in semantics. Thus, when forming new words, in addition to considering features particular to Arabic such as linguistic heritage, derivation, blending or arabization, the Arab lexicographer, translator or terminologist has to ensure that problems in the source language are not inadvertently inherited.

Another undesirable influence of a foreign language on terminology occurs when a polysemous word in a source language is translated by a single term in the target language. Obviously, it would be more advisable to render each different meaning by a unique term. This holds especially true in the case of homonyms.[2]

2. For more examples see Hamzaoui (1986b, 51) and Al-Kasimi (1978, 19).

There are also geographical and political factors that contribute to the uncontrolled proliferation of synonymous terms. The Arab world is a vast territory consisting of twenty-two independent Arabic-speaking countries extending from the Atlantic Ocean to the Arabian-Persian Gulf with no real central linguistic authority.

Finally and most importantly, there are linguistic causes that relate to the Arabic language and its various methods of word formation. This is not to say that Arabic is incapable of neologization. In fact, the problem with Arabic terminology is frequently that of over-production. Nonetheless, the derivational mechanisms of Arabic are different from those of so called "modern languages of science", hence the need to systematize and regulate the various processes of Arabic word formation (derivation, compounding, blending, semantic expansion, etc.). Indeed, apart from derivation, which is generally recognized as a key method of word formation, there is no consensus about the role or importance of other word formation methods. And there is no agreed strategy about how to implement the various word formation processes in any orderly and systematic way.

There are also sociolinguistic factors of the target language community to take into consideration. For example, it is very difficult to successfully introduce Arabic terms in a subject area that is taught almost exclusively in foreign languages; the foreign equivalent terms are likely to become entrenched. Modern scientific terms produced in Arabic can be misunderstood particularly by speakers who are unfamiliar with some of Arabic's productive features, who are not well informed about the science in question or who are not introduced to the principles and aims of terminology, leading to general confusion and dissatisfaction.

Arabic, it appears, is doomed to have several words for the same entity, in many cases at least. Quite surprisingly, Arabic terminologies are frequently characterized by various dualities: duality of native Arabic and borrowed terms that have been Arabized (e.g. "*hātif*" – "*tilifūn*"/ 'telephone', "*mirqāb*" – "*tiliskūb*" / 'telescope'), duality of terms derived from English and those derived from French (e.g. "*aids*" – "*sida*"), of single and compound words (e.g. "*miḥrār*" – "*miqyās al-ḥarāra*" / 'thermometer'), duality of dialectal and 'formal' words (e.g. "*bās*" – "*ḥāfila*" / 'bus'), and so forth.

3. Why standardization?

Some people believe that communicating successfully is the only thing that matters, and that terminological problems or inconveniences such as synonymy, polysemy, homonymy, etc. are secondary issues. Appropriate terms are necessary for communication to be effective. As early as the eleventh century, al-Khawārizmī (d. 387

H.),[3] in a pioneering book *Mafātīḥ al-ʿulūm*, describes terms as "the keys to science" (p. 11). Of course, it is preferable to use one term for one concept (the bi-univocity or monosemy principle) especially in scientific and technical fields such as medicine and air traffic control. One can imagine the ramifications of terminological confusion in these fields: mis-diagnosis or even worse in the former, and catastrophic accidents in the latter. Even if communication is not seriously impeded by terminological problems, it is at least rendered inefficient, with people having to master multiple terms for the same concept just to be able to speak to each other, to understand the media, to conduct business, and so forth.

A language that has a dozen names for a single entity is inefficient. For instance, Arabic has 23 terms for what is called in English linguistics (Mseddi 1984, 72), 24 according to Ghalafān (1998a, 147). At the other extreme, there is no morphologically single equivalent for "polyglotism" (for which the term "*alsuniyya*" could have been devoted) or for "*diglossia*". Despite all the efforts of the linguistic academies, the institutions, and individuals, this type of terminological confusion still persists.

4. Standardization or unification?

The term "standardization" is by far the most common term in the Anglo-Saxon world to refer to the process of achieving the desired goal of one concept-one term. In the Francophone speaking countries, it is "normalization". In the Arab world, it is the Arabic equivalent to "unification" that is the most common as attested by the so-called *Unified Dictionaries* series issued by the BCAAW and by a number of articles published in *Al-Lisān Al-ʿArabī* by the same bureau. No distinction between "unification" and "standardization" is generally recognized in the works of the same bureau for instance (Samaᶜna 1998, 45).

At this stage, however, it may be useful to draw a distinction between the Arabic terms for "standardization"[4] or "normalization", on the one hand, and "unification",[5] on the other hand. The two terms can be considered as synonymous if we only take into account the end-product of the process in question. However, strictly speaking, the two terms are not synonymous (Samaᶜna 1998, 45; Hamzaoui 1986b, 58, 60–68).

---

3. Hegira refers to "the flight of Muhammad from Mecca to Medina in 622 A.D., marking the beginning of the Muslim era" (The American Heritage Dictionary of the English Language 2000).

4. For standardization, the Arabic equivalents "*tanmīṯ*" (from French "*normalization*", e.g. Hamzaoui 1986, 57), "*taqyīs*" and "*ma'yara*" (from English "standardization", e.g. Samacna 1998, 43) have been suggested. Thus, 'standard' is "*qiyāsī*", "*namaṭī*" or "*miᶜyārī*".

5. "Unification" is the English translation of "*tawḥīd*" in Arabic.

Unification refers to the process of achieving the terminological principle of monosemy by whatever method is available, be it statistical, logical or linguistic. For instance, the term may be listed in the majority of consulted sources, may be preferred by the majority of participants in an arabization conference by vote or unified by evaluative criteria. Interestingly, in terminology, standardization can mean either unifying the criteria, i.e. the principles and the methodologies according to which terms are formed or documented, or unifying the terms themselves (i.e. selecting one term among synonyms to express a specific concept) on the basis of such pre-established criteria (Al-Kasimi 1989, 78; Felber 1980b, 66). Thus, standardization refers to the process of achieving the desired goal of one concept-one term primarily through objective terminological and linguistic criteria that can be statistically measured. The use of such terms in the light of the previous distinction can only enrich the Arabic tradition in terminological research.

The two methods of achieving the one concept-one term principle in terminology are normally complementary. Logically, however, standardization by specific criteria precedes the work of terminology standardization committees, which are usually composed of subject specialists and terminologists. Sometimes the work of a standardization committee is restricted to decisions concerning preferred terms. In other cases its work may involve the definitions of the concepts as well. Naturally, terminological standardization as a process need only be invoked when there is a need to denote a concept in Arabic for which there is either no existing term or for which any existing expressions, such as borrowed terms, are unacceptable.

5. Arabic efforts in the field of terminology standardization

The problem in reviewing the previous works pertaining to the production and standardization of Arabic scientific and technical terminology is how to put them into a logical order. Methodologically, one can start by considering all the works (books, articles, theses, etc.) that have been published in the field, however, this arrangement is already available in annotated bibliographies. Alternatively, one can consider all the institutions (academies and organizations) and individuals that have been active in the field. Although this approach gives a more concise picture of the field and stresses the official or semi-official recommendations as opposed to individual suggestions, it remains far from being perfect. Ideally, one ought to consider not so much the works of institutions and scholars in coining and / or attempting to standardize Arabic scientific terms as the particular recognizable methodologies represented therein.

Recapping, there are three types of problems in standardizing Arabic terms. Similarly, suggested solutions range from linguistic adaptations to political decisions via organizational procedures. Naturally, the mere act of describing these problems is the

first step towards finding solutions. For instance, if the major problem is the lack of a central authority in charge of terminology then the establishment of such an authority is an obvious solution, etc. We have grouped the suggested solutions into the following categories, based on the framework by Al-Kasimi (1978, 15–24):

a. Organizational suggestions call for legal as well as administrative measures to centralize, coordinate and promote terminological activities in the Arab world;
b. Technical and human resources could be optimally utilized to establish a pan-Arab term bank (and thesaurus), teach the general theory of terminology in Arabic universities, and disseminate standardized terms;
c. Political solutions recommend passing laws to safeguard Arabic and make its use obligatory in all domains including higher education;
d. Inter-linguistic solutions advocate the elaboration of a unique transcription and transliteration system between Latin and Arabic sounds and letters, to support translation from and into Arabic;
e. Intra-linguistic solutions stress the importance of unifying the methodologies of term formation and establishing clear criteria for evaluating terms in order to deal with situations of synonymy or undesirable influx of foreign terms. A unified Arabic scientific and technical terminology requires clear criteria for evaluating terms.

Undoubtedly, these suggestions, if implemented, will help to solve terminological problems and lead to a greater standardization of Arabic terminology. Success is, however, contingent on the coordinated efforts of terminologists, translators, lexicographers, politicians and teachers, as well as on the development of an Arabic methodology of term production and standardization. In the next sections, we provide an overview of Arabic works in the field of terminology standardization, with an emphasis on criteria for term evaluation and standardization.

Calls to unify scientific and technical terms in modern Arabic can be traced back to the end of the First World War. In order to overcome the lack of coordination of efforts in the field of Arabic terminology, many linguists and scholars called for the standardization of Arabic terms. As early as 1924, Al-Khānī, a member of the Arabic Language Academy of Damascus (ALAD), which was known as the Arabic Scientific Academy, observed and criticized the confusing terminological situation in Arabic (especially as far as medical terms are concerned), and advocated the standardization of terms (Al-Zargān 1996, 69). The movement to unify terms in Arabic has strengthened ever since not only in the ALAD but also in the Arabic Language Academy of Cairo (ALAC). The latter promoted terminology standardization, raising the awareness of academics, especially between 1955 and 1961 (Hamzaoui 1986a, 102; Al-Zargān 1996, 70). Hamzaoui (1986a, 102) reports that Al-Shihābī, an active member of the

ALAD and the ALAC, was the first to raise the issue of the standardization of Arabic terms in a broader perspective and to document all Arabic individual and official attempts to unify these terms from 1919 to 1953 (Al-Shihābī 1955; 1959). Al-Shihābī also explained the causes of the terminological problems, which he attributed to the lack of communication between translators and authors in the various Arab countries. He reiterated his appeals for unification in another book titled *Al-Muṣṭalaḥāt al-ʿIlmiyya wa al-Faniyya fī al-Luġa al-ʿArabiyya fī al-Qadīmi wa al-Hadīṯ* ('Scientific and Technical Terms in Arabic: the Past and the Present'), which was first published in 1955 and reprinted in 1965.

The first official texts at the pan-Arabic level to include a call for a unified terminology were in the 'Cultural Convention' between the Member States of the Arab League approved by its Council in Cairo in 1945. The Cultural Unity Convention, adopted by the Council of the Arab League in 1964, states that "the Arab States agree to seek the standardization of civilizational and scientific terminology and to assist the arabization movement for the enrichment of Arabic while preserving its character" (Abid & Marrakechi 1988, 3).

However, the first real attempt at a pan-Arabic level to coordinate the efforts of arabization and solve the related problems of terminology occurred in 1961 during the first arabization conference which was held in Rabat. During this conference, the BCAAW (at that time called the Permanent Bureau for Arabization in the Arab World) was established. Since then, the bureau has played a major role not only in compiling unified dictionaries but also in producing terms where they lack and in fostering terminological activities. In particular, the BCAAW organized two conferences during which the methodologies of Arabic term production and standardization were discussed. Indeed, the Bureau became conscious of the fact that in the absence of generally agreed upon criteria for evaluating terms, arabization conferences were reduced to mere debates between the advocates of arabization and the purists (advocates of pure Arabic), and when the latter prevailed, the conflict focused on the proper method of term production (derivation, blending or semantic extension) (Hamzaoui 1986b, 21).

The first methodology conference organized by the BCAAW was held in Rabat in 1981 under the title of *Conference on the Unification of the Methodologies of Producing Arabic Scientific terms*. Many Arab scientific and linguistic institutions (including the four academies, the Institute of Studies and Research for arabization and the Library of Lebanon) were invited and the conference resulted in a rather concise document with 18 basic principles for how to choose and coin scientific terms. The recommendations of the conference were published in many volumes of *Al-Lisān Al-ʿArabī* including Volume 18 (1981, 175–178), and Volume 39 (1995, 339–341), and were reproduced in many other sources (including Ḥijāzī 1993b, 251-254 and Darir 2004). The 18 recommendations constitute to some extent the total sum of the various methodologies that

have emerged since the beginning of the 20th century (Samaᶜna 1993, 167). Of the 18 recommendations, 12 are particularly relevant as criteria of term evaluation. Items 1 and 6 are translated below:

1. There must be some *appropriateness*, *association* or *similarity* between the literal and conventional (terminological or technical) meaning of a term. A term does not have to reflect by its form all of its scientific meaning;
2. In using the various linguistic means to generate new scientific terms, priority should be given to *heritage terms*, then to *neologism* including *semantic extension*, *derivation*, *arabization* and *blending*.

These recommendations were generally well received but not unanimously. Fassi Fehri (1986, 358–360, 406), in particular, was very critical of the preference of heritage terms over neologisms even though that preference was advocated by most, if not all, language academies in the Arab world.

The second methodological conference, which was titled *Methodology of Producing Arabic Terms and Ways of Disseminating Unified Terms*, was held in Amman in 1993. The proceedings of the conference together with its seventeen recommendations are published in *Al-Lisān Al-ʾArabī* Volume 39 (1995, 335–338). Two items in the recommendations are particularly worth mentioning:

1. The participants in the conference approve the principles that had been agreed upon in the first methodological conference;
2. …some scale be devised for the evaluation of terms based on the scored points in each of the [following] four criteria:
    a. consistency and widespread use;
    b. ease of use (the fewer letters a word contains the better);
    c. adequacy (judged by the number of subject fields where the term is used);
    d. productivity (judged by the number of derivatives produced from the term).

In the seventh arabization conference held in the Sudanese capital Khartoum in 1994, the previous suggestion for devising "a practical evaluative methodology for the unification of terms" was re-based on six criteria (*Al-Lisān Al-ʾArabī* 1995, 39: 343):

1. consistency and widespread use of good Arabic;
2. ease of use (defined as ease of pronunciation);
3. adequacy (defined as the parallelism between Arabic and foreign terms);
4. preferring heritage terms to neologisms;
5. preferring Arabic terms to colloquial and foreign terms;
6. productivity.

Up to 2015, Alecso's BCAAW has compiled forty dictionaries in its collection of *Unified Trilingual Dictionaries*, which are the result of periodical arabization conferences. These dictionaries comprise more than 140,000 trilingual terminological entries in English, French and Arabic in the subjects of general, higher and technical education in addition to various glossaries published in its journal *Al-Lisān Al-ʾArabī* . As of December 2014, the Bureau had published 75 issues of its journal, some of which contain two parts.

Before terminographical works are considered as unified dictionaries at the BCAAW, they go through different stages (Samaᶜna 1998, 45):

a. First, a trilingual (English-French-Arabic) dictionary in manuscript is prepared by agreement between the Bureau and some specialized academic institution in the Arab world. The latter acts as the implementer of the dictionary project to its final stage. English is considered as the SL, French and Arabic as TL. Frequently, the manuscript contains Arabic and French glossaries, but no definitions;
b. The manuscript is sent to the terminological institutions in the Arab world (academies, universities, etc.) to make comments;
c. A conference of experts is held to examine the manuscript in the light of the comments the BCAAW has received;
d. The manuscript is finalized taking into account the observations of the experts, and sent back to the specialized institutions and scholars for further comments;
e. An arabization conference is held to examine the dictionary as well as other dictionaries that are submitted to the conference;
f. If a sub-committee at an arabization conference adopts the dictionary, it is considered as unified after undergoing all the improvements.

The Arabic language academies, in general, and the ALAC, in particular, contributed "to the theorization of terminology and has issued since 1984 an important list of resolutions (List of Resolutions Concerning Scientific Terms in Fifty Years – Cairo 1984) which can be considered as a primary element in a project for modern Arabic terminology" (Abid & Marrakechi 1988, 5). The ALAC seeks to develop Arabic, simplify its grammar and enable it to express scientific and technical terms. Decisions in this domain include legitimizing the derivatives from the dual and the plural as in "*šafatānī*" ('bilabial') and *"ʾasnānī"* ('dental') and forming the plural from a verbal noun as in "*šuʾāʾāt*" ('radiations'). In this respect, the ALAC has been one of the vehement advocates of linguistic *analogy* in the production of scientific terms (Al-Khatib 1982, 741). This can be taken as one of its major, most useful and valuable contributions (Sāra 1989b, 157). In this way, by analogy to existing words, it has extended the productive (or even not so productive) word-patterns to the maximum, by taking inspiration from the works of ancient grammarians, recorded cases of the phenomena in question and the general attitudes of the modern writers of Arabic (Al-Ḥur 1994,

173–174). The decisions of the ALAC have been frequently cited such as in Al-Tūnjī and Al-ʾAsmar (1993, 743–877), Ḥijāzī (1993b, 237–247), Sāra (1989b, 157–160), Chawqui Amīn and Al-Turzi (1989), Khalaf-Allah and Chawqui Amin (1963), the series *Sets of Scientific and Technical Terms Approved by the Academy*, and of course the ALAC' journal.[6] Many Arab linguists and grammarians, both ancient and modern, have already observed such phenomena, but these were considered as linguistic phenomena not as regular processes.

ALAC's approach to term formation and unification is to translate foreign terms by first looking for a corresponding Arabic term from the linguistic heritage or traditional sources. This word formation process is known in Arabic "*al-turāṯ*". Sometimes new meanings are given to obsolete words and this is known "*al-maǧāz*", i.e. 'semantic extension'.[7] If none of these work, it forms new terms following known word patterns (derivation). If these methods do not product an acceptable term, a neologism is formed through blending, compounding,[8] or by arabizing (i.e. borrowing) the foreign term, preserving as far as possible the word patterns of Arabic. Further methods include explanatory translation or paraphrasing of terms as in translating "euthenics" by what in backward translation means "the doctrine of improving the human surrounding".

From 1957 to 1987, the ALAC produced some 48,000 terms that were first published in its journal and then reproduced in sets of fairly regular yearly volumes called *Sets of Scientific and Technical Terms* treating different branches of science (Haroun 1990, 5). This gives an average of 1,600 terms a year during that 30 year period. However, the number of terms approved by ALAC has constantly increased each year, from 600 terms in 1970 to 4,000 terms in 1971 to 5,000 terms in 1973 (Sāra 1989b, 174). The aforementioned sets of yearly published scientific and technical terms started in 1957 with the first volume. By 2007, 47 volumes had been published in the series. With a current average of 3,500 terms a year, we can safely assume that ALAC has produced more than 200,000 terms in 55 years.

The ALAD did not come up with clear, unanimous decisions in the form of rules or guidelines for the production of terms apart from stressing the importance of the "four rules" (i.e. heritage, derivation, blending and arabization) (Hamzaoui 1988, 51). It is not possible, for instance, to know exactly when to resort to heritage, to derivation, to blending or to arabization even though it was understood in the minds of the academics that these processes should be given a certain order. For instance, the search for words in the linguistic heritage should precede the production of new terms, and

6. By 2007, 103 volumes of the journal had been issued.

7. As in "*ṣarḥ*", which originally meant a tall building, but is now used for skyscraper.

8. e.g. 'hemichordate' = "*al-niṣf ḥabliyāt*" for a low vertebrate group.

arabization should be used as a last resort, and so forth. (Hamzaoui 1988, 51). The efforts of the Academy were scattered in various articles published in the Academy's periodical. Noteworthy in this respect is Jamīl Ṣalība's article published in 1953 in the Academy's Journal (Ṣalība 1953, 28 (1): 18–28). Ṣalība explains that heritage as a method of term production has priority over the other methods. Heritage is to be followed by semantic extension, derivation, and arabization, in this order. These four methods together with the conditions and constraints governing their use yield what he calls the four rules of term production.

According to the Iraqi Academy of Science (IAS), the production of new terms, as envisaged since its establishment, "may be achieved through derivation or through arabization or through both of them. Recourse to blending can only be made if necessary. No word should be derived without first checking for an already existing word with the same meaning. On the other hand, it is possible to Arabize a term even in the presence of a corresponding Arabic term" (Sāra 1989b, 162). The same statute stipulates that "Common words are to be preferred to obsolete or outmoded words" (Sāra 1989b, 162). However, in fact, the IAS was so biased towards the use of Arabic terms that sometimes it opted for rare or unknown words (ʿOmar 1989, 15). Indeed, sometimes the academy opted for rare words even when it was presented with clearer terms as in the case of railroad terminology.[9] Al-Malā'ika 1995, a member of the IAS, believes that, of all existing words, archaic and obsolete words (and all those of restricted use) are more suitable for conveying new scientific and technical concepts since, by definition, their meaning is specialized or restricted. Consequently, it may be convenient to prefer the obsolete or archaic words to the common ones in the production of new terms to avoid ambiguity resulting from polysemy. Nonetheless, there is a marked tendency for the academy to prefer single terms over the complex ones, and this is a sound terminological criterion in line with the economy principle.

Many of the tendencies and preferences expressed by the Academy in the past, in particular preferring rare or obsolete words to common terms, have been modified or revised by its Arabic language committee.

The practical methodology of the Arabic Language Academy of Amman – Jordan (ALAA) in implementing a terminological project is to entrust a specialist with the task of collecting the foreign and Arabic terms in a specific field or branch of knowledge. If necessary, the specialist can suggest his/her own Arabic equivalents to the foreign terms. Then the project is submitted to a new constituted technical committee for comments and refinement. Once this is done, the project is submitted to the committee of terms, whose decisions are almost final, for further improvements, coordination

9. For examples, see the academy's website: www.iraqacademy.iq/PageViewer.aspx?id=5

and standardization in the light of previous decisions of the Academy. Finally, the project is presented to the council of the Academy for study and approval (Al-Ṭawīl 1995, 266). Once all this is achieved, terms are considered as unified on the national level and can be sent to the Arabic institutions that are likely to use them and to the BCAAW for standardization on a pan-Arab level.

Since 1989, the ALAA has also worked on the development of a term bank to store and disseminate standardized terms emanating from the ALAA and from other specialized Arab institutions (Al-Ṭawīl 1995, 225). The ALAA may well be the first language academy in the Arab world to have developed a term bank.

The Union of Arabic Academies (UAA) was established in 1971 in Egypt between the three Arabic academies existing at that time: the ALAD, the ALAC and the IAS. The UAA has worked on the standardization of certain specialties by organizing a number of conferences such as the Damascus conference devoted to legal terminology (1972), the Baghdad conference devoted to the terminology of petroleum (1973), and the Tunis conference devoted to medical terminology (1992) (Al-Ṭawīl 1995, 236). It has also held other conferences relating to the Arabic language in general or to specific issues about terminology and arabization such as the conference in ʿAmman that was devoted to the discussion of Arabic terms in the last quarter of the 20th century (Sāra 1989b, 171). In this respect, the UAA does almost the same work as the BCAAW. These two sometimes competing efforts have resulted in some duplicate or overlapping work (Al-Ṭawīl 1995, 236), a situation that has potentially contributed to fragmentation in Arab terminology.

The second half of the 20th century witnessed increased activity of individuals in making concrete suggestions, proposing methods and developing guidelines for the standardization of Arabic terms. Three examples will be briefly discussed here: (1) Lakhdar Ghazal (1977), (2) Hamzaoui (1985; 1986b), and (3) Heliel (1987).

As early as 1977, Lakhdar Ghazal (1977, 59–61) synthesized the criteria of term selection proposed by the Arabic language academies on various occasions into one methodology. Ghazal's criteria fall into two categories: (1) linguistic and (2) sociolinguistic. Linguistic criteria include lexical, structural and semantic criteria. The lexical and structural criteria are objective and consequently relatively easy to measure. Sociolinguistic criteria in general are more subjective and therefore less measurable; an exception is the criterion of usage, which can be statistically measured.

Ghazal's evaluation framework is one of the earliest. He developed it three years before the *Methodology Conference on the Unification of the Ways of Forming Terms* organized by the BCAAW in 1981 and before similar attempts made by Hamzaoui and Heliel.

Hamzaoui exposed his methodology of term evaluation in a number of works (1982/1986a, 1985, 1986b, 1995). The most comprehensive account is found in *The General Methodology for the Translation, Coordination and Standardization of Terms*

(1986b; in Arabic). This work has the advantage of considering the terminological project in its entirety. Hamzaoui derived his methodology from those of the ALAAC, the BCAAW and ISO. In this respect, his work is pioneering not only for reviewing the previous works but also for suggesting a working methodology with criteria that can be quantitatively (arithmetically) measured as an indication of the most adequate term(s).

With respect to the goals of standardization, we observe that Hamzaoui's methodology (1986b, 63–67) is built on four criteria:

1. Widespread use and recurrence (or regularity) of a term. The more sources a term occurs in the better;
2. Manageability, i.e. ease of use of a term. A term has to be easy to pronounce, and comprise a single word (i.e. not complex);
3. Adequacy or suitability. The more specific the meaning of a term the better. In other words, a term that is used in few fields is to be preferred to one that is used in many different fields;
4. Incentives. Terms that are productive in generating derivatives are more likely to be adopted by users.

The advantage of Hamzaoui's methodology of term evaluation is that it evaluates terms through statistical measures. Through concrete suggestions Hamzaoui (1986b, 67) illustrates how his criteria could be implemented and measured arithmetically. However, his methodology takes into consideration only that which can be statistically measured.

About the same time Hamzaoui published his aforementioned book, Heliel wrote an article called *On Linguistic Terms and the Dictionary of Linguistics* in 1987 (in Arabic) proposing some criteria for term evaluation as part of a comparative study in three linguistics dictionaries (namely Bakalla et al. 1983; Al-Khuli 1982 and Mseddi 1984). Heliel (1987a, 57–62) focuses on three criteria: (1) morphological consistency or systematicity, (2) specificity and (3) concision.

1. Morphological consistency or systematicity can be defined as respect of the *derivational family*. A derivational family contains morphologically associated words at the level of stems or derivational affixes and specifies the relationships between them. In practice, this means that in evaluating any Arabic terms that have been suggested as translation equivalents to differently related foreign words, those that preserve such family relationships are to be preferred to those that do not. According to this criterion, the Arabic Linguistic terms "*ḥalq*", "ḥalqī", "*muḥallaq*", and "*taḥliq*" – as translation equivalents of 'pharynx', 'pharyngeal', 'pharyngealized',

and 'pharyngealization' respectively – are to be preferred to terms that do not belong to the same derivational family, as in Bakalla et al.'s dictionary (1983), which uses "*bul'ūm*", "*bul'ūmī*" and "*taḥliq*" (Heliel 1987a, 57);
2. Specificity is defined as "freedom from ambiguity";
3. Concision can be defined as singularity of composition. In practice, this means that a single-word term is to be preferred to a complex one.

Heliel does not explicitly define or explain how to measure his criteria since he was more concerned about the evaluation of dictionaries than of individual terms.

6. Involvement in International Standards Organizations

Concerning involvement by the Arabic community in standards on the international level, the International Organization for Standardization (ISO), is a good example. ISO's work consists primarily in facilitating international coordination and unification of industrial standards. Nonetheless, ISO/TC 37 – *Terminology and other language and content resources*, develops standards that govern the process of terminology standardization. TC37 consists of 33 participating countries and 30 observing countries, of which there are four Arabic speaking countries: two participating (Morocco and Tunisia) and two observing (Saudi Arabia and Egypt). It is difficult to see the real contribution of these countries to that committee. One thing is for sure: they are not what could be described as a driving force. For instance, no system of transliteration from or into Arabic has been issued by ISO and Arabic is not one of the languages in which Standards are normally written nor is it one into which they are frequently translated. Yet in contrast, Tunisia is a member of Infoterm, the International Information Center for Terminology, which is an international body promoting terminology management, demonstrating that Tunisia has a particular interest in terminology harmonization. The level of participation of the Arabic community in international standardization of terminology principles is restricted to the translation of a handful of ISO TC37's recommendations. For instance, in 1983, *Al-Lisān Al-'Arabī*, the BCAAW's Journal, published a translation of ISO's recommendation 1087 (1969) by the Arab Metrology and Standards (1983, 201–214). In 1985, the same journal published another translation of that same recommendation by the Syrian Arab Metrology and Standards (1985, 208–243).

All of this demonstrates that the Arabic community's involvement in international terminology work falls well below expectations, hence the need for an evaluation of Arabic efforts in the field of promoting terminological awareness and in standardizing terminology at the Pan-Arabic level.

7. General evaluation of terminological work in the Arab world

Arab terminologists, linguists and lexicographers, as individuals and as institutions, are well versed in terminological principles and methods and have gone a long way towards promoting terminology as a science and as a practice in the Arab world. They have also tried to coordinate and unify the terminological activities and methodologies between the Arab states and Arab scholars. This is not to say, however, that all expectations have been met. Indeed, although many dictionaries and glossaries have been published, they have not kept pace with the ever increasing need for new, high-quality terms. More terminological work needs to be undertaken, and this work needs to be better coordinated. Indeed, Arab terminological institutions have been criticized for failing to coordinate their work, for adopting a range of methodologies to produce and standardize terms – none of which achieved consensual status, for their inefficiency in implementing terminology projects, their limited resources, and their technical underdevelopment (Al-Ṭawīl 1995, 235–267).

Abid and Marrakchi (1988, 5) explain that: "terminological work in the Arab world is actually done on the basis of principles and methods which lack cohesion, complementarity and accuracy. It is based more on the practical experience of terminologists than on a comprehensive proven terminological methodology". Heliel (1988c, 16) echoes this view when he says: "Not much is known about the qualifications and the preparation of the specialists in the Arab agencies involved in terminology work. They are, most probably, exclusively self-taught with a high linguistic standard in their mother tongue and in one or more foreign languages, but without any systematic training in terminology".

All these factors make terminological projects time consuming, costly and ineffective. According to some scholars (e.g. Khalīfa 1984, 171 and Al-Farḥān 1984, 154), the major failure of the Arabic language academies has been their inability to bridge the gap between theory and practice, or between the term producers (e.g. the academies) and the term users (e.g. university teachers and students).

The best thing that language academies and specialized institutions can do is not produce terms directly, but act as a judge or referee of the terms advanced by translators and terminologists, and also provide these contributors with guidelines and "rules" as to how to produce and standardize terms. In practice, a translator or writer cannot wait for someone or some institution to provide newly formed terms. Only by being proactive can these institutions retain their credibility and integrity. As pointed out by Hans Wehr (Milton 1976, viii):

> The academies have, however, greatly underestimated the difficulties of artificial regulation of a language. The problem lies not so much in inventing terms as it does in assuring that they gain acceptance.

All of these shortcomings and inadequacies call for a constant revision of the methodologies adopted in the field and require adequate suggestions to solve the present terminological as well as related problems (e.g. promoting the use of Arabic at all levels of education, encouraging translation into Arabic, improving Arabic teaching methods, etc.).

The previous attempts and suggestions seeking to standardize Arabic terms remain largely subjective (e.g. biased towards one method of term production, a preference for terms form the Arabic linguistic heritage), lack complementarity and comprehensiveness and ignore the psychological and sociological dimensions of terminology standardization projects. Debates in Arabic terminology frequently revolve round the eternal conflict between the purists, on the one hand, and the innovators (the advocators of lexical borrowing), on the other hand. What is needed is a viable comprehensive model that takes into account the attitudes and expectations of the term users themselves as explained by Darir (2004).

The following model of term standardization based on criteria of term evaluation is an attempt in this direction (Darir 2004). These evaluation criteria satisfy two conditions: (1) *simplicity* of use and *applicability* by any worker in the field of terminology; and (2) *effectiveness*. The first condition is meant to guarantee that any worker in the field reaches the same results on conducting the same evaluation procedure. The second condition is meant to predict the terms that are likely to be accepted by the term users.

8. A viable comprehensive model of term evaluation

In our opinion, a neologism has to satisfy three types of criteria (or conditions) in order to guarantee its acceptability: (1) the *linguistic*, (2) the *terminological*, and (3) the *sociolinguistic* and *psycholinguistic* criteria. These three types of criteria are further divided into the following thirteen criteria:

A. Linguistic criteria

1. Correct linguistic usage

The *linguistic* criteria relate to the *phonetic*, *phonological*, *morphological* and *graphological* acceptability (i.e. *correct linguistic usage*) of the terms according to the morphological and linguistic structures and tendencies that are established or being established in the language. If this first archi-criterion is not fulfilled in a term candidate, the ability of the remaining criteria to justify its acceptability will be weakened. The conditions to be satisfied by terms in this respect can be conveniently formulated in questions and can be further divided into the following:

1a. *Phonetic conditions*. Is the term easy to pronounce? Are all its component sounds a natural part of the language? More importantly, is the term phonetically *maximally distinct* (distinctiveness) from all other terms in the language? Cases of homonymy should be kept to the minimum. In other words, no new term should be phonetically identical to another one that is already present in the language.

1b. *Phonological conditions*. Does the term conform to the phonological rules and constraints of the language? Phonotactic rules about the permitted sound sequences in the language are to be considered here.

1c. *Morphological conditions*. Does the term respect the morphological rules of the language including the proper use of the processes at the disposal of Arabic in the production of words in general and technical terms in particular? This includes conditions relating to derivation, arabization, etc. and the application of these processes as need be according to some order of priority. Does the term conform to the basic inflectional rules of the language in forming the plural, the dual, the tenses, etc.? Is the term in conformity with the established word patterns? Does it allow the case markings typical of Arabic?

1d. *Orthographic and graphological conditions*. Are the basic orthographic rules in the language respected? These include in Arabic the spelling of the Hamza, the final "*tā*' ", etc. Can the term be read appropriately and easily without adding the diacritics marking the vowels?

Many loan words as well as dialectal words will automatically suffer when considering the linguistic criteria. Well-formed Arabic terms, on the other hand, will be privileged on this account. Nevertheless, the communicative requirements for clarity and exactitude may justify the violation of some of the linguistic conditions on terms. This is, in fact, self-adaptation of language to communicative needs and terminological differences. Thus, the term "*ṣawtīm*" ('phoneme') gains in clarity and exactitude what it loses in respect of the linguistic conditions. In the evaluation, if a term satisfies all linguistic criteria, it is credited with the full score of five points. If any one of them is violated, the term does not receive any points.

B. Terminological criteria

The terminological criteria for determining the adequacy of a term relate to terminological properties such as *economy*, *clarity*, *productivity*, *systematicness*, etc. as defined below.

2. Economy, concision or morphological singularity of form

In order to make communication easier, shorter terms are preferred to longer ones and single-word terms are preferred to complex ones. This criterion seems to work in the

opposite direction of that of *transparency*, *clarity* or *explicitness* (discussed below) and the goal is to find a balance between alternative choices and considerations.

As put by Felber (1980b, 69), "Language economy should be a governing principle, i.e. in forming a new term, a greater accuracy of expression very often involves less ease in speaking and understanding. Hence one should not be more precise than the situation requires".

The length, or concision, of a term may be judged by the number of component words and, in case of a single-word term, by the number of component syllables, radicals or letters. We refer to the first as *syntactic simplicity* and the second as *morphological simplicity*. In the evaluation, the number of words or syllables that make up a term, along a graduated scale, is taken into consideration.

3. Transparency and clarity

In terminology, the more immediately and naturally a term suggests its meaning (i.e. the more it is free from ambiguity, and the more the key elements of the meaning are reflected in the term itself) the better. This property of reflecting meaning in the term itself is referred to as *transparency*.

In contrast with the criterion of *economy*, that of *clarity* favors the terms which tend to be longer and which provide maximum information about their concepts since longer terms can capture more information than shorter ones. When applied to Arabic, the criterion of clarity favors terms of Arabic origin since their roots and their morphological patterns typically carry meaning information.

The criteria of transparency and clarity favor those terms that best reflect their meanings through their radicals and/or by their *morphosemanthemes* (*ʾawzān ṣarfiyya*). For the evaluation, terms are credited with five points if the evaluator can respond affirmatively to the following questions: (1) on consulting a good monolingual dictionary, do the radicals of the term suggest the meaning of the term? (2.5 points), and (2) does the morphosemantheme do so? (2.5 points).

4. Frequency or widespread use

Since linguistic habits are known to affect the attitudes of term users, it is important to consider whether the term is already attested in actual usage. This can be quantitatively measured by counting the number of sources where it occurs in a representative predefined corpus. For every source in which the term appears, the term could be given one or two points, depending on the importance that is attached to this criterion without exceeding, however, the full score for any criterion, which is five points.

5. Unequivocalness

What can be called *unequivocalness*, *exactitude*, *precision*, or *specificity* refers to a fundamental principle in terminology: bi-univocity (monosemy). According to this principle, a term designates a single concept or object (within a specific field) and likewise, each concept or object is designated by one and not more than one term. Bi-univocity is meant to reduce cases of *polysemy* and *synonymy* in accordance with the golden rule of terminology: one concept one term.

In the evaluation, if a term unequivocally denotes only one concept, it is credited with the full score of five points. If it refers to more than one concept, no points are given.

6. Productivity and systematicness

Productivity (or *derivational flexibility*) means that a term that allows the largest number of derivatives both within its grammatical category and in other grammatical categories within the same derivational family is preferred. By *systematicness* we mean that all derivatives are expected to be within the same derivational family. Hence, productivity and systematicness are two sides of the same coin. Productivity can be evaluated by the number of derivatives produced from a term.

7. Consistency

Consistency means that a term that is used consistently and with the same meaning across different branches of science is preferred. Hamzaoui (1986b, 66) suggests an evaluation chart that takes into account the number of fields, scientific disciplines, sub-fields, or related fields where a term is used with a different meaning: the fewer fields, the better. For instance, if a term is used in more than one field, where it has a different meaning, then in the evaluation two marks are extracted for each additional field of use.

C. Socio- and psycho-terminological criteria

A purely linguistic (or lexicological) approach to the production and evaluation of terms may only yield terms that may never go beyond the shelves of lexicographers and academies. Thus, it is necessary to take into account the sociolinguistic, psycholinguistic and the aesthetic dimensions of terms even though these dimensions are less measurable objectively since they vary from one culture to another. In the evaluation procedure, these dimensions could be left to the discretion of the term evaluator. The point, however, is that we must consider the preferences, attitudes and inclinations of the term users as well as the national, geographical and social differences.

C1. Psycho-terminological criteria.

The psycho-terminological criteria, which are in many ways personal, act as incentives that motivate the term user to opt for certain terms rather than others.

8. Familiarity

Familiarity is related to the ease (or difficulty) of lexically recognizing and remembering a neologism. The easier it is to recognize and remember a term, the more likely it is to become established in common use. Onomatopoeic words fall within this category.

With regard to this criterion, terms from the Arabic linguistic heritage and terms based on semantic extension will be privileged since they do not overload the memory and this objectively explains the success of such terms. When an Arabic term is phonetically and structurally similar to a foreign term that it is meant to replace, it is more likely to take root. This is especially true of terms produced by literal translation and terms of Arabic origin that have been borrowed by the foreign languages and then reintegrated into Arabic.

9. Credibility and prestige

If a term is issued by some linguistic or legislative authority (language academy, BCAAW, etc.), it can either be exempted from the evaluation procedure altogether or be automatically assigned the average mark since it has satisfied, in the eyes of that authority, a number of considerations.

C2. Socio-terminological criteria.

In order to guarantee the acceptability of terms by the largest possible audience, terms have to satisfy socio-terminological criteria, which are group-oriented and take into account factors such as snobbism and fashion (including the appeal of foreign terms), and the role of established linguistic usage such as a particular trend towards heritage terms or modern neologisms.

10. Snobbism, fashion and the role of established linguistic usage

Many scholars have stressed the all-powerful influence exercised by foreign terms in vogue especially those already established in the language (Goosse 1975, 53–54). What is evident is that in case the suggested Arabic equivalent to a foreign term is longer or rare in form or sound combinations it is very unlikely to supersede the foreign one.

11. Lack of undesirable interference from the vernaculars

It is necessary to avoid those terms that have negative connotations or secondary meanings in the modern dialects. In this respect "*ʾuṣība bil-fawāq*" is more acceptable than "*ʾuṣība bil-ḥāzūqa*" (both of which mean 'to hiccup'). Related to this is what can be called lack of contextual flexibility as exemplified by Al-Khatib (1992, 168). Al-Khatib explains that even though the term "muṣdi", as a translation of 'oxygen', is a pure Arabic term, it is less eloquent in contexts such as "*nuqila al-marīḍu ilā ġurfati al-muṣdi*" (i.e. 'the sick person was transferred to the oxygen room') because "*al-muṣdi*", in Arabic, suggests "*al-muṣdi*" ('rust').

12. Maximum distinctiveness

It is also necessary to avoid those terms which are minimally distinct or whose pronunciation may cause confusion with other terms especially if they are pronounced the usual way they would be in the modern dialects. In this respect, the term "*misarrah*" as a translation of 'telephone' is inadequate for it can easily be confused with "*masarrah*", which means 'joy'. Similarly, "*miqwal*" as another translation equivalent of 'telephone' can easily be confused with "*miqwad*" i.e. 'steering wheel'.

D. Aesthetic criteria

13. Aesthetic considerations

The quality of the sounds involved in the term is also an interesting criterion since it is known that certain sound combinations are more frequent or more appreciated in certain languages (see Al-Ṭawīl 1995, 262). Nevertheless, this and other aesthetic criteria are not very significant since some very successful terms (especially Arabized ones) are known to contain unfamiliar sounds or sequences, but then aesthetic criteria are language specific. The intuitively felt 'beauty' or 'ugliness' of a term or word may also contribute to successful implantation.

There is some degree of overlapping in these criteria, in the sense that some can be found under more than one category. Nonetheless, it is important to give the criteria their due weight in the evaluation process. These criteria were subjected to tests not only to evaluate terms among a set of synonyms, but also to evaluate their relative chances of successful adoption, as demonstrated in the following four sets of related terms:

1. "*hātiǰ*", "*tilifūn*", "*misarra*", "*irzīz*", "*miqwal*" (for 'telephone')
2. "*ʿilm al-luġa*", "*lisāniyāt*", "*alsuniya*", "*lisāniya*", "*ʿilm al-lisān*" (for 'linguistics')
3. "*ḥāsib iliktrūnī*", "*ʿaql ilikrūnī*", "*ḥāsiba iliktrūniya*", "*miḥsāb*", "*naẓẓāma*", "*ḥassāba*", "*miḥsaba*", "*hāsūb*" (for 'computer')

4. "*talfaza*", "*tilfāz*", "*tilifizyūn*", "*mirnāt*", "*iḏāᶜa marʾiya*", "*rāʾī*" (for 'television')

The criteria were extremely reliable in their predictions about which term in a set of synonyms would become the standard, shown underlined above. For more information about the implementation of these term evaluation criteria, see Darir (2004).

Conclusion

In terminology standardization, there are many factors to take into consideration (organizational, technical, etc.) but, undoubtedly, the linguistic and terminological factors are the most significant. Terminological factors can be expressed in the form of acceptability conditions, or in the form of term evaluation criteria.

The successful implantation of a term can be virtually guaranteed by satisfying most of the term evaluation criteria described previously. But in addition, terminologists and lexicographers should take the attitudes and choices of term users into account when standardizing terms or creating neologisms. In other words, they should avoid the prescriptive approach in producing or imposing terms and adopt a more descriptive one. Taking into consideration the socioterminological dimension of terms is necessary in any terminological enterprise. Truly, the main goal of terminology is not the correction of a largely accepted and current usage of terms on linguistic grounds but the description and respect of established usage. Only in cases of terminological confusion is the terminologist's interference justified.

Within the proposed system of evaluation, terms from the Arabic linguistic heritage, dialectal words and loan or Arabized terms are evaluated on objective criteria. In other words, none are rejected outright based on subjective criteria. In this way, the lengthy discussions between the advocates of "pure Arabic" terms and the advocates of loan translation or loan words can be avoided. There is no reason, for example, to stipulate that a term should be of Arabic origin, since this concern will be accommodated by objective criteria such as linguistic correctness, derivational flexibility and familiarity (as defined above). Similarly, loan terms may be chosen on other grounds, for instance, because they are economical or because they unambiguously refer to their designations.

The systematic approach to term evaluation described herein will render the term unification process carried out in arabization conferences, for instance, much more efficient, in particular because the criteria on which the evaluation is based are the result of a practical investigation with actual term users.

The singular approach that has prevailed in the Arab world among individuals and language institutions should be abandoned because the future of the Arabic language is at stake. It is pointless to have a dozen institutions working on terminology

and to convene arabization conferences and draft resolutions if the work proceeds slowly or if the decisions are not implemented. In fact, the sheer number and diversity of experts and institutions playing an active role in terminology standardization and harmonization is actually working against these goals since there is no real coordination among them. Terms produced by one institution are not automatically accredited by another, which leads to duplicate effort with sometimes conflicting results and thus, a failure to standardize.

The successful development of Arabic terminology cannot take place without a unified set of principles and criteria for terminology production and standardization. The first step is to collect the general guidelines that have been elaborated by the different language and science academies and specialized institutions in the Arab World, guidelines that should be drawn from past as well as present terminological projects and that could serve as a basis for producing and standardizing terms. The second step would be to highlight those guidelines that are accepted through a process of agreement and incorporate them into a science that could be called in the Arabic tradition *ʾUsūl*[10] *ᶜilm al-muṣṭalaḥ* or 'Principles of Arabic Terminology'. Once this *ʾUsūl ᶜilm al-muṣṭalaḥ* has been approved by terminological authorities in the Arab world, specialists will have the necessary tools to coin their terms according to the established principles.

References

Abid, Abdellatif, and Zouhaier Marrakechi. 1988. "Present Situation of Terminological Activities in the Arab World." *TermNet News* 21: 2–7.

Abou Abdou, Mohamed. 1984. *L'arabisation – et ses Problèmes*. Rabat: IERA.

Al-Farḫān, I. 1984. *Al-Mawsimu al-Ṯaqāfī al-Ṯānī li-Maǧmaᶜ Al-Luġa al-ᶜArabiyya al-ʿUrduniy*. Manshūrāat al-Majmaᶜ.

Al-Ḥamad, A. T. 1995. "Tawḥīd al-Muṣṭalaḥ al-ᶜArabī wa Subulu Našrihi." *Al-Lisān Al-ʾArabī* 39: 169–184.

Al-Hilālī, S. 1988. "Tabāyun Muṣṭalaḥāt al-Maᶜāǧim al-ᶜIlmiya wa ʿAṭaruhu ᶜalā al-Taᶜrīb." *Al-Lissān Al-ʾArabī* 30: 219–240.

Al-Hilālī, S. 1995. "Taṭwīru Manhaǧiyyati Waḍᶜ al-Muṣṭalaḥāt al-ᶜIlmiya." *Al-Lisān Al-ʾArabī* 39: 59-86.

Al Khuli, Muhammad Ali, 1982b. *Muᶜǧam ᶜilm al- ʿAṣwāt*. Riad-Saudi Arabia: Matābiᶜ al-Farazdaq at-Tiǧāriyya. (this is really quote within quote, it does not matter)

Al-Ḥur, A. 1994. *Al-Muᶜǧamāt wa al-Maǧāmiᶜ Al-ᶜArabiya*. Beirut: Dār al-Fikr Al-Arabi.

Al-Kasimi, Ali. 1978. "Problems of Technical Terminology in Arabic Lexicography." *Al-Lisān Al-ʾArabī* 16 (1): 15–24.

10. In the Arabic tradition, the term "'*usūl*" usually means principles as in "'*usūl al-fiqh*", which means 'principles of Jurisprudence'.

Al-Kasimi, Ali. 1980a. "Al-Muṣṭalaḥiyya". *Al-Lisān Al-ʾArabī*, vol. 18, No. 1: 7-20.
Al-Kasimi, Ali. 1987a. "Naḥwa Taṭwīri Bunūki al-Muṣṭalaḥāt." *Al-Lisān Al-ʾArabī* 28: 77–83.
Al-Kasimi, Ali. 1989. "'Iškāliyatu Tawḥīd al-Muṣṭalaḥ al-ᶜArabiy." *Al-Lisān Al-ʾArabī* 32: 77–84.
Al-Khatib, A. M. 1983. "Manhaǧu Binaʾ al-Muṣṭalaḥ al-ᶜIlmī al-ᶜArabī." *Al-Lisān Al-ʾArabī* 20: 85–101.
Al-Khatib, A. Sh. 1982. *Muᶜǧam al-Muṣṭalaḥāt al-ᶜIlmiya wa al-Faniyya wa al-Falsafiya*. Beirut: Maktabat Lubnān.
Al-Khatib, A. Sh. 1992. "Alfāẓu al-Ḥaḍāra bayna al-ᶜĀmmī wa al-Faṣīḥ." *Al-Lisān Al-ʾArabī* 36: 161–174.
Al-Khatib, A. Sh. 1997. "Ḥawla Tawḥīd al-Muṣṭalaḥāt al-ᶜIlmiya." *Al-Lisān Al-ʾArabī* 44: 9-32.
Al-Malaʾika, J. I. 1995. "Manhaǧiyyatu Waḍᶜi al-Muṣṭalaḥ wa Tawḥīdihi." *Al-Lisān Al-ʾArabī* 39: 134–139.
Al-Ṭawīl, Fāris. 1995. "Naḥwa Manhaǧiyatin Šāmila lil-ᶜAmal al-Muṣṭalaḥi." *Al-Lisān Al-ʾArabī* 39: 225–276.
Al-Zargān, M. A. 1996. "Al-Daᶜawāt al-Mubakkira ilā Tawḥīd al-Muṣṭalaḥ al-ᶜIlmi al-ᶜArabi." *Al-Lisān Al-ʾArabī* 41: 69–73.
As-Sāmarrāʾī, I. 1982. *Al-ᶜArabiya Tuwāǧihu al-ᶜAṣr*. Baghdad: Dār al-Jahid.
Al-Shihābī, M. 1955 [1965]. *Al-Muṣṭalaḥāt al-ᶜIlmiyya wa al-Faniyya fi al-Luġa al-ᶜArabiyya fi al-Qadīmi wa al-Hadīṯ*. Egypt.
Al-Shihābī, M., 1959. "*Tawḥīdu al Muṣṭalaḥāt fi al-Bilād al-ᶜArabiyya*". *Maǧallat al-Maǧmaᶜ al-ᶜIlmi Al-ᶜArabi*. Cairo-Egypt, 11: 157-161
At-Tūnjī, M. and Raji Al-ʿAsmar. 1993. *Al-Muᶜǧam al-Mufaṣṣal fi ᶜUlūm al-Luġa*. Vol. 2 Appendix 2. Beirut: Dār al-Kutub al-ᶜIlmiya.
Bakalla et al. 1983. *A Dictionary of Modern Linguistic Terms*. Beirut: Librairie du Liban.
Chawqui Amin, Mohamed, and Ibrahim Al-Turzi. 1989. *Al-Qarārāt al-Maǧmaᶜiya fi al-ʿAlfāḍ wa al-ʾAsālīb*. Maǧmaᶜ al-Luġa al-Arabiya: Al-Hayʾa al-ᶜāmma.
Cowan, J. Milton (ed.). 1976. *Hans Wehr A Dictionary of Modern Written Arabic*. London: Harrap.
ᶜOmar, A. M. 1989. "Al-Muṣṭalaḥ al-ʾAlsuniy wa Ḍabṭ al-Manhaǧiyya." *Alam Al-Fikr* 20 (3): 5–24.
Darir, Hassane. 1993. "The Unification of Arabic Scientific Terms: Linguistic Terms as an Example." *The Arabist, Budapest Studies in Arabic* 6–7: 155–179.
Darir, Hassane. 2004. "The Unification of Arabic Scientific and Technical Terms: Linguistic Terms as an Example." Unpublished dissertation, Forthcoming as "Towards a Model for Arabic Scientific and Technical Terms Standardization: Linguistics Terms as a Case Study."
Encyclopædia Britannica. 1998. *Encyclopedia Universalis*, s.v. "terminology." CD-ROM, version 4.0.
Esber, Nabil. 1998. "La Trans-Dénomination Terminologique en Arabe." *Al-Lisān Al-ʾArabī* 45: 3-12.
Fassi Fehri, A. 1986. *Al-Lisāniyāt wa al-Luġa al-ᶜArabiya*. Casablanca: Dār Tūbqāl.
Felber, Helmut. 1980b. "International Standardization of Terminology: Theoretical and Methodological Aspects." *International Journal of the Sociology of Language* 23: 65–79.
Ghalafān, M. 1998a. "Al-Muᶜǧam al-Muwaḥḥad li-Muṣṭalaḥāt al-Lisāsiyāt." *Al-Lisān Al-ʾArabī* 46: 146–163.
Goosse, André. 1975. *La Néologie Française Aujourd'hui: observations et réflexions*. Paris: Conseil International de la Langue Française.
Ḥamād, A. A. 1983. *ᶜAwāmilu al-Taṭṭawur Al-Luġawī*. Beirut: Dār al-Andalus.
Hamzaoui, M. R.. 1985. "Al-Manhajiyya al-ᶜArabiyya li Waḍᶜ al-Muṣṭalaḥāt." *Al-Lisān Al-ʾArabī* 24: 41–51.

Hamzaoui, M. R. 1986a. *Al-ᶜArabiyya wa al-Hadāṯa*. Beirut: Dar al-Gharb al-Islami.

Hamzaoui, M. R. 1986b. *Al-Manhaǧiya al-ᶜĀmma li Tarǧamati al-Muṣṭalaḥāt wa-Tanmīṭihā*. Beirut: Dar al-Gharb al-ʿIslami.

Hamzaoui, M. R. 1988. *Maǧmaᶜu al-Luġati al-ᶜArabiyya bi-Dimašq*. Dar at-Turki li-an-Nashr.

Haroun, Abdulslam N. 1990. *Comprehensive Dictionary of Terms Approved by the Arabic Language Academy for Engineering and Technical Sciences*. Cairo: El Sonna Book Shop.

Heliel, M. H. 1987a. "Ḥawla al-Muṣṭalaḥ al-Lisāni wa Qāmūs al-Lisāniyāt." *Al-Lisān Al-ʾArabī* 28: 29–75.

Heliel, Mohamed. 1988c. "A Proposed Course for Terminology Teaching and Training in the Arab World." *TermNet News* 21: 12–16.

Ḥijāzī, M. F. 1993a. *Al-Baḥṯ al-Luġawi*. Egypt: Maktabat Gharīb.

Ḥijāzī, M. F. 1993b. *Al-ʾUṣul al-Luġawiyya li ᶜIlm Al-Muṣṭalaḥ*. Egypt: Maktabat Gharīb.

Khalaf-Allah, Ahmed, and Mohamed Chawqui Amin. 1963. *Maǧmaᶜ al-Luġa al-ᶜArabiyya fī Ṭalāṭīna ᶜĀman, vol. 3, Maǧmūᶜat al-Qarārāt al-ᶜIlmiyyya*. Egypt: Al-Hay'a al-ᶜĀmma.

Khalīfa, Abdelkarīm. 1984. *Al-Mawsimu al-Ṭaqāfī al-Ṭānī li-Maǧmaᶜ Al-Luġa al-ᶜArabiyya al-ʿUrduniy*. Manshūrāat al-Majmaᶜ.

Lakhdar Ghazal, Ahmed. 1977. *Al-Manhaǧiyya al-ᶜĀmma li al-Taᶜrīb al-Muwākib*. Rabat.

Messaoudi, L. 1997. "Al-Muṣṭalaḥ Al-Ṭibiy wa Taqāṭuᶜ al-Maǧālāt." *Al-Lisān Al-ʾArabī* 43: 34-39.

Mseddi, A. 1984 *Qāmūs Al-Lisāniyāt*. Tunisia: Ad-Dār al-ᶜArabiyya lil-Kitāb.

Pickett, Joseph P. 2000 *The American Heritage Dictionary of the English Language*, 4th ed. Boston: Houghton Mifflin.

Samaᶜna, J. H. 1993. "Al-Muṣṭalaḥiyya al-ᶜArabiyya al-Muᶜāṣira." *Al-Lisān Al-ʾArabī* 37: 161–168.

Salība, Jamīl, 1953. "Taᶜribu al-iṣṭilāḥāt al ᶜilmiᶜyya". *Maǧallat al-Maǧmaᶜ al-ᶜIlmi Al-ᶜArabi*, Damascus-Syria, 28: 18-27

Samaᶜna, J. H. 1998. "Al-Ḥaraka al-Muᶜǧamiyya bi-Maktab Tansīq at-Taᶜrīb." *Al-Lisān Al-ʾArabī* 46: 40-55.

Sāra, Q. 1989b *Al-Taᶜrīb: Ǧuhūdun wa ʿĀfāq*. Damascus-Beirut: Dar al-Hijra.

CHAPTER 3

Terminology and translation in Arabic

Shared aspects and conflictual relationships

Hassan Hamzé

Much of scientific and technical terminology is developed outside of the Arabic world. Therefore, translation, in all its various aspects, seems to be the only means of creating terminology in Arabic. Borrowings, derivations and semantic transfers are used by terminologists and translators, as each Arabic translator is also, by desire or by necessity, a terminologist. Consequently, Western terminological problems are rampant in Arabic. There are three reasons for the major shortcomings that characterize terminology in Arabic translations: (1) Western terminology is considered as an ideal terminology with a one-to-one relation between concept and term, (2) the linguistic aspect is considered as a priority because term is confused with concept, and (3) the terms in bilingual lists are considered as static units which are cut from the textual canvas in which they are used. Consequently, many translated texts are illegible or difficult to digest. There is an abundance of foreign terms and terms coined by individuals. Translation seems to be a mere transcoding operation.

Keywords: term, concept, translation, transcoding, terminology, Arabic

1. Incidence of terms in general dictionaries

Dozens, perhaps hundreds of terms are created every day in different expert domains. Many of these terms find their way into the so-called 'common' language and the general dictionary. This phenomenon has grown significantly in recent years. Indeed, according to what Meyer and Mackintosh reported, Landau "estimates that over 40 percent of the entries in major dictionaries consist of terms, while the presence of terms is only a minor concern for the lexicographer" (our translation) (2000, 201). The survey we conducted on Arabic monolingual dictionaries and French-Arabic or Arabic-French bilingual dictionaries shows that this significant presence of terms in (general) dictionaries is also valid for Arabic, or at least partially. Nearly a quarter of the entries in the bilingual French-Arabic *al-Manhal* dictionary (Abdel-Nour 1983) consist of terms. In contrast, Arabic monolingual dictionaries, as well as bilingual dictionaries with Arabic as the source language, comprise significantly fewer terms: about

https://doi.org/10.1075/hot.2.04ham

15 percent. Why are there significantly more terms in bilingual dictionaries with Arabic as the target language, than there are in monolingual Arabic general dictionaries or in bilingual dictionaries with Arabic as the source language? We suggest four possible reasons:

1. Arabic today contributes only marginally to scientific and technical development and to knowledge dissemination. Thus, dictionaries with Arabic as the main or source language will not contain many terms.
2. Education in the Arab world is regularly offered in foreign languages. This seems to be the case for the exact sciences as well as for many of the human and social sciences. Thus, foreign language dictionaries will contain more terms.
3. In the Arabic lexicographical tradition, there is often a confusion between the word and the lexical unit. This confusion is due to the weight of the word in history (Hamzé 2013, 14). Consequently, in the monolingual dictionary, compound terms are absent or appear as subentries[1].
4. Many Arabic equivalents of foreign terms in the bilingual dictionary are similar to definitions or explanations, and are not established terms in use. Therefore, they do not appear in the dictionary entries.

2. Terminology creation and forms of translation

The coining (creation) of terms is related to scientific and technical progress and to the emergence of new concepts developed by specialists in different domains.

However, in Arabic, translation is very often the sole basis of terminology creation. This phenomenon is not unique to the Arabic language, it also applies to Third World languages.

The increased terminological density observed in the bilingual French-Arabic dictionary compared to the monolingual dictionaries and bilingual Arabic-French dictionary highlights the vital relationship between terminology and translation in the Arabic language: the bilingual French-Arabic dictionary is much richer in terminology. Indeed, in the Arab world we import products, concepts and terminology: we borrow, we adapt or we try to create Arabic equivalents; first in the bilingual dictionary and later in the monolingual dictionary.

In ancient times, 8th century, part of the Greek heritage was translated into Arabic directly or indirectly via the Syriac language, before being developed and translated

1. Even in the bilingual French-Arabic dictionary, compound words do not appear as entries, but as subentries (Baraké 2013, 140).

into Latin and the European languages (Ben Mrad & Hamzé 2010).[2] In modern times, a partially similar phenomenon, called *nahḍa* or 'renaissance', has emerged in the Arab world. In the 19th century, people began to translate into Arabic from European languages, more particularly from French and English. Universities like the American University of Beirut and the Faculty of Medicine in Egypt provided their courses in Arabic for all disciplines, including science subjects such as medicine, engineering and agriculture. Moreover, the courses taught by French professors at the Faculty of Medicine in Egypt were translated into Arabic for students (al-Khoury 1989, 1: 189). Consequently, a large number of scientific terms entered modern Arabic through translation.

This translation process, which generates terms in Arabic, has three forms:

The first form is an indirect translation into Arabic of scientific and technical writings featuring new concepts. Authors who spontaneously write in Arabic to provide syllabi, compose books, present papers, publish in journals, etc. indirectly use a form of translation with which they manipulate the terminology they need. Because they experience the new concepts in the foreign languages in which they were created, Arab authors are influenced by foreign terminology which conveys these concepts. Consequently, the Arabic terms they use are, in one way or another, a translation of foreign terms which designate new concepts. A book from the first half of the 19th century perfectly illustrates this indirect translation of terms in general texts. *Rifā'ah 'Aṭṭahṭāwi* did not invent the concepts expressed by many new Arabic terms in his *Taḫlīṣ Al-'Ibrīz*. His book, as he states in the introduction, is an account of his trip to Paris and the events he experienced, including a description of sciences and arts in this city (2001, 6–7). For his description, he borrowed from French all related concepts and terms which he sought to reformulate, i.e. translate into Arabic.

As is clear from the first lines describing his arrival at the port of Marseille, *'Aṭṭahṭāwi* is faced with the 'quarantine', something which had no equivalent in Arabic. In the book, he writes that when he got out of the boat, "we took small boats and we arrived at a house outside the city devoted to quarantine" ("*karantīnat*") (2001, 53).[3] Immediately, he uses this borrowed term and briefly explains it in order to coin an Arabic verb *kartana*, which does not even exist in French. As an explanation, he says

---

2. See examples of this transmission in Latin, English and French in articles written in French by: Henri Béjoint and Hassan Hamzé, Bassam Baraké, Xavier Lelubre, Salam Bazzi-Hamzé and Rima Baraké; in Arabic by: Ibrahim Ben Mrad, Habib Nasraoui, Hilel Ben Hassine, Khaled Miled and Mohamed Chandoul. Articles include the *Cyclopaedia* of Ephraim Chambers, French borrowings from Arabic, and terminologies of optics, grammar, space science, simple medicines, medicine and pharmacology.

3. It is the author himself who wrote the term in quotation marks to indicate that it is a foreign term.

that the foreigner who comes into the West '*lā budda min* '*an yukartana*' "must be put in quarantine".[4]

The second form of translation is a semi-direct translation in bilingual or trilingual dictionaries, lexicons and glossaries, either specialized or general. We call this form 'semi-direct' because the lexicographer is not trying to translate discourse in communicative situations, but rather establish correspondences between the two languages.

Bilingual Arabic dictionaries and lexicons are full of newly-coined terms. This work often does not consist of recording Arabic terms established by use, as dictionaries are often not corpus-based. Instead, the lexicographers themselves propose and adopt Arabic terms as target language equivalents. The various Arabic equivalents proposed for the same English or French term in bilingual dictionaries and specialized lexicons of linguistic terminology published or posted on the Internet provide many examples of such coined terms.[5] Interestingly, there is, to our knowledge, no Arabic monolingual dictionary of linguistic terminology.

This approach to terminological creation is equally attested in the general dictionary. In the context of a research project by the *LTT* (Lexicology, Terminology, Translation) network on the role of French-Arabic translation in term creation,[6] Amadou Tydiani Diallo (2008) registered 1,140 Arabic entries that were created by the authors of *al-Manhal*, such as the term *wisāda nafūḫa* to translate "air bag", the verb *mafhama* "conceptualise", *maṣdar*: *mafhama* "conceptualisation", and *ḥibālat, silākat*/*maḥbalat* and *maslakat* for the French term "câblerie" (cable-works).

In the Arabic monolingual dictionary, the same problems arise, i.e. new terms are coined by the lexicographer and are not extracted from a corpus. Much of the terminology of this dictionary is simply borrowed from the bilingual dictionary. Indeed, the Arabic monolingual dictionary follows the bilingual one by borrowing its terminology instead of using an authentic corpus (Hamzé 2008, 187–190). The *al-Munǧid fī al-luġa al-'arabiyya al-mu'āṣira dictionary*, which is a general dictionary, clearly acknowledges in its introduction that it drew much of its Arabic entries from the French-Arabic and English-Arabic bilingual dictionaries, because "the needs of the Arab intellectual are

4. The book is packed with new terms, including many borrowings to describe the city of Paris, the political system, the social organization and the various activities in the country: *sibiktakl* "spectacle", *šarṭa* "chart ", *kunstītīsiyūn* " constitution "), etc.

5. See dictionnaries/lexicons by Mseddi, Abdessalem (1984); Baraké, Bassam (1985); Baraké, Bassam et alii (1987); Arab League Educational Cultural and Scientific Organization (1989) and (2002), Baalbaki, Ramzi (1990), Arif, Mohammad Najib (1993); Hanna, sami et alii (1997); Fassi Fehri, Abdelkader (2009), etc.

6. Research Project by the AUF (Agence Universitaire de la Francophonie), 2006–2008 which involved researchers from the following universities: Lyon2, Manouba in Tunis, and Lebanon, Jordan and Dakar.

not far from those of the Western intellectual in a world that is going towards globalization" (our translation) (2000, z).

Finally, the third form of translation is translation proper. Ten years ago, a study on translation in the Arab world confirmed very alarming statistics from UNESCO reports in 1992. The number of books translated in all countries of the Arab world was significantly lower than that of a small country like Hungary, which is not even considered a developed country (Jalal 2004, 117–119). The UNESCO report of Paris lists only 90 translated books for the last forty years of the 20th century, among which only two books were translated in Beirut between 2000 and 2002 (Skafy 2011, 5). It is true that translation into Arabic was not booming at that time, but the very pessimistic figures that were recorded on the number of books translated into Arabic have to be revised. UNESCO statistics are unreliable, because publishers, sometimes even countries, do not respond to surveys, which distorts the analysis. A recent survey conducted among Beirut-based publishers shows that nearly 3,000 books were translated by these publishers between 2000 and 2010, which amounts to 300 books per year (Skafy 2011, 8–9). Of course, this only concerns figures. The quality of translations must also be taken into account.

In this third form of translation, terminology is everywhere, but to different degrees. Terminology is crucial in the translation of specialized texts, but terminology is also present in the translation of general texts, since an important part of the "general" vocabulary consists of terms. Let us take, for example, the translation of a report on a simple road accident, something which happens every day. It may require the use of terms from several domains: law, finance for insurance issues, mechanics for property damage, medicine for the deceased and wounded, etc.

3. Translation and terminology creation

Whatever form of translation may be used – indirect, semi-direct or direct – it always leads to the creation of terms in Arabic. There are many reasons why terms need to be created:

The first one is a standard case: there is no equivalent Arabic term for a particular foreign scientific and technical term. Many sciences and techniques are developed outside of the Arab world. They evolve rapidly, lead to new concepts and, consequently, to new terms for which we need to find new equivalent terms in Arabic.

The second reason is that a perfectly suitable Arabic term exists, but is not known to the lexicographer, terminologist, or translator. The Arabic translator, even a well-trained one, may not be aware of the existence of a term. This is due firstly to the rapidly changing domains of knowledge and, secondly, to inadequate research tools, which the translator needs in order to be able to carry out the tasks effectively.

Because the teaching of exact sciences, and even human and social sciences, is provided in foreign languages, a break with tradition and terminology is under way.

In this situation, it can be discovered that a concept that appears new, was in fact well-known in ancient times. However, we need to find the term by searching through historical texts; texts which are sometimes not readily accessible. This is, for instance, the case with the 'performative verb', which is well defined by al-Astarābāḏī. In his šarḥ Al-Kāfiya, he gives an example:

(1) a. biʿ- tu
Have sold I
"I sell"

In the performative verb (*inšāʾī*) *biʿ-tu* "I sell", the act of selling, according to al-Astarābāḏī, is performed by pronouncing this verb, because the pronunciation creates the act of selling, makes it exist (*mūǧid-un*) (al-Astarābāḏī n.d.: 2: 225).[7]

The third reason why terms need to be created is that the translator is not satisfied with some existing term in Arabic. It is naïve to think that the creation of new terms means that there is no corresponding Arabic term or that we ignore these terms. This may be true in some cases. In other cases, which are unfortunately manifold, we must look elsewhere to understand why this happens. Too many well-known terms are rejected by translators and lexicographers They often question existing terms, even when they are relevant, morphologically appropriate and well established in use. This is for instance the case with the new term *daḫla* (Fassi Fehri 2009, 79) which was proposed to compete with *madḫal*, a term that is well established in all Arab countries to refer to an "entry" in a dictionary. Thus, a term is never final in Arabic. At any time, translators/terminologists may reject a term because they consider it to be inadequate or not very modern. Specialists/translators also sometimes reject a competing term simply because they seek to claim ownership of their own new term.

The need to create terms leads to a situation in which the Arabic translator has two almost inseparable functions. The first is that of the translator, the second is that of the terminologist. The Arab translator is a de facto terminologist, continually seeking or creating new terms, either because of a lack of awareness of existing Arabic terminology, or because an Arabic term is truly lacking. The dictionary illustrates this reality quite well: in Arabic lexicographical tradition, it is not supposed to contain the terms adopted by the community and established by use, but rather the terms that the lexicographer/terminographer considers relevant. Therefore, it is not the corpus which determines the choice of the terms, but the personal taste of the lexicographer (for dictionaries) and of the translator (for translations). Very often – if not always – a

7. The Arabic term equivalent to the term "performative verb" exists in the tradition: fiʾl ʾīqāʾī, ʾinšāʾī. However, this term is not necessarily known by translators who choose: "munājiz" to translate this term in Arabic (Idriss 2012). See more examples of reconciliation between the Arab grammarians and the Speech-Act Theory (Miled 1999, 49–57; 175–220; etc.), (Kembouche 1990, 333), etc.

dictionary is not created by using corpus-based data, but by incorporating the choices of its author. In fact, the only corpus used consists of other dictionaries; the lexicographer/terminographer chooses what he/she likes, or invents new terms.

4. Terminology creation processes

There are different methods adopted for creating new Arabic terms, which are well known in the fields of terminology and lexicography. These are briefly presented below:

Borrowing

The simplest and easiest method consists of borrowing a foreign term or adapting it in such a way that the phonological and/or morphological characteristics of the receiving language are accommodated, like with the following terms: (*fūnīm*) "phoneme" and (*murfīm*) or (*mūrfīm*) "morpheme".

Semantic neologisms

This process consists of giving a new meaning to an existing Arabic word or term. The methods which are used most in this process are:

1. The particularization process, which selects a word from the general vocabulary and gives it a particularized meaning
2. The use of tropes: metaphor, metonymy, etc. Example of a metaphor: *zar'* or *ġars* to translate "transplant" of the heart or kidneys and the "culture" of the skin. Example of metonymy: ḍaġṭ *širyānī* for "blood pressure", which does not refer to the tension of the arteries, but to "the tension of the blood flow in the arteries" (El Khoury 2007, 220–221). It has to be noted that these figures of speech are often "second degree figures" in Arabic. They are not created in Arabic, but modelled on the figures of speech of foreign terms

Formal neologisms

This process takes many forms. It uses the designation system, from which single words are selected to create simple terminological units, or the communication system, which is the source of compound terminological units:[8]

8. Every human language is constituted of two systems:

– a designation system and its morphology, which builds units of designation: nouns, verbs …
– a communication system and its syntax, which structures the sentences of the language.

1. Compound terminological units: Simple terminological units are not enough to name all the objects in the world. Indeed,

> the designation process, if reduced to the sole resources of the designation subsystem, should assign the same term to several referents or choose in the referent one attribute which will serve for its entire designation, by metonymy. But by necessity, the designation process has not been limited to the sole forms of the designation subsystem: it combines linearly different forms in one and the same term which it converts in a syntagm (our translation). (Roman 1999, 180)

   Consequently, the designation system increasingly gives way to the communication system as a source of new terms.
   Complex terms that are quite long are often replaced by abbreviations or acronyms in Arabic.
2. Simple terminological units: In the case of simple terminological units (single-word terms, or unigrams), Arabic may use composition, lexicalization or one of the many derivational forms of its inflectional system to establish an equivalent.
   Terms are also coined through analogy and nominalization, as is the case with *ḥibālat, silākat*/*maḥbalat* and *maslakat*, used by the author of *Manhal*. These terms are coined from *ḥabl* and *silk* 'cable, cord' following the usual morphological patterns of Arabic: (*Fiʿāla*) which refers to professions like *ṣināʿa* 'industry', *zirāʿa* 'agriculture', *tiğāra* 'commerce', etc., and (*mafʿala*)[9] which refers to a place where objects are abundant, like *maʾsada* 'place where there are many lions', *marmana* 'place where there are many grenades', *maktaba* 'place where there are many books', etc. When this pattern (*mafʿaLa*) is constructed on the basis of a noun which is linked to a verb, it may be interpreted as referring to the place where the action occurs, like the pattern (*mafʿal*), and *maḫbaza* 'place where there is a lot of bread/place where bread is baked', i.e. bakery, *maṭbaʿa* 'place where there are many prints/place where one prints', i.e. printing shop/printing company, etc.

Creation of new roots

In order to create neologisms, the Arabic language increasingly uses quadri-consonant roots, although this is not evidenced (*muhmal*). An example of this is the above cited verb (*mafhama*) and its derivation *maṣdar* (*mafhamat*). Indeed, the verb *mafhama* 'conceptualise' is created from *mafhūm* on the basis of the tri-consonant root (*F.H.M*).

---

9. Capital letters are used for root consonants and small letters are used for augmented consonants. Unfortunately, this difference is not visible in the graphic representation of the glottal /ʾ/ and pharyngal /ʿ/.

However, the verb *MaFHaMa* and its derivation *maṣdar* are formed on the basis of a new quadri-consonant root (*M.F.H.M*). The initial /m/, which is an augmentation in *mafhūm*, is part of the *MaFHaMa* root. The same applies to other neologisms like the verbs *MaRKaZa* 'to put in the centre' and *taMaRKaZa* 'to put oneself in the centre' derived from *maRKaZ* 'centre', transforming the initial /m/ into a root consonant, instead of using the tri-consonant root (*R.K.Z*). We observe the same phenomenon in *Ma'SaSa* and its derivation *maṣdar Ma'SaSat* from *mu'assasāt* 'establishment'. New quadri-consonant roots with a final /m/ are used in the translation of linguistic terminology, as is the case of: *ṣaWTaM*, *ṣaRFaM*, *LaFẒaM*, etc. which are formed from *ṣaWT*, *ṣaRF*, *LaFẒ*, etc. with a suffix like in French: "phonème", "morphème", "lexème", etc.

Creation outside the norms

Arab translators sometimes go too far in their frantic search for neologisms and respect of the source languages. They coin neologisms without taking into account the Arabic linguistic system. As a consequence, we may even encounter a verb that is formed with five consonants: *DaMaQRaṭa* ('democratize'), which is a unique construction in Arabic given the fact that Arabic verbs are formed on tri- or quadri-consonant roots. When Arabic borrows a verb with five consonants, or forms a verb from a noun with five consonants, it deletes one of these consonants in order to reduce the form to one with four root consonants, like in *BaSTaRa* with an /s/ as in "to pasteurise", *BaRMağa* ('to programme'), *'aKSağa* ('oxygenate'), *HaDRağa* ('hydrogenate') created from *BaRNāMağ* ('programme'), *'ūKSīĞīN* ('oxygen'), *HiDRūĞīN* ('hydrogen') by deleting one middle or final consonant, or the above cited verb created by *'Aṭṭahṭāwi*: *KaRTaNa* from *KaRaNTīNa* ('quarantine') after deletion of the third root consonant /N/, etc.

In a similar way, hybrid compounds are created using an Arabic and a foreign element, but they are not always compatibile with the syllabic system of Arabic, like *sūsyūlisāniyyāt* ('*socio*linguistic'), which registers a deviating initial syllable /cv:c/ instead of *lisāniyyāt 'iğtimā'iyya*, or *bsīkūlisāniyyāt* ('*psycho*linguistic') which starts with the /ccv/ sequence (irregular in Arabic) instead of *lisāniyyāt nafsiyya*. Some translators tend to translate a single source word into a single Arabic target word. This is why translators reject the well-established compound term *tarğamāt ḏātiyya* for 'auto-biography' and propose a bizarre neologism formed on the basis of a single word, i.e. *tarğaḏātiyya*.[10]

---

10. This term was part of the title of a presentation during a colloquium in Tunis. The convenor did not look at the program and could not pronounce the title.

5. Translation and Arabic terminology problems

Whatever the reasons for terminological creation and whatever translation method is used, Arabic terminology cannot come out unscathed.

All studies on Arabic scientific and technical terminology emphasize terminological anarchy. In our Research Centre for Translation and Terminology in Lyon, many theses were defended on Arabic terminology, including several under our own supervision[11]. These studies, like the ones carried out in the West or in the Arab world, insist on a number of issues that characterize Arabic terminology creation, which is based primarily on translation. However, the theoretical assumptions behind these defects and the major textual problems remain unexplored.

Proliferation of terms

The first flaw is a great proliferation of terms, for example, a dozen Arabic terms to translate "synchrony" (Odeh 1998, 337), twenty to translate "linguistics" (Mseddi 1984, 72), and so forth.

In his *Dictionary of Linguistic Terms English–Arabic*, Ramzi Baalbaki not only proposes the term he prefers, but also other proposals registered elsewhere. For example, the term *ibdāl*, which he used to translate 'mutation', is phonetically flanked by "*'intiqāl*, *'inqilāb*, *taḥawwul*, *taġayyur*, and *taġayyur ṣawtī*". For the same concept, one can even find different terms in the same translation or in the same dictionary. The term selected by translators consulting a dictionary seems to be the result of a lottery. Translators choose whatever translation equivalent they like, and this choice differs from one translator to another (Esber 1995, 1: 153).

The *Unified Dictionary of Linguistic terms* states in the introduction of its first edition that it aims to unify Arabic terms, something that is also mentioned in its title. It proposes different synonyms to translate the same term:

> In order to avoid synonymy and to support the trend towards one single Arabic term in the same expert domain, the dictionary selects one term, when there are two or more Arabic variants, by printing it before the others (our translation). (1989, 8)

Examples of such synonymy are: *ḥabsī* and *munqati'* for 'disrupted', *musābāt*, and *'amah at-tarākīb* for 'agrammatism', *kayfiyyat al-ḥadaṯ*, and *aḥwāl al-ḥadaṯ* for 'aspect'.

However, the dictionary claims in the same introduction: "We kept, when necessary, several Arabic equivalents *in particular* when the same foreign term refers to

---

11. See Diallo (1997), Badawi (1999), Osman (2008) on grammatical terminology in *'al-'Aḫfaš, al-Farrā'*, *az-Zamaḫšari*; Odeh (1998) on Saussurean terminology; Abi Ghanem (2007), El-Khoury (2007), Affeich (2010) on genetic engineering, organ transplantation, and Internet terminology; See also theses coordinated by André Roman of El-Hadi (1991), El-Khoury (1994), Lelubre (1992) telecommunication, ICT and optics terminology, etc.

several concepts" (our translation) (1989, 13). Consequently, the reader who finds two Arabic terms for a French or an English term does not know whether it is one foreign concept designated by two Arabic synonyms, in which case he may choose any one of these terms, or whether two different concepts in Arabic are designated by one foreign term. Furthermore, the dictionary user does not know which concepts the first term and the second term correspond to.

Neologisms, regionalisms, translators' idiolects, foreign language influence, and the lack of a unifying standardization body with decision-making power, are the main reasons for the terminological proliferation described here.

Admittedly, most of this terminology creation – if not all – is a translation matter. Similar to the designation process in the source language, we find "trans-designation" in the target language. This involves a translation process which uses decoding that mirrors the lexical semantic decoding in the source language (Esber 1995, 1: 153). Translators who claim, and quite rightly so, that Arabic terminology is growing exponentially, are themselves contributing to this growth. They tend to continually adopt, in their translations, terms that they consider most appropriate without taking into account that usage is the decisive factor.

However, it must be said that in some cases this proliferation will not last, as many terms proposed alongside viable existing terms will not survive. Sometimes, they don't last beyond the text in which they originally appear. Out of 21 Arabic synonyms of the term "linguistics/linguistic", only two or three terms have survived, *lisāniyyāt* being the preferred one.

Polysemy of terms

After proliferation, the second flaw is polysemy, or polyreferentiality according to terminologists. The same translator uses one Arabic term for two or more different concepts, as is the case with *'ištiqāq* for 'derivation' and 'etymology' (Odeh 1998, 352–354), or *itbā'* used in the *Unified Dictionary of Linguistic terms* for four different meanings or concepts in the field of linguistics: 'dilation', 'front mutation', 'paronomasia', 'pun'. However, *itbā'* is also a well-known term in Arabic grammar where it refers to two concepts different from those for which it was used in the *Unified Dictionary of Linguistic terms*:

1. to follow a word by another which depends on it and which has the same vowel. Ex.: *kitāb-un* (book, nominative) and *qadīm-un* (old, nominative) in: *kitāb-un qadīm-un* "an old book".
2. to follow a word with a sequence that has the same pattern and the same phonic endings. This sequence is not a word. It does not appear in the Arabic dictionary. Ex. *basan* after *ḥasan* (beautiful) in the expression: *ḥasan basan*, *nayṭān* after *šayṭān* "Demon" in the expression: *šayṭān nayṭān* (Abdul-Massih 1990: *itbā'*). When it is quoted, as *nifrīt* after *'ifrīt* "daemon" in the expression: *'ifrīt nifrīt*, the dictionary does not define it. It simply writes: "it's an *'itbā'* " (Ibn Manẓūr n.d., *nfr*).

Polysemic terms are very common, even in the writings of specialists. Ben Mrad, director of *Revue de la Lexicologie*, gives a significant example: We noticed in several articles that were sent to *Revue de la Lexicologie* that both homonymy and polysemy are called "*'ištirāk lafẓi*", which literally means that two or more words are associated with the same articulation or the same pronunciation. We even observed some confusion between the two phenomena (homonymy and polysemy) in terminological glossaries and even in books of Arabic philology' (Ben Mrad 2011, 328, our translation).

Overlapping terms

The third issue is the overlapping of terms: one Arabic term used by X to designate concept A is used by Y to designate concept B, and so forth. Such an overlap is confusing.

Table 1 (in which we added the transliteration), from al-Hamzaoui (1991, 313), shows the translation of the terms "semantics", "semasiology", "semiology", "semiotics", "onomasiology" in four specialized dictionaries. This example speaks for itself.

Table 1. Translation of semantics, semasiology, semiology, semiotics, onomasiology.

المصطلح الأوروبي *Al-muṣṭalaḥ al-'ūrūbbī*	**الترجمات العربية** *At-tarğamāt al-'arabiyya*			
	(1)	**(2)**	**(3)**	**(4)** [x]
أ) Semantics	علم الدلالة/علم المعاني *ʿilm ad-dalāla/ ʿilm al-maʿānī*	علم الدلالة *'ilm ad-dalāla*	الدلالية *ad-dalāliyya*	السيمية – علم الدلالة – علم السيمانتيك *as-sīmiyya – ʿilm ad-dalāla – ʿilm as-sīmāntīk*
ب) Semasiology	علم الدلالة/علم المعاني *'ilm ad-dalāla/ 'ilm al-ma'ānī*	علم الدلالة *'ilm ad-dalāla*	الدالّية *ad-dālliyya*	علم السيمانتيك – دراسة التغير في المعنى *"ilm as-sīmāntīk- dirāsat at-taġayyur fī l-maʿnā*
ج) Semiology	علم الرموز *'ilm ar-rumūz*	علم الرموز *'ilm ar-rumūz*	العلامية *al-ʿalāmiyya*	السامیولوجیا – علم العلاقات – علم السيمانتيك – دراسة المعنى في حالة سنكرونية *as-sāmyūlūğiyā- ʿilm al-'alāqāt – ʿilm as-sīmāntīk – dirāsat al-ma'nā fī ḥālat sankrūniyya*
د) Semiotics	علم الرموز *ʿilm ar-rumūz*	السيميوتية/ علم الرموز *as-sīmyūtiyya / ʿilm ar-rumūz*	السيميائية *as-sīmyā'iyya*	-
هـ) Onomasiology	دراسة الأعلام *dirāsat al'a'lām*	دراسة العلاقات الدلالية *dirāsat al-ʿalāqāt ad-dalāliyya*	المسمياتية *al-musamm ayātiyya*	-

Inappropriate equivalents

The fourth issue consists in choosing inappropriate equivalents; inappropriate in that they do not refer exactly to the concepts in question. Translating "phoneme" by *ṣuwayt*, diminutive of *ṣawt* "sound", is a good example because "phoneme" is not "small sound" as is implied by the Arabic term. The choice of the Arabic diminutive is a misinterpretation of "minimal trait" in the definition of "phoneme", being 'the minimal non-segmentable element of the phonological representation of an enunciation' (Dubois 2004, phonème our translation). Fortunately, this Arabic term, like many other poor translations, has not survived.

Inappropriate reuse of traditional terminology

One of the reasons for the observed defects in current Arabic terminology is the careless reuse of old terminology for translating new concepts in certain fields of knowledge. This problem is clearly present in the language sciences. Modern linguistics has a common object of study, i.e. language, with traditional grammar. It is therefore not surprising that there is some friction between the terminology of modern linguistics and that of traditional grammar. The known contentious relations between them have led to two diametrically opposed trends among Arabic translators: keep traditional terms at all costs and apply these to new concepts, or create new terms at all costs and steer away from tradition. These trends are, in fact, at opposite extremes. The first one confuses the two terminologies, while the second one considers them totally alien and incompatible.[12] Many of the previously cited terms, like *'itbā'*, or the following terms, like *Fā'il*, are examples of these contentious relations.

Idealization of European terminology

There is an abundance of literature on the shortcomings of Arabic terminology, which has emerged quickly without a rigorous framework nor the authority to make and impose decisions. The more these shortcomings are shown, the more they are recognized and understood, and yet due to the lack of an implementation framework, they remain difficult to solve. For instance, scholars frequently emphasize the problem of unnecessary term proliferation, whereby Arabic speakers adopt new terms to express a concept for which an acceptable Arabic term – often of better quality - already exists. The result is an abundance of synonyms of questionable quality, which dilutes the Arabic language. Ironically, these same scholars have been found to create unnecessary terms themselves.

---

12. For further development, see Hamzé 2010, 2: 39–54.

In principle, the criticism of Arab terminology seems fully justified. However, it seems that when the shortcomings of Arabic terminology are illustrated, they are explicitly or implicitly compared with terminology work in Western languages, in particular French and English. This comparison favors Western languages, and there is a tendency to believe that everything is better in Western terminology work, i.e. free from all the defects noted in Arabic terminology work. Western terminology work strives to impose an ideal relationship between one term and one concept i.e. a one-to-one relationship in which one term designates one concept, and in which one concept corresponds to one term.

It is also known that Western terminology frequently uses prefixes, suffixes and Greco-Latin forms in term development. Al-Ḥatīb listed more than seven hundred affixes (1982, 43–66). Al-Hamzaoui goes even further by developing an automated translation of terms and affixes, hence his desire to identify them

> in order to agree to keep or to create ancient or modern Arabic equivalents. This type of work, done according to this method, will allow us to develop general rules based on comparative scientific studies. *In turn, this will allow us to draw general criteria and automatic rules that can be systematically applied to ensure fast translation* (our translation). (1975, 128)

In other words, prefixes, suffixes and other morphemes would, like in French or English terminology, be ideal term units or systematic components of an ideal terminology with a one-to-one relation between term and concept: no synonymy, no polysemy, no homonymy. All would be clear and functional.

Similar problems and size difference

EU terminology faces the same issues: synonymy and polysemy are commonplace. Quite simply put, the problem is more serious in Arabic (Hamzé 2004, 49–66).

In his treatise *Introduction au problème terminologique* that appeared in the *Dictionnaire de la linguistique*, Georges Mounin focuses on "proliferation or terminological Babel-like confusion" (1995, IX). This sounds like the terminology problem in Arabic.

Mounin, extremely severe when he talks about the incompetence of translators, gives multiple examples of this "terminological malaise" which results from "much precipitation and neglect". There are plenty of neologisms resulting from translation errors. For example, due to the influence of English, in French one finds errors such as: *structurel* instead of *structural*", *cryptanaliste* instead of the well-attested *décrypteur*, and *receveur* instead of *récepteur*. Perhaps such errors result from a "psychopathology of the researcher":

> the idea that by giving something a name of your choosing, even though this something already has an acceptable name, somehow implies that you have unearthed a new concept, is symptomatic of a professional malaise that seems to afflict young scholars intent on asserting their originality (our translation). (1995, IX–XIV)

However, this quest for terminological originality, leading to the ad-hoc creation of neologisms, is not unique to the younger scholars. The same has been observed, albeit to different degrees, with Jakobson, Benveniste, Tesnière, Hjelmslev, and Bloomfield, all of whom have been known to coin their own terms as well. Damourette and Pichon are an example of 'scholars whose entire work seems based on a lexicon created piecemeal' (our translation) (1995, XI). 'Of the 106 terms created by Hjelmslev, only five percent survived in common usage' (our translation) (1995, XIV).

If Western linguistic terminology, according to Marouzeau, "still today and perhaps even more than ever, is apparently built on random discoveries and inspiration" (our translation) (Mounin 1995, x), then Arabic linguistic terminology is built on random *translations* and inspiration. In Arabic, the issues raised by Mounin reach excessive proportions.

Confusion between term and concept

Approaches followed by translators and terminologists

One of the major issues affecting Arabic terminology creation through translation is an approach-oriented problem. The Arabic translator adopts a semasiological approach by starting his thought process with the signifier of the foreign term. The question that arises is not which Arabic term should be chosen for the *concept* designated by the foreign term, but which Arabic term should be chosen to mirror the foreign term, or even the foreign signifier. The translator starts from words in order to get to the words. Part of the problem is actually due to this shift: the translator acting as a terminologist without adopting the terminological approach, or the terminologist acting as a translator who is more interested in translating the word than in designating the concept. And yet, the onomasiological approach of the terminologist is to assign a name to the concept and not to translate the word.

One indication that the semasiological approach predominates can be observed by looking at occurrences of differences between the source languages. When French and English terms have a different etymological root while expressing the same concept, the corresponding Arabic terms are different too, even though, there is no semantic justification for this difference.

Terminology creation in Arabic relies heavily on the adoption of calques which are very close to the etymological meaning of the French or English word. For example, the translation of "Hypertext" uses transcoded variants that are based on a calque of the etymological meaning of "text" and "hyper", in the sense of "passing/beyond": *niẓām fawqa an-naṣṣ* ('system beyond/on top of the text'), *naṣṣ fā'iq* ('extraordinary text'), *naṣṣ wāfir* ('rich text'). However, the resulting meaning is nonsensical, because "Hypertext" simply refers to the idea of "link" (Affeich 2010, 262–263).

Inadequate treatment of polysemy in dictionaries

Dictionaries and bilingual glossaries often display a single entry for a French or an English term. But these terms could be polysemous (i.e. one term refers to two or more concepts), which is not exceptional especially in the humanities and social sciences. Creating one entry for each foreign term and its Arabic equivalent leads to the assumption that there is a one-to-one correspondence between foreign and Arabic terms. In a previous study, we examined the terms *actant/actor* and *sujet/subject* in dictionaries and bilingual or trilingual glossaries of Arabic linguistics (Hamzé 2010, 39–54). Each of these terms is presented in one entry in these glossaries. *Actant/actor* and s*ujet/subject* are polysemous: *actant* refers to the agent of a verb, i.e. the one who performs the action, but *actant* may also refer to agent, patient and beneficiary of the action at the same time. In other words, it can denote everything which does not refer to the setting and incidental details of the process or state expressed by the verb. In the same way, *sujet/subject* is polysemous. *Sujet/subject* can refer to what is reported about something, or to the one who performs the action expressed by the verb; in the latter case, *sujet/subject* can be equivalent to *actant/actor*. In the former case, it refers to what is reported, which would make it synonymous with *thème/theme*, or to a noun phrase in a sentence consisting of a noun phrase and a verb phrase (Dubois 2004, sujet).

Table 2 displays the translations of the three terms proposed by six dictionaries:

Table 2. Translations of agent, actant and sujet

	Dic. de ling. **(Mseddi) 1984**	***Unif. Dic. of Ling. Ter.*** **1ère éd. 1989**	***Dict. of Ling. Ter.*** **(Baalbaki) 1990**	***Lex. de la Term. Ling.*** **(Mubarak) 1995**	***Unif. Dict. of Ling. Ter*** **2ème éd. 2002**	***A Lexicon of Ling. Ter.*** **(Fassi Fehri) 2009**
agent	*ʿawn*	*Fāʿil*	*Fāʿil ḥaqīqī*	*Fāʿil/ʿāmil*	*Munaffiḍ*	*Munaffiḍ*
actant	*Mufāʿil*	*Fāʿil ḥaqīqī*	*Fāʿil ḥaqīqī*	*Maʿmūl al-fiʿl*	*Fāʿil ḥaqīqī*	*Fāʿil*
sujet	*Musnad ilayhi/ Mawḍūʿ*	*-Musnad ʾilayh (naḥw) -mawḍūʿ (manṭiq) -Fāʿil ou mubtada'*	*Musnad ilayhi*	*Fāʿil/Musnad ʿilayh/Mubtada'*	*Fāʿil*	*Fāʿil*

This table gives an idea of the following problems we may face when translating linguistic terminology into Arabic: synonymy, polysemy and overlap between the proposed Arabic equivalents. However, we wish to emphasize that this table shows the tendency to use a foreign term as the most convenient term in a single entry. If we put aside the translation of "subject" by *mawḍūʿ*, which does not belong to the realm of linguistics but to that of logic, we can observe a tendency to propose in each dictionary a single Arabic term for each French corresponding term.

In the Arab tradition, the Arabic term *Fā'il* refers to the 'noun positioned after a verb and to which the verb is predicated and related' (Ibn Jinnī 1976, 13, our translation). Whether *Fā'il* 'performs the action or not, this noun is in the nominative and we use *Fā'il* to respect the syntax of the Arabic language, without any point of reference to the action itself" (as-Sīrāfī 1990, 2: 266, our translation).

Because *Fā'il* is thus disconnected from the action, it is impossible to use this term to translate "agent", "actor" and "subject". It is not possible either to use *Fā'il* as a perfect and stable equivalent for one of these three terms (Bazzi-Hamzé 2007).

In Example (1), Zayd is playing the role of *Fā'il* in Arabic. It may correspond to "agent/agent", "actant/actor" and "sujet/subject":

(1) *kataba* *zayd-u-n*
He wrote Zayd. NOM.
Zayd wrote

In Example (2) Zayd does not correspond to "agent", even if it is always *Fā'il* in Arabic; rather, it has a thematic role "patient" because of the nature of the verb:

(2) *māta* *zayd-u-n*
He died Zayd. NOM.
Zayd died

In Example (3) Zayd is a *mubtada'* (Inchoative/Topic) not a *fā'il*, while Zayd is also an "agent":

(3) *zayd-u-n* *kataba*
Zayd. NOM. He wrote
Zayd, he wrote/Zayd wrote

These three examples show that *fā'il* (nominative) cannot correspond to any of the three terms "agent/agent", "actant/actor", "sujet/subject". It becomes clear that we cannot simply draw up a list of Arabic terms for French or English terms by establishing a term by term correspondence. Determining a target language equivalent by literal translation produces a calque. Such an approach will reproduce any defects that may be present in that (Western) terminology (polysemy, synonymy, etc.), but of even greater concern is that literal translations frequently depart from the conventions of the Arabic language.

In order to avoid terminological chaos, some organizations, such as the Arab Organization for Translation, require translators to provide a bilingual list displaying foreign terms and their Arabic equivalents at the end of a translated publication. This policy, which seems commendable, aims at making sure the translators check their terminology so that they will not adopt different Arabic equivalents for a foreign term.[13]

---

13. Examples are abundant, e.g. Kaddoura (2012, 249), Odeh (1998, 339).

However, taking pre-established bilingual lists as a starting point may lead to misuse of those terms and may reduce translation to a mere transcoding operation. One example suffices to illustrate this possible scenario:

In Arabic, there is a quasi-consensus to use *muṣṭalaḥ* for "term" and *'ilm al-muṣṭalaḥ* or *muṣṭalaḥiyya* for "science of terms" or "Terminology". A priori, there seems to be no objection to the choice of these Arabic terms. However, in Arabic translations we observe *muṣṭalaḥiyyat fulān* as a way of translating "terminology of person X", which seems absurd because it means "science of the terms of person X". Translators consulting "idealized" bilingual glossaries confuse term and concept. In this case, they do not realize that the term "terminology" is also polysemous, having three different meanings: (1) the science that studies the labelling of concepts in scientific and technical fields, (2) all the terms of a given science or of a given author, and (3) all the rules and methods to study the terms and what we sometimes call "terminography" (Hilal 2010, 22). If translators encounter such problems when they are using a supposedly trustworthy terminology list, how can we expect otherwise when they have no terminology resources at all?

We understand now why a bilingual glossary in which a single Arabic term corresponds to a single foreign term is doomed to fail, regardless of how thoroughly the Arabic equivalents were researched. A translation that relies on absolute correspondence between terms is bound to be problematic.

> The most effective method is not to decide which Arabic term shall be used for each specific foreign term, but rather, to decide which Arabic term, historical or modern, corresponds to the specific meaning, manifested in discourse, of a foreign term. […] This approach might seem more complicated, but it is the only way to effectively solve terminology problems. Opting for the easy way out by dictating that Arabic term X must be used for foreign term Y, be it created or inherited from grammatical tradition, will only lead to confusion (our translation). (Hamzé 2010, 49–50)

Terminology and direct translation: A fill-in-the-blanks exercise

An ancient Arab author, al-Ḥawārizmī (who died in the 10th century), wrote a book that has a very symbolic title: *Mafātīḥ al-'ulūm* ('Keys to the Sciences'). This title, which deals with the terminology of Arab and foreign sciences, suggests that terminology provides the key to knowledge. According to the author, those who do not master the terminology of a given science, will never fully understand this science (al-Ḥawārizmī, 2).

In translation, this remark is even more relevant. Translating terminology is the heart of the translation process in specialized texts, because the real difficulty in this type of text is a conceptual one in both phases of the translation process: (1) understanding the source text and (2) using appropriate expressions in the target language.

One remark seems crucial about many texts translated into Arabic: they are full of foreign words. Arabic translators seem smitten by the magic of words, and seem to believe that a simple transcription of the foreign term in Arabic characters suffices to solve the problem and to convey the message.

Admittedly, such a deference to the dominant foreign language can be useful in that it helps to avoid situations where the bilingual reader is misled because of the above described deficiencies in Arabic terminology: polysemy of terms, inappropriate equivalents, etc. However, translations are not intended for bilingual readers, who can read the work in its original language, but rather the monolingual Arabic reader. The use of foreign words by the translator is, thus, paradoxical because it is a way of telling the reader the following: we know that you do not understand the Arabic term used, but to help you understand it, we provide the term in a foreign language which you also do not understand. We have come full circle!

Understanding the meaning of terms, and how to choose the correct Arabic equivalent, are obviously essential skills for translators. However, translating is more than choosing Arabic equivalents for foreign terms. Literally speaking, the principle of systematically replacing foreign terms by predetermined Arabic equivalents results in what we have elsewhere called the "fill-in-the-blanks exercise" (Hamzé 2009). With "fill-in-the-blanks," the translator first identifies the terms in a text to be translated and determines their target language equivalents, arranging them in the form of a bilingual list. In parallel, the text is translated, but the terms are skipped over. When the bilingual list is completed, the terms are inserted into the translation at the appropriate spots.

A priori, a translation into Arabic should not systematically substitute one – and only one – Arabic equivalent for each foreign term. We had the opportunity to propose an example of such a case in our translation of the Latin terms *res* and *modus*, adopted by André Roman in order to avoid polysemy in the traditional *subject – verb* terminology. Both Arabic equivalents that we created to translate *res* and *modus* (*'ism ʿayn* and *mawqūt*) are not necessarily used as equivalents for *res* and *modus* respectively. *Modus* is a designation imagined by humankind 'on a time axis, as time unfolds, in which time itself is one of the components' (Roman 1990, 3, our translation). In Arabic, this can be a verb like *walada* ('generate, procreate'), a noun like *wālid* ('he who procreates, father') and an adjective like *mawlūd* ('created, procreated'). *Modus* can also refer to constituents comprising only one consonant, like *hamza* /'/ of a call, an exclamation, /s/ in the pattern *'istafʿala*, etc. (Roman 2007, 94–98). It is, therefore, not even appropriate to use the Arabic term *mawqūt*, which we proposed, for each occurrence of the term *modus*.

A translation that systematically uses a specific Arabic equivalent for each occurrence of a foreign term does not consider terms in their textual frame, but rather as elements in static lists that are cut from discourse. A term is not an uprooted unit, cut from the discourse in which it functions. A term has two types of relations:

1. A relation to other terms in a conceptual tree structure. Terminology lists and encyclopedias should arrange terms systematically in structured concept systems. Moreover, one of the criteria for choosing terms for inclusion in a dictionary is membership to "organized terminology" or to one "conceptual series" (Josselin and Roberts 2013, 90–91). For example, terms that designate the various parts of speech – noun, verb, adjective, and so forth – form a conceptual family within the larger family of linguistic terminology.
2. A relation to words that are not terms, i.e. words from the general lexicon. A text, even a specialized one, cannot be reduced to a set of terms. A text is necessarily the result of the insertion of terms into a frame with the words of the general vocabulary.

6. Conclusion

Terms should, therefore, not be considered as static entities, but as entities related to their context in the textual frame that is composed of both terms and words of the general vocabulary. "Textual terminology" which has surfaced thanks to the computer-aided analysis of large corpora, emphasizes the role of terminological variation at the textual and intertextual level:

> Variation refers to the variability of terms as they appear in context. According to several corpus-based research studies, terminological variation, far from being an 'anomaly', occurs in 15 to 25 percent of all terms in the corpus.
>
> (Slodzian 2000, 73–74, our translation)

Moreover,

> a specialized text, like any text, has its share of rhetorical elements, word play, intertextual references and cultural allusions. Specialized translation is not merely a terminological transcoding exercise, far from it, especially since many terms have no direct correspondence between two languages. (Durieux 2010, 32, our translation)

We have demonstrated that translating terms in general or specialized texts is not simply a matter of word-to-word correspondence, of "filling in the blanks". This approach produces a flawed Arabic text, a word-for-word translation. One practically needs to be bilingual to read such literally translated texts which are infused with foreign words. Or, one needs to "back translate" the translation into the source language in order to understand it. This is, to say the least, paradoxical.

References

Abdel-Nour, Jabbour, and Souheil Idriss. 1983. *Al-Manhal: Dictionnaire français-arabe*. Beyrouth: Dar El-Ilm lilmalayin and Dar al-Adāb.

Abdul-Massīh, Georges, and Hani Tabri. 1990. *Al-Khalil*. Beyrouth: Librairie du Liban.

Abi Ghanem, Carine. 2007. *La terntinologie arabe du génie génétiEre, création et dffirsiort dqns le monde arabe*. Lyon : Université Lyon2.

Affeich, Andrée. 2010. *Rupture et continuité dans le discours technique arabe d'internet*. Lyon: Université Lyon2.

Arab League Educational Cultural and Scientific Organization. 1989. *Unified Dictionary of Linguistic Terms (English – French – Arabic)*. Tunis.

Arab League Educational Cultural and Scientific Organization. 2002. *Unified Dictionary of Linguistic Terms (English – French – Arabic)*. Tunis.

Arif, Mohammad Najib. 1993. *Dictionnaire de linguistique : français-arabe*. Betrouth : Al-Maktabat al-qawmiyya al-hadî1a.

al-Astarābāḏī, Raḍiyy ad-Dīn. n.d. *Kitāb al-Kāfiyat fī n-naḥw* (Syntax treatise). Beirut: Dār al-kutub al-ʻilmiyya.

Baalbaki, Ramzi. 1990. *Dictionary of Linguistic Terms: English – Arabic*. Beirut: Dar El-Ilm lilmalayin.

Badawi, Mohamed. 1999. *Etude de la terminologie grammaticale d'al-Farrd'*. Lyon : Université Lyon2.

Baraké, Bassam. 1985. *Dictionnaire de linguistique français-arabe*. Tripoli:Jarrous press.

Baraké, Bassam et alii. 1987. *Dictionnaire des termes linguistiques et littéraires français-anglais-arabe*. Beyrouth. Dar el-Ilm lilmalayin.

Baraké, Bassam. 2013. "Traitement du mot et traitement du terme dans le dictionnaire bilingue français-arabe." In *Le terme scientifique et technique dans le dictionnaire général*, ed. by Hassan Hamzé, 135–152. Beirut: Dar al-Hilal.

Bazzi-Hamzé, Salam Hassan. 2007. "Fāʿil." In *Encyclopedia of Arabic Language And Linguistics*, ed. by Kees Versteegh, 2: 82–84. Leiden-Boston: Brill Academic Publishers.

Ben Mrad, Ibrahim. 2011. "Homonymie, polysémie et critères de distinction." In *In the Shadow of Arabic: The Centrality of Language to Arabic Culture, Studies in Semitic Languages and Linguistics*, ed. by Bilal Orfali, 325–338. Leiden – Boston: Brill.

Ben Mrad, Ibrahim and Hassan Hamzé (eds.). 2010. "Transmission de la terminologie scientifique et technique arabe en Europe." *Revue de la Lexicologie* N 26.

Diallo, Amadou. 1997 *La théorisation et la terminologie grammaticale d'al-'Akhfash al-'musat*. Lyon: Université Lyon2.

Diallo, Amadou. 2008. "Les néologismes créés par l'auteur du dictionnaire *al-Manhal*". Unpublished.

Dubois, Jean, et al. 2004. *Dictionnaire de linguistique*. Paris: Larousse.

Durieux, Christine. 2010. "Transparence et fonctionnalité." In *La traduction des textes spécialisés: retour sur des lieux communs*, ed. by Inès Sfar and Salah Mejri, *Synergies Tunisie*, 2: 31–38.

El-Hadi, Widad. 1989. *La terminologie arabe des télécommunications*. Lyon: Université Lyon2.

El-Khoury, Tatiana. 2007. *La terminologie arabe de la greffe d'organe: Fonctionnement discursif et relations intra- et inter-termes*. Lyon: Université Lyon2.

Esber, Nabil. 1995. *La terminologie de la linguistique: problèmes de traduction, français-arabe*. Lyon: Université Lyon 3.

Fassi Fehri, Abdelkader. 2009. *A Lexicon of Linguistic Terms, English – French – Arabic*. Beirut: Dar al Kitab al Jadid United Co.

al-Hamzaoui, Mohamed Rachad. 1975. "Aṣ-ṣudūr wa l-lawāḥiq wa ṣilatuhā bi taʿrīb al-ʿulūm wa naqlihā ʾilā al-ʿarabiyya al-ḥadīṯa (Prefixes and suffixes: Their relationship with arabization of science and their transfer to modern Arabic)." *Al-Lisān al-ʿarabī* 12 (1): 121–138.

al-Hamzaoui, Mohamed Rachad. 1991. *Al-Muʿğam al-ʿarabī, ʾiškālāt wa muqārabāt* (*The Arabic Dictionary/Lexicon: Issues and Approaches*). Tunis: Bayt al-ḥikma.

Hamzé, Hassan. 2004. "An Example of Linguistic Submission, the Translation of Affixes and Greco-Latin Formants into Arabic." In *Less Translated Languages*, ed. by Albert Branchadell and Lovell Margaret West, 49–66. Amsterdam: John Benjamins. https://doi.org/10.1075/btl.58.05ham

Hamzé, Hassan. 2008. "La terminologie dans le dictionnaire général: le bilingue, un tremplin pour le monolingue." In *Lexicographie et terminologie: Histoire des mots*, ed. by François Maniez and Pascaline Dury, 181–190. Lyon: Université Lyon 2.

Hamzé, Hassan. 2009. "*At-Tarğamah* l-baḥṯ (Translation as Research)." *Al-ʿArabiyya wa t-tarğamah* 1: 6–36.

Hamzé, Hassan. 2010. "Terminologie grammaticale arabe et terminologie linguistique moderne." In *La traduction des textes spécialisés: retour sur des lieux communs*, ed. by Inès Sfar and Salah Mejri, *Synergies Tunisie* 2: 39–54.

Hamzé, Hassan. 2013. "Introduction sur le statut du terme dans le dictionnaire général." In *Le terme scientifique et technique dans le dictionnaire général*, ed. by Hassan Hamzé, 11–17. Beirut: Dar al-Hilal.

al-Ḥaṭīb, Aḥmad Šafīq. 1982. "Sawābiq wa lawāḥiq tarid fī l-muṣṭalaḥāt al-ʿilmiyya maʿa tarğamātihā l-ʿarabiyya (Prefixes and suffixes in scientific terms with its Arabic correspondents)." *Al-Lisān al-ʿarabī* 19: 43–66.

al-Ḥawārizmī, Muḥammad b. Aḥmad b. Yūsuf. *Mafātīḥ al-ʾulūm* (*The Keys to sciences*). Cairo: ʾIdārat aṭ-ṭibāʿat al-munīriyya.

Hilal, Alaa. 2010. *Le statut du terme dans le dictionnaire général*. Lyon: Université Lyon2.

Ibn Jinnī. 1976. *Al- Lumaʾ fī n-naḥw* (*Brightness in grammar*). Edited by H. Kechrida. Uppsala.

Ibn Manẓūr. n.d. *Lisān al-ʿarab* (*ʿArab language*). Beirut: Dār Ṣādir.

Idriss, Souheil. 2012. *Al-Manhal, dictionnaire français-arabe*. Beirut: Dār al-Adāb.

Jalal, Chawkī. 2004. *At-Tarğamah fī al-ʿālam al-ʿarabī: al-wāqiʿ wa at-taḥddī* (*Translation in the arab world: Reality and challenges*). Cairo: al-Mağlis al-ʾaʿlā li aṭ-ṭaqāfah.

Josslin-Leray, Amélie et Roda Roberts. 2013. "Quels termes retenir dans le dictionnaire général." In *Le terme scientifique et technique dans le dictionnaire général*, ed. by Hassan Hamzé, 85–118. Beirut: Dar al-Hilal.

Kaddoura, Maha. 2012. *Le passage de la traductologie vers l'arabe: Rôle d'une terminologie en devenir*. Paris: Université Paris3.

Kembouche, Mohammed. 1990. *Etude syntaxique du roman algérien Az-Zilzāl d'aṭ-Ṭahir Waṭṭar*. Lyon: Université Lyon 2.

al-Khoury, Shehadeh. 1989. *Dirāsāt fī t-tarğamah wa l-muṣṭalaḥ wa t-taʾrīb* (*Studies in translation, terminology and arabization*). Damas: Dār Ṭlās.

Lelubre, Xavier. 1991. *La terminologie de l'optique: faits et théories*. Lyon: Université LyonZ.

Meyer, Ingrid & Kirsten Mackintosh. 2000. "L'étirement du sens terminologique: aperçu du phénomène de la déterminologisation". In *Le sens en terminologie*, ed. by Henri Béjoint and Philippe Thoiron, 198–217. Lyon: Presses Universitaires de Lyon.

Milad, Kalid. 1999. *Al-ʿinšāʾ fī l-ʾarabiyya bayna t-tarkīb wa dalāla* (*Performative discourse in Arabic between syntax and semantics*). Tunis: Manouba university.

Mounin, Georges. 1995. *Dictionnaire de la linguistique*. Paris: Quadrige/Presses Universitaires de France.

Mseddi, Abdessalem. 1984. *Dictionnaire de linguistique Français-Arabe, Arabe-Français*. Tunis: Maison arabe du livre.

Mubarak, Mubarak. 1995. *Mu'jam al-muṣṭalaḥāt al-ʾalsuniyya, faransī-ʿinğlīzī-ʿarabī* (*A dictionary of linguistic terms: French-English-Arabic*). Beirut: Dār al-Fikr al-lubnānī.

al-Munğid fī l-luġa l-ʿarabiyya al-muʿāṣirat (*Al-munğid: A dictionary of modern Arabic language*). 2000. Beirut: Al-Maktabat aš-Šarqiyyat.

Odeh, Akram. 1998. *La traduction et la terminologie linguistique du français en arabe: L'arabisation du « Cours de linguistique générale » de F. de Saussure*. Lyon: Université Lyon2.

Osman, Riad 2008. La *termittologie grammaticale dans |l'œuvre d'Az-Zamakhsharî*. Lyon-Beyrouth. Université Lyon2-Université libanaise.

Roman, André. 1990. *Grammaire de l'arabe*. Paris: Presses Universitaires de France.

Roman, André. 1999. *La création lexicale en arabe. Ressources et limites de la nomination dans une langue humaine naturelle*. Lyon: Presses Universitaires de Lyon.

Roman, André. 2007. *Al-Mujmal fī l-ʿarabiyyat an-niẓāmiyyat* (*Systematic grammar of Arabic*). Translated by Hassan Hamzé. Cairo: al-Markaz al-qawmī li t-tarjama.

as-Sīrāfī, Abū Saʿīd. 1990. *Šarḥ Kitāb Sībawayhi* (*Comments on Sībawayh's al-Kitāb*), ed. by Ramaḍan Abd at-Tawwāb. Cairo: Al-Hayʾa al-ʿāmma li l-kitāb.

Skafy, Nahwa. 2011. *ḥarakat at-tarğamat fī bayrūt min al-ʿām 2000 ḥattā l-ʿām 2004* (*The translation movement in Beirut between 2000 and 2004*). Beirut: Islamic University of Lebanon.

Slodzian, Monique. 2000. "L'émergence d'une terminologie textuelle et le retour du sens." In *Le sens en terminologie*, ed. by Henri Béjoint and Philippe Thoiron, 61–85. Lyon: Presses Universitaires de Lyon.

aṭ-Ṭahṭāwī, Rifāʿa. 2001. *Taḫlīṣ al-ibrīz fī talḫīṣ bārīz ʾaw ad-Dīwān an-nafīs bi ʾīwān bārīs* (*Description of a Trip to Paris*). Sousse: Dār al-Maʿārif li ṭ-ṭibāʿa wa n-našr.

CHAPTER 4

Medical terminology in the Western world

Current situation

Maria-Cornelia Wermuth & Heidi Verplaetse

This chapter first describes the fundamentals of medical concept formation, the different types of medical concepts and the specific properties of medical terms. We provide an overview of the most important types of terminologies (controlled vocabularies) and databases and recent medical terminology standardization activities at the national and international levels (CEN/TC 251). We introduce the domain of medical linguistics as a field of study that is concerned with specific aspects of medical language to enable the computer-aided recording, storage, and retrieval of medical data. The following types of terminologies and databases will be described in greater detail: anatomical and nosological nomenclatures, coding systems (International Classification of Diseases (ICD), Systematized Nomenclature of Medicine (SNOMED), indexing systems (Medical Subject Headings (MeSH)), thesauri and metathesauri (Unified Medical Language System (UMLS) and the bibliographic database Medline (Medical Literature Analysis and Retrieval System Online). We conclude with a discussion of science popularization strategies for general health texts in terms of intralingual translation between Language for Specific Purposes (LSP) and Language for General Purposes (LGP), as well as implications for interlingual translation of medical terminology for lay readers.

Keywords: medical terminology, medical databases, controlled vocabularies, medical terminology standardization, medical linguistics, science popularization, lay-friendliness, health information texts, Language for Specific Purposes (LSP), Language for General Purposes (LGP), intralingual translation, explicitation

1. Historical background of medical terminology

Like any other scientific domain, the field of medicine is characterized by its own language and vocabulary, which are the result of a centuries-old development. In fact, the specific features of modern medical language can only be understood against the historical background and context in which it gradually evolved. We therefore start with a brief overview of the milestones in the development of medical language from its very beginning until today (the data are taken from Eckart 2015; Institut für

https://doi.org/10.1075/hot.2.05wer

Geschichte der Medizin 2008; Montalt and Gonzalez-Davies 2007; Van Hoof 1998, and Wulff 2004).

The oldest written sources of Western medicine are the Hippocratic writings from the 4th and 5th centuries BC, which already contain numerous medical terms such as "*apoplexy*" ('stroke'), "*catarrh*" ('downflow') or "*diarrhea*" ('throughflow') (Wulff 2004, 187; Institut für Geschichte der Medizin 2008, 7). The Greek medical tradition continued in the Roman period, during which highly relevant Greek manuscripts were produced. The most prominent medical authority representing this period is Galen (129–210 AD). Greek remained the language of medicine in the Roman period until the beginning of the first century AD. An important turning point was the publication of *De Medicina* (between 25–35 AD), the only remaining part of the encyclopedic treatise by Aulus Cornelius (Celsus 2015) written in Latin. This work gives us not only comprehensive access to all the medical knowledge of that time, but it also addresses "universal" terminological issues such as the lack of Latin equivalents for most Greek medical terms. From a linguistic point of view, it is particularly interesting how Celsus approached this terminological problem, which is no less relevant today, be it for other language pairs. Wulff (2004, 187) describes this approach as follows: First, Celsus used Greek terms in their original grammatical and orthographic forms (e.g. "*pylorus*", "*eileos*") in his Latin text. Subsequently, he naturalized Greek words, writing them with Latin letters and replacing Greek endings by Latin ones (e.g. "*stomachus*", "*brachium*"). Finally, he translated the highly metaphorical Greek anatomical terminology into Latin by provoking the same metaphorical associations, such as "*dentes canini*" (Greek "*kynodontes*", 'dog teeth') and "*caecum*" (Greek *to*"*typhlon*", 'the blind gut').

During the Middle Ages, many of the classical Greek medical texts were translated into Arabic. While original medical writings in Arabic have also been produced, only a few Arabic terms (e.g. "*nucha*", 'nape') are preserved in Western medical terminology. During the Renaissance (15th and 16th centuries), the era of medical Latin started with the translation of Greek and Arabic medical writings into Latin. In this period, Latin also became the language of anatomy (some Greek terms such as "*diaphragm*" and "*condyles*" were Latinized later).[1] During the subsequent centuries almost all important medical works were published in Latin (e.g. Vesalius' *De humani corporis fabrica* in 1543), and Latin became the international scientific *lingua franca* playing the same role that English occupies today. In this era the medical vocabulary expanded through the creation of numerous hybrid Greek and Latin medical terms (so-called neoclassical compounds composed from combining forms derived from

1. Anatomical terms are generally in Latin, whereas Greek terms for anatomical parts are reserved for clinical use (Institut für Geschichte der Medizin 2008, 40).

classical Latin and ancient Greek roots).[2] Examples are terms for diseases such as "gastritis", which is composed of the morphemes "*gaster*" (from the Greek "*γαστ ´ηρ*") for 'stomach', and "*-itis*" for 'inflammation', and surgical terms such as "*cholecystectomia*" ('removal of the gallbladder'), which consists of the Greek roots "*chole*" ('bile', 'gall'), "*kystis*" ('bladder') and "*tome*" ('to cut'), the Greek or Latin prefixes "*ec-*", "*ek-*"/ "*e-*", "*ex-*" ('out(ward)'), and the Latin suffix "*-ia*" ('act, condition'). These neoclassical compounds are still an integral part of the modern medical language.

Gradually, the role of the national languages for medical communication gained importance at the expense of Latin.[3] In the Netherlands, for example, Simon Stevin coined numerous medical Dutch equivalents for Latin and Greek terms (Crezee 1997, 1). Latin and Greek terms became mixed into general language resulting in specialized language "varieties" such as medical Dutch, English, French, German, Italian, and many others (Wulff 2004, 188). Most of those national medical languages were only used within the linguistic community of the country itself, except for French, German and English, which for some time replaced Latin as vehicles for international communication. As most of the medical terms, which found their way into the national languages, were derived from medical Latin, there are many correspondences between the different national medical languages. Yet, there are systematic differences that still persist. For example, in Germanic languages (such as German, Dutch, and the Scandinavian languages) anatomical terms and disease names are often imported directly with their original Latin endings (e.g. "*Nervus*/nervus musculocutaneus" and "*Ulcus*/ulcus ventriculi"), whereas these terms in Romance languages are usually "naturalized" according to the norms of each particular language (e.g. "le nerf musculocutané" and "ulcère gastrique" in French). English is a special case: although it is a Germanic language a considerable part of its vocabulary is of Romance origin, so that medical English tends to follow the Romance pattern except in placing the adjective before the noun (e.g. "the musculocutaneous nerve" and "gastric ulcer"). It should be noted, however, that in medical practice there are no fixed rules for endings (Wulff 2004, 187). So, English-speaking doctors may also accept direct loans with Latin endings (e.g. "*medulla oblongata*" and "*diabetes mellitus*"), and German doctors may naturalize the Latin terms (e.g. "Koronararterien" for "Arteriae coronariae") or translate them into German (e.g. "Magengeschwür" instead of "Ulcus ventriculi").

In the modern era medical terminology was heavily influenced by French and English. Examples of French influences are more particularly to be found in therapeutic

---

2. New Latin comprises many such words and is a substantial component of the technical and scientific lexicon of English and other languages, including international scientific vocabularies.

3. In some countries such as Denmark and Germany medical Latin was still in use by the middle of the 19th century (Wulff 2004, 187).

terminology such as "*bandage*", "*dragée*", "*drainage*", "*lavage*", "*pincette*", "*pipette*", etc., all well-known terms which have been incorporated into many other languages. The development of English as the international means of communication in Western medicine started in the 1950's; today it is a generally accepted fact that English is the preferred language for international medical communication, both in oral (e.g. medical conferences) and written (e.g. publications) forms. The modern medical *lingua franca* is English, as was the case for Latin in the medieval period. As described by Wulff (2004, 187) in greater detail, new *up-to-date* medical terms are mostly (American and British) English loan-words[4] (such as "bypass", "compliance", "clearance", "pacemaker", "rooming in", "screening", "scanning", etc.) that are left unchanged and used in the national language or –depending on the target language politics– translations (such as the French "pontage" for English "bypass" or German "*Magengeschwür*" for Latin "*ulcus ventriculi*"). It is noteworthy that, contrary to what one would expect, also these borrowed terms may cause problems depending on the target languages' linguistic rules. Examples are the use of capital or non-capital letters – which is more particularly relevant in German: English loan nouns such as "pacemaker" are written with a capital ("Pacemaker") in analogy with German nouns ("*Herzschrittmacher*") – and issues such as hyphenation, gender, and inflection. Moreover, some terms have different meanings depending on the context in which they are used, which causes potential misunderstandings. An example is the English term "compliance", which means "lung plasticity" in addition to (the more commonly known) "patient's readiness to collaborate". In some cases, mixed terms are also created combining a native word stem with an English one such as the German noun "*Kammerstiffness*", which is derived from the English form "chamber stiffness" (the native equivalent is "*Kammersteifigkeit*/*Kammersteifheit*") (Karenberger 2015, 24). The added value of such combined forms remains, however, questionable.

2. Medical language

The language of medicine is, first, a natural language. Unlike formal artificial languages (e.g. the language of chemistry or mathematics), it is based on the syntax of general language and its vocabulary, which is extended by a huge number of specialized terms denoting domain-specific concepts such as "cardiac attack", "obesity", "cell membrane", etc. These terms constitute the vocabulary of medicine, which in turn comprises the different intersecting domain vocabularies of the numerous medical (sub-)specializations, such as anatomy, surgery, physiology, gynecology, etc. (Sadegh 2015, 59).

4. At present American English represents a significantly higher percentage of the (bio)medical literature compared to British English.

The language of medicine is also a living language that is constantly subject to changes due to the high dynamicity that characterizes the medical domain (Institut für Geschichte der Medizin 2008, 12). On the one hand, new concepts, and thus terms, emerge on an almost daily basis due to continual biomedical research, the development of innovative therapies and procedures, and the emergence of new diseases such as *Sick Building Syndrome* (SBS) (describing a range of symptoms linked to longer stays in buildings harmful to health), *Chronic Fatigue Syndrome* (CFS), and *Multiple Chemical Sensitivity* (MCS), just to mention a few examples. A virtually endless number of potential new concrete and abstract concepts must be named, providing a wealth of terms to be integrated into the medical vocabulary. This process of terminologization is of utmost importance, as it enables the organization of all medical knowledge into conceptual systems each of which reflects the specific features of the many medical specializations and sub-specializations which have been developed in modern medicine (Montalt Gonzalez 2007, 230). The estimated size of the actual medical vocabulary amounts to about 200,000 terms (Karenberger 2015, 19), including terms for drugs, body parts, organs and organ parts and functions, and terms for diseases, medical investigations and surgical procedures.

On the other hand, medical terms may also disappear or be used with a different meaning. An example is the term "hysteria", which derives from the Greek cognate of "uterus", "ὑστέρα" ('hystéra') (King 1993), referring originally to nervous disorders linked with diseases of the female sexual and reproductive organs.[5]

It can be said that the medical language has since its emergence been characterized by its openness to influences from other languages. Today's medical terminology reveals a very varied picture that consists of many linguistic elements taken from other than Greco-Latin sources, especially English. Although classical terms still represent the foundation of medical terminology, also words from general language, abbreviations and acronyms, eponyms, slang and jargon words (partially derived from terms), synonyms, metaphors and metonyms, and made-up words are substantial parts of today's medical language. Also, variants of medical language, so-called sociolects, which are used in hospitals and by different medical schools, play an important role. The following examples in German and English illustrate the diversity of modern medical terminology (the German examples are taken from Karenberger 2015, 19ff.):

(1) Words from general language with a change in meaning: "(*Krankheits*)*herd*" (literally: 'stove' for 'focus or source of a disease'), "(*Herz*)*flimmern/heart flutter*" (for 'cardiac fibrillation'), "*Umstimmung/transposition*" (for 'reversal of predisposition')

5. In modern medicine, the term is replaced by more accurately defined categories, such as *conversion disorder*.

(2) Foreign words with semantic narrowing such as "*Inspiration*/*inspiration*" (for 'deep breathing') and "(*Mikroben*)*kultur*/(*microbial*) *culture*", "*Influenza/influenza*", "*Shunt/shunt*", and "*Lavage/lavage*"

(3) Abbreviations such as "*i.v*". (for 'intravenous'), "EKG/ECG" (for 'electrocardiograph')

(4) Acronyms (initialisms) such as "HIV" (for 'Human Immunodeficiency Virus'), "AIDS" (for 'Acquired Immune Deficiency Syndrome'), "CT" (for 'computer/computerized tomography'), "MRI" (for 'Magnetic Resonance Imaging'), "SIDS" (for 'Sudden Infant Death Syndrome'), "*Prion/prion*" (for 'Proteinaceous infectious particle')

(5) Eponyms (diseases, procedures, anatomical parts, etc. named after a person) such as "*Alzheimer*(*-Krankheit*)/Alzheimer's (disease)", "Parkinson/Parkinson's", "Hodgkin/Hodgkin's (disease)", "*Billroth-I-Operation*/*Billroth I* (or Billroth's operation I)", "*Eustachische Röhre*/Eustachian tube" ('auditory tube')

(6) Slang and jargon words, which are mostly used in clinical settings; an example are abbreviations used for surgery planning as "*Wurm*" for '*Blindarmoperation*' / 'appendectomy' or "T.E." for '*Mandeloperation*' / 'tonsillectomy' (Porep & Steudel 1983, 18)

(7) Synonyms such as "*Pfeiffer-Drüsenfieber*"/"*Mononucleosis infectiosa*"/ "*Infektiöse Mononukleose*"/"*Knutschkrankheit*" and "Pfeiffer glandular fever"/ "*mononucleosis infectiosa*"/ "*infectious mononucleosis*"/"kissing disease"

(8) Metaphors (substitution of one term for another based on formal analogy) such as "*Ohrmuschel*/ear shell" (for 'pinna', 'outer ear'), "*Kleinhirnwurm*/*dorsal vermis*" (for 'cerebrellum'), "*Rabenschnabelfortsatz*" (for 'coracoid process') and metonymies (substitution of one term for another based on contiguity) such as "*Elephantiasis*/*elephantiasis*" (for 'lymphatic filariasis') and "*Fischschuppenerkrankung*/fishskin disease" (for 'ichthyosis')

(9) Made-up words such as "ELISA" ('enzyme-linked immunosorbent assay' denoting a substance testing method), and "PEEP" ('positive end-expiratory pressure') denoting the pressure in the lungs above the atmospheric pressure that exists at the end of expiration. (Studdert, Gay & Blood 2012)

3. Challenges related to medical language

The described linguistic features of medical language have both advantages and disadvantages (Karenberger 2015, 20). Eponyms, for example, denote a concept in a precise and pregnant manner, contrary to alternate expressions, which in most cases would be much more awkward and for which proper understanding would also require solid historical knowledge. A nice example is the eponym "Apgar-Index/Apgar score"

that efficiently denotes the method invented in 1952 by the anesthesiologist Virginia Apgar to evaluate the health of newborns. A disadvantage is that the meaning of eponyms cannot be derived from their morphological structure and that eponyms are also often used inconsistently across different languages, such as the German eponym "*Röntgenstrahlen*" vs. the Anglo-American term "x-rays". This is the reason why since the 1960's comprehensive lexical resources have been developed with definitions of eponyms used in the anatomical and clinical domains (Eckart 2015, 19). Global reference works for eponyms are the dictionaries of Forbis and Barolicci (2004) and Winkelmann (2009).

The lack of international consistency is more particularly manifest with respect to medical abbreviations and acronyms. An example is the acronym AIDS and the corresponding French acronym "SIDA" ('*Syndrome Immuno-Déficitiaire Acquis*'). The potential ambiguity of many abbreviations is another shortcoming. For example, the German abbreviation "OP" means, depending on the context, "*die Operation*" ('operation'), "*der Operationssaal*" ('operating room') or "*Originalpackung*" ('original packaging of drugs'). Another example is the abbreviation "*s.i.*", which means either "*sine indicatione*" ('of the location') or "*semis interna*" ('internal half') depending on the context in which it is used. Another problem is the proliferation of synonyms for many medical terms: in principle, synonymy is a linguistic means that enriches the clinical language since it allows subtle differentiations, for example, which specific element of a term's meaning is highlighted, or which stylistic level is addressed. The German synonyms cited above for the viral infection called "glandular fever" ('Drüsenfieber') illustrate the potential of medical synonymy. This infection predominantly affects young adults and can be termed in different ways depending on the respective focus (see Karenberger 2015, 21): diseased body part ("*Pfeiffer-Drüsenfieber*"), disease type ("*Mononucleosis infectiosa/Infektiöse Mononukleose*"), the leading symptom ("*Monozyten-Angina/Lymphoidzell-Angina*"), the most frequent mode of transmission ("*Knutschkrankeit/*kissing disease"), and the age group concerned ("Teenager-*Fieber*").

It is noteworthy that there is no straightforward one-to-one relation between concept and term (i.e. one term refers to one concept) in medical terminology in a few cases, contrary to what is recommended by traditional terminology theory. Rather, depending on the medical area, a many-to-one relation may exist between term and concept. This is especially the case for clinical terminology, which – depending on the national language – uses numerous synonyms for one and the same concept. Examples are the English term "typhoid fever" that has the German equivalents "*Typhus*", "*Typhus abdominalis*", "*Bauchtyphus*", "*typhoides Fieber*" or "*enterisches Fieber*", all of which refer to one and the same concept <typhus>. This stands in sharp contrast to the anatomical nomenclature (see Section 4.1), which adheres strictly to the one concept-one term principle. The contrasting relation – one to many – occurs when one term may be used to refer to different concepts, such as the term "surgery", which – depending

on the context – may refer to the surgical procedure or the room in which it is performed. The scope of synonymous and polysemous medical terms represents a risk as well since potential misunderstandings may be caused without sufficient contextual information. A well-known example is the German eponym "*Morbus Paget*", which denotes two completely different diseases: (1) a disease of the bones, also called "*Osteitis deformans*" ('Paget's disease of bones'), and (2) a specific manifestation of breast cancer ('Paget disease of the nipple') (Wermuth 2013).

The unstable term-concept relation in medical language is mainly related to the lack of consistent term definitions, which is a recognized shortcoming in the medical field. Many medical concepts are, in fact, complex and cannot be defined precisely, which entails that for a few concepts no exact scientific definition can be provided. An example cited by Sadegh (2015, 45) is the concept of <baldness>, which cannot be defined precisely (by indicating the maximum number of hairs, for instance). On the other hand, many medical concepts *can* be defined precisely, and the various actors within the medical field (students, researchers, physicians) are encouraged to define new terms in unambiguous and clear ways.

4. Medical nomenclatures, clinical terminologies and coding systems

The principal aim of medical language is to optimize communication between experts working within their specialist subject areas. For this purpose, nomenclatures, vocabularies, terminologies and coding have been developed to support the effective communication among medical experts and the recording of patient data, whether on paper or, increasingly, via an electronic medical record. These systems are the subject of research in the fields of Medical Information and Library Sciences and medical linguistics, a subdiscipline of medical informatics and information sciences that focusses on natural language processing of medical linguistic data (Sadegh-Zadeh 2015, 61ff). In the following sections we describe some of the most popular systems (for a detailed introduction to health informatics in general, and the various medical terminologies and coding systems see Coiera 2015).

4.1 Medical nomenclatures

Medicine comprises many specializations, and the vocabulary of each is carefully and deliberately designed by domain experts. Depending on the specialization, medical terms are more or less standardized. Due to the domain-dependent differences, a distinction can be made between so-called controlled vocabularies or nomenclatures on the one hand, and clinical terminologies on the other (Institut für Geschichte der Medizin 2008, 12; Karenberger 2015, 22; Sadegh-Zadeh 2015, 63ff). A nomenclature (literally 'a list of names') is a naming system for a given domain formed according

to strict linguistic rules. The terms are collected and created by domain experts, and approved by scientific authorities. The aim is to standardize the use of the domain language to support monosemy and to avoid ambiguity. In the medical domain, there are two important types of nomenclatures (Sadegh-Zadeh 2015, 63ff): the anatomical nomenclature denoting bones, organs, and cells; and nosological nomenclatures denoting diseases and symptoms.

4.1.1 The anatomical nomenclature

The so-called *Nomina anatomica*[6] are an integral component of the medical language and shared cross-linguistically by all medical communities. This standardized anatomical terminology was established in 1895, and consists of approximately 8,000 internationally agreed anatomical terms and expressions (Karenberger 2015, 22) in Latin. Other specific features are (1) mononymy of terms (a single term for a single anatomical structure); (2) term formation according to established rules periodically reviewed by a commission; (3) the use of Latin as the official nomenclature language (only a minor part of the medical terminology –in essence the anatomical terms – is still used in its original and unchanged Latin or Latinized form such as "*scapula*", "*humerus*", etc.). These normative rules and regulations do not provide for eponyms and synonyms, which are, nevertheless, frequently used in clinical language (see Section 4.1.2). In 1998, the *Nomina Anatomica* were replaced by the *Terminologia Anatomica* (TA), which is the foundation of the *International Nomina Anatomica* (INA), which has been and continues to be the valid international standard on human anatomic terminology.[7] It was developed by the Federative Committee on Anatomical Terminology (FCAT) and the International Federation of Associations of Anatomists (IFAA) (Thieme 1998). The Anatomical Nomenclature consists of about 6,000 defined terms formed by means of about 400 Greek and 200 Latin roots (Institut für Geschichte der Medizin 2008, 12).

4.1.2 Nosological nomenclature and clinical terminologies

In contrast to the anatomical terminology, clinical terms designating pathologies, diagnoses and therapies are much less standardized, and there are no generally valid regulations regarding the formation of clinical terms. Most clinical terms with Greco-Latin origin are naturalized (i.e. adapted to the phonology, spelling, and grammar of the target language). An example is the German term "*Koronararterien*", which is

6. Since the first publication in 1895 several revisions of the *Nomina anatomica* have been made. The currently valid version is *Terminologia Anatomica* (Thieme 1998).

7. Due to the publishing practices prevailing in the medical domain an English nomenclature has meanwhile also been introduced in parallel with the Latin anatomical terms.

the naturalized form of the Latin term "*arteriae coronariae*". An obvious advantage of naturalized clinical terms is that they allow synthetic descriptions of complex states of affairs (Van Hoof 1998, 49), as illustrated by the naturalized Greek-Latin term "*hematogenous metastasis*", which means "the spread of a cancer from one organ or body part to another through the bloodstream". Moreover, in clinical use most anatomical terms are named after the person who first described the given anatomical part (Institut für Geschichte der Medizin 2008, 12). Examples are anatomical eponyms such as "Eustachian tube" for "*tuba auditiva*" (naturalized as 'auditory tube'), which is named after the sixteenth-century anatomist Bartolomeo Eustachi, and "*Kohlrausch's-fold*" for "*plica transversa recti media*", which is named after the the nineteenth-century German physician Otto Kohlrausch. In addition, language-specific eponyms are used as well (for example to designate syndromes). Eponyms are morphologically not transparent, in contrast to the terms which consist of Greek and Latin formants (more than 500 word roots, combining forms, prefixes, suffixes) (Van Hoof 1998, 49), which can be understood internationally. The deviating national terminological practices in the clinical usage of medical language inevitably impede seamless international communication. This is the reason why for some time there have been various attempts to develop internationally agreed clinical and pathological terminologies, in which the designations for diseases, symptoms and syndromes are classified and numbered in order to facilitate their standardized documentation. It should be mentioned that the terminological variety in the clinical domains creates problems for translators as well (Stahl 1992, 265).

Two prominent nosological nomenclatures in English are the *International Nomenclature of Diseases (IND)* initiated by the Council for International Organizations of Medical Sciences (CIOMS) (Bankowski & Robb-Smith, 1978), and the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* published by the American Psychiatric Association since 1952. The aim of these nomenclatures is to reduce ambiguity in the designation of (mental) diseases, but there are some doubts as to their effectiveness. Reasons given by Sadegh-Zadeh (2015, 63ff) and Karenberger (2015, 22) are that: (1) the English language is not used in medicine worldwide; (2) there is no internationally recognized clinical terminology standard; and (3) disease names require universally valid definitions, which in practice do not exist (see also Section 2). In fact, most diseases have several designations, and only in a few cases does one term designate several diseases (thus there is no monosemy nor mononymy; see Rogers 2005, 1850). This seems logical if we consider that disease concepts are highly culture-dependent. Ultimately, the specific cultural practices of a society will determine what is considered an illness. A well-known example is the concept of homosexuality, which for a long time was (and in some cultures still is) synonymous with disease. Another example is the term "schizophrenia", which for a long time had different meanings in German, French, and English (Stahl 1992, 265).

The differences between the controlled *Nomina Anatomica* and clinical language/terminology can be summarized as follows (Table 1, taken from Karenberger 2015, 22):

Table 1. Differences between Nomina anatomica and clinical language/terminology (Karenberger 2015, 22)

Feature	*Nomina anatomica*	Clinical language / terminology
International validity	Yes	No
Etymology of the term elements	Predominantly Latin	Predominantly Greek
Terms from modern languages	No	Relatively high portion
Multiple designations	No	High portion
Eponyms	No	High portion

In conclusion, clinical medicine as a branch of medicine is constantly changing, and its practice is culturally-dependent. These factors make it particularly difficult to standardize.

4.2 Coding and classification systems

Next to nomenclatures and clinical terminologies, different medical coding and classification systems have been developed that are designed to support a standardized computerized medical language for global use. These systems allow describing, classifying, and coding medical terms and concepts by means of common clinical terminology. The International Classification of Diseases and Related Health problems, usually shortened to International Classification of Diseases (ICD), is one of the most popular and widely used systems. It was originally established by the World Health Organization (WHO 2016) to enable epidemiological statistics about morbidity and causes of death (Wermuth 2005; Wermuth 2006; Wermuth 2009; Sadegh-Zadeh 2015, 63ff). ICD is a mono-hierarchical classification (in contrast to SNOMED CT; see Section 4.4), which means that a single classification feature is used each time to form the different subclasses. This coding system is important since it provides a common language for reporting and monitoring diseases, which allows data to be compared and shared in a consistent and standardized way between hospitals, regions and countries, and over periods of time. Furthermore, the system facilitates the collection and storage of data for analysis and evidence-based decision-making. Users include physicians, nurses, other providers, researchers, health information managers and coders, health information technology workers, policy-makers, insurers and patient organizations. The ICD provides hierarchically ordered alpha-numeric codes for the classification of diseases and other health data (such as signs, symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or disease). The computer-readable codes are followed by a short description (rubric) of the

code's meaning in natural language (e.g. *K35.2 Acute appendicitis with generalized peritonitis*). Today, the classification is primarily used to enable the computer-based storage and retrieval of diagnostic and health information for clinical, epidemiological and quality purposes. Also, decisions about government funding and resource allocation are based on the recorded data. There are regular revisions of ICD, and all WHO Member States are expected to use the most recent version for reporting death and disease. Currently its 11th web-based revision is in use (ICD-11) (WHO 2012a, 2012b). ICD has been translated into 43 languages.

4.3 Combined system: Medical terminology and coding system

In the medical domain, systems are also used that combine clinical terminology with coding schemes. The most prominent of these is the Systematized Nomenclature of Medicine Clinical Terminology (SNOMED CT), released in 2002. SNOMED CT is a logic-based health care terminology, which originated from the Systematized Nomenclature of Pathology (SNOP) issued in 1965 by the College of American Pathologists (CAP) for anatomical and morphological descriptions. It is the most comprehensive, multilingual clinical healthcare terminology worldwide, and is used in the electronic health record (EHR) (Stearns et al. 2001).[8] Its main goal is to enable users to encode different kinds of health information in a standardized way, thus ultimately improving patient care. SNOMED CT currently contains more than 311,000 active concepts.

SNOMED CT is multi-hierarchical and multi-axial (meaning that concepts may have more than one superordinate concept) and includes three types of components: (1) *concepts*, (2) *descriptions*, and (3) *relationships*. Concepts represent "clinical thoughts", i.e. all kind of objects (concrete and abstract) occurring in health care processes that need to be recorded. Each concept has a unique machine-readable numerical concept code or so-called concept ID (concept identifier) that identifies the clinical terms (primitive or defined) used to designate that concept. For example, the concept 22298006 refers to *Myocardial infarction*. Concepts are further described by various clinical terms or phrases, called *Descriptions*, which are divided into *Fully Specified Names* (FSNs), *Preferred Terms* (PTs), and *Synonyms*. SNOMED CT is based on the terminological principles elaborated by traditional terminology science (Cabré 1998;

8. In 2007, the International Health Terminology Standards Development Organization (IHTSDO) acquired the intellectual property rights to all versions of SNOMED. IHTSDO is a non-profit standards development organization located in London (UK) with 29 international members that works on behalf of the health care system. Its objective is to improve health care by determining global standards for health terms that must support the safe, accurate and effective exchange of health information. As of 31 December 2016, the trading name of the terminology is Snomed International (IHTSDO 2016).

Kageura 2002; Picht & Draskau 1985) and the established ISO 704 (2009) and ISO 1087-1 (2000) standards. The concepts are organized from the general to the more detailed into acyclic taxonomic (is-a) hierarchies. For example, *Viral pneumonia* IS-A *Infectious pneumonia* IS-A *Pneumonia* IS-A *Lung disease*. Concepts may have multiple parents, for example <*Infectious pneumonia*> is also a child of <*Infectious disease*>. The taxonomic structure allows data to be recorded and later accessed at different levels of aggregation. SNOMED CT concepts are linked by approximately 1,360,000 links. These so-called relationships link concepts to other concepts whose meaning is related in some way or another. These relationships provide formal definitions and other properties of the concept (e.g. kind of relationship, causative agent, finding site, pathological process, etc.). This means that the meaning of concepts is not explained by textual definitions, but must be derived from the formal representation composed of an attribute/value combination. For example, the concept <cellulitis of foot>, may be represented in several ways. The concept has two superordinate concepts (IS-A relationships), namely <disorder of foot> and <cellulitis of leg>. It points simultaneously to (1) a concept in the Inflammatory Disorder sub-hierarchy by means of an attribute relationship composed of the attribute *associated morphology* + the value *cellulitis* chosen among the Inflammatory Disorder sub-hierarchy concepts; (2) a concept in the Body Structure hierarchy by means of an attribute relationship composed of the attribute *finding site* + the value *foot structure* chosen among the Body Structure concepts. If so desired, it is entirely possible to generate textual concept definitions based on these hierarchical and defining attribute relationships.

Concepts are represented by one fully specified name (FSN). The FSN is a unique unambiguous description of the concept's meaning and is only used in SNOMED CT. For example, "*Hematoma*" ('morphologic abnormality') is an FSN that represents what the pathologist sees at the tissue level, whereas "*Hematoma*" ('disorder') is an FSN that indicates the clinical diagnosis of a hematoma by a general practitioner. The FSNs (realized in English) are not supposed to be translated as they function as a kind of "metalanguage" by means of which the concept can be referred to. Each concept is also represented by one suggested default preferred term (PT) and many synonyms. The PT is the term used in clinical settings. As SNOMED CT is also a multi-axial terminology concepts may have more than one superordinate concept. For example, the concept <excision of fragment of bone> belongs to the Procedure hierarchy, but has also two immediate superordinate concepts: it is (1) a type of <excision of bone>, as well as (2) a type of <removal of bone fragments>.

SNOMED CT is designed for implementation in software applications that serve the needs and objectives of end-users. In fact, SNOMED CT is used in different computer applications such as Electronic Health Record Systems, Computerized Provider Order Entry (e.g. E-Prescribing or Laboratory Order Entry), catalogues of clinical services (e.g. for Diagnostic Imaging procedures), knowledge databases used in clinical

decision support systems (CDSS), Remote Intensive Care Unit Monitoring, Laboratory Reporting, Emergency Room Charting, Cancer Reporting and Genetic Databases.

The terminology is intended to support the representation of detailed clinical information contained in electronic clinical records in a way that can be processed automatically. The potential benefits of SNOMED CT are situated on different levels and include aspects such as the provision of clinical information at the level of detail needed for delivering health care, facilitating data sharing and recording of information by different people in different locations, unambiguous interpretation due to the standardized terminology, and many others. SNOMED CT is intended to be used worldwide and therefore needs to be translated into other languages and dialects. Currently translations are available in American English, British English, Spanish, Danish and Swedish. Other translations (incl. Dutch, French and German) are underway.

4.4 Metathesaurus

The *Unified Medical Language System* (UMLS) is a (bio-)medical metathesaurus[9] (i.e. a thesaurus providing information on other thesauri) developed by a multidisciplinary team of the US National Library of Medicine (NLM) (Sadegh-Zadeh 2015, 67). It provides a huge set of files and software that brings together many health and biomedical vocabularies and standards to enable interoperability between computer systems. The objectives of UMLS are to enable health care professionals and researchers to access and integrate electronic biomedical information from a variety of sources (Lindberg et al. 1993) and to develop applications, such as electronic health records, classification tools, dictionaries and language translators.

4.5 Indexing system

"Indexing" means indicating a publication's subject(s) by means of keywords ("descriptors") (Sadegh-Zadeh 2015, 68). The most popular indexing tool used in the (bio)medical domain is the *Medical Subject Headings* (MeSH), a controlled vocabulary developed and maintained by the US National Library of Medicine (NLM) for indexing articles, books, and other material stored in the database PubMed.[10] PubMed comprises more

---

9. A thesaurus, from the Greek "*θησαυρ΄ος*" ('thesaur΄os') for "treasure", is a *treasury of words*, i.e. a controlled vocabulary and terminology, denoting objects or relations in a domain and consisting of systematized lists of synonyms, antonyms, and otherwise related terms. A *metathesaurus* is a thesaurus about several other thesauri (Sadegh-Zadeh 2015, 67).

10. The second part of the acronym PubMed ("Med") refers to the MEDLINE database (which PubMed searches); the first part ("Pub") may be interpreted as either *public* (PubMed is the free version of MEDLINE) or as *publisher* (PubMed includes links to publisher websites).(National Center for Biotechnology Information, n.d.).

than 26 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher websites. Its main purpose is to facilitate subject access, thus supporting literature search in the (bio)medical domain (Coletti & Bleich 2001).

4.6 MEDLINE

MEDLINE (Medical Literature Analysis and Retrieval System Online, or MEDLARS Online) is a database of bibliographic references and abstracts on life sciences and biomedical topics. It includes bibliographic information for articles from academic journals covering medicine, nursing, pharmacy, dentistry, veterinary medicine, health care, biology and biochemistry, as well as fields such as molecular evolution. The database is compiled by the US National Library of Medicine (NLM) and is available on the Internet. It is searchable via the search engine accessing PubMed.

5. Recent national and international medical terminology standardization activities

The International Organization for Standardization (ISO) develops and publishes International Standards, which are defined as "documents that provide requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose" (ISO 2016). The standards are developed by field experts who work together in Technical Committees (TCs). ISO/TC 215 sets the standards for health informatics and plays a central role regarding the standardization of medical terminology systems. This committee is responsible for the standardization of Health Information and Communications Technology (ICT), to facilitate the compatibility and interoperability between independent healthcare systems. It consists of several Working Groups (WG), each dealing with an aspect of Electronic Health Records (EHR): Architecture, Frameworks and Models (WG 1), Systems and Device Interoperability (WG 2), Semantic Content (WG 3), Security, Safety and Privacy (WG4), and Pharmacy and Medicines Business (WG6). Since the beginning of the standardization activities 170 standards and other deliverables have been developed by ISO/TC 215.

In the European Union, standardization in the area of Health ICT is performed by the CEN/TC 251 (Commission for European Normalization/Technical Committee 251). The goal is to achieve compatibility and interoperability between independent systems and to enable modularity in Electronic Health Record systems. The two Working groups Enterprise and Information and Technology and Applications stipulate the requirements for health information structures for supporting clinical and administrative procedures, and develop the technology behind interoperable systems. Moreover,

safety, security and quality requirements fall within their area of responsibility. An overview of the published CEN/TC 251 standards is available online at www.cen.eu.

In summary, we can conclude that medical nomenclatures, clinical terminologies and coding systems play a significant role in medical communication. Initiated and developed by experts from different domains, the various systems are approved by scientific and professional associations (as in the case of the anatomical nomenclature) or by national and international authorities and organizations (e.g. NLM and WHO).

6. Science popularization and lay-friendliness in health information texts

Following our review of various aspects of medical terminology mainly in its scientific context in the previous sections, in this section we introduce some important issues related to the use of medical terminology in general health communication for patients and other lay target readers. The relevance of appropriate terminology usage in health information documents for this target group is obvious, as patients and other affected lay readers need to be informed in ways that ensure correct interpretation and understanding as well as therapeutic compliance. This requires significant adaptations between the highly specialized scientific medical register or Language for Specific Purposes (LSP) and the register of general language use or Language for General Purposes (LGP). But as health communication in the latter case still conveys specialized knowledge (and hence concepts or terminology), albeit to a non-specialized target group, health communication texts intended for the general public often occupy an intermediate position between LSP and LGP, depending on their precise function. Thus, for instance a public information brochure on a healthy daily diet will be closer to the LGP end of the continuum, whereas patient information leaflets with medicines for specific medical conditions will be situated more towards the other end, as they contain features of both LGP texts and LSP texts, notably concerning concepts and terminology usage. In this sense patient information leaflets (henceforth PILs) might be considered a specific type of LSP. They convey information which is directly relevant for the patient derived from the more specialized Summary of Product Characteristics documents (SmPCs), which provide comprehensive information on the available knowledge and evidence for specific medicines. SmPCs are a specific type of document required within the European Commission before any medicinal product is authorized for marketing and are written by and for specialists.

The use of medical terminology in health information documents for non-specialist readers, more specifically PILs, will be discussed mainly on the level of intralingual register-specific translation. But interlingual translation of medical terminology in health information documents for non-specialists also has some important implications on the level of technicity in terminological variants (and hence non-specialist understanding)

for specific target languages, as discussed briefly below. Our discussion is based on one pilot study and one more extensive study of PILs, and on one comparative pilot study of PILs and the SmPCs from which they were derived. For all three studies a range of different criteria were analyzed within the context of broader research questions. The studies analyzing PILs departed from the intercultural research question into different levels of *uncertainty avoidance* (UA), one of Hofstede's (2001) values for intercultural comparison. The PIL-pilot study compared ten PILs (five in original English and five translated into German) for medicines for the treatment of hypertension and insomnia, which were issued by the European Medicines Agency (EMA). The second study compared 24 PILs (12 English and 12 Dutch translations) for the treatment of infections and tumors. All PILs were also taken from the EMA website (www.ema.europa.eu/ema/).

The pilot study on intralingual translation is based on a comprehensive comparison of different linguistic levels in the SmPC and the PIL for a medicinal product for the treatment of essential hypertension and the prevention of severe cardiovascular problems. Not all specialist information in the SmPC is directly relevant for patients. Consequently, the PIL contains approximately half the number of words of the SmPC. Transferring the relevant information from the SmPC to the PIL also involves the use of a different structure and order of the information. The SmPC includes the following main sections, with additional subsections, as stipulated by the EMA: (1) Name of the medicinal product, (2) Qualitative and quantitative composition, (3) Pharmaceutical form, (4) Clinical particulars, (5) Pharmacological properties, and (6) Pharmaceutical particulars. The PIL structure also follows an EMA template, published by the Quality Review of Documents (QRD) group and includes the following sections: (1) What [name of medicine] is and what it is used for, (2) What you need to know before you take [name of medicine], (3) How to take [name of medicine], (4) Possible side effects, (5) How to store [name of medicine], (6) Contents of the pack and other information. In addition to the QRD-template, the EMA has also issued the updated *European Guideline on the readability of the labelling and package leaflet of medicinal products for human use*(2009), which includes general recommendations for language use and style.

In the SmPC – PIL pilot study we found different strategies to incorporate specialized information and terms into general language in the form of more widely known words or lay terms. When we consider the adaptive strategies for terms or concepts in the SmPC to the PIL in Examples (10) and (11), we find the adaptation from a more complex noun phrase with postmodifier ("type two diabetes mellitus with documented target organ damage") in the SmPC to a simplified simple noun phrase with a single adjective premodifier with general reference ("high risk") in example (10). "High risk diabetes" in the PIL offers a summarizing gloss of the information from the SmPC, including implications for the patient (i.e. "high risk"). In example (11), however, we see the adaptation from a simple premodified noun phrase ("peripheral arterial disease") in the SmPC to a more complex noun phrase with both a coordinated

premodifier ("reduced or blocked") and a coordinated postmodifier ("to the heart and legs") in the PIL. The noun phrase "reduced or blocked blood supply to the heart or legs" provides an explanatory (but not a scientific) definition for the lay reader. When we consider example (12) from the PIL, we see two different science popularization strategies in one and the same sentence concerning the order in which specialized or scientific terms and the elucidating lay terms are presented to the reader, viz. *lay term + scientific term* as well as *scientific term + lay term*. In example (13) the reference to a scientific term is introduced metalinguistically by means of the verb "called" and the quotation marks ("a condition called "orthostatic hypotension"). Interestingly, the ensuing explanation for the PIL-reader is not limited to an explanatory definition, but includes information on the conditions ("on standing up from a sitting or lying position") and immediate results ("resulting in dizziness or faintness").

(10) type two diabetes mellitus with documented target organ damage (SmPC)
→ high risk diabetes (PIL)

(11) Peripheral arterial disease (SmPC)
→ reduced or blocked blood supply to the heart or legs (PIL)

(12) Low blood pressure (hypotension) [lay term + scientific term], likely to occur if you are dehydrated (excessive loss of body water) [scientific term + lay term] or have salt deficiency due to diuretic therapy ('water tablets') [scientific term + lay term]. (PIL)

(13) If you suffer from a condition called "orthostatic hypotension" (a drop in blood pressure on standing up from a sitting or lying position resulting in dizziness or faintness) your condition may worsen if you take X in combination with […] (PIL)

While enhanced explanatory definitions as in example (13) may certainly be informative and useful for patients, it seems advisable to implement some rules for uniformity in science popularization strategies for expressing medical concepts and terms in general health documents. Various science popularization strategies are possible, and were observed in the PIL-pilot study. Table 2 summarizes possible science popularization strategies.

Table 2. Science popularization strategies in patient information leaflets (PILs)

Science popularization strategy		**Explanation**
(a)	scientific term + lay term	
(b)	lay term + scientific term	
(c)	scientific term only	no lay term or explicitation added
(d)	lay term only	no scientific term or explicitation added
(e)	scientific term + explicitation	
(f)	lay term + explicitation	

Example (12) above illustrates options (a) and (b) from Table 2. And examples (11) and (13) include explicitations with scientific terms (option e) (see below for a working definition of an explicitation). Options (c) and (f) from Table 2 are illustrated in examples (15) and (14) respectively below. An example of option (d) in a PIL is the use of the term "bile obstruction" only in a PIL (scientific term "*cholestasis*").

These science popularization strategies were observed in the PILs of the pilot study in the broader context of *uncertainty avoidance* as a measure of people's behaviour and risk management. The *Uncertainty Avoidance Index* (UAI) compares different national cultures with regard to the extent to which their members feel threatened by uncertain or unknown conditions (Hofstede 2001, 161). Uncertainty avoidance is also relevant **in texts and contexts where patients find themselves exposed to new (medical) conditions** and treatments. Various linguistic analytical criteria were applied to compare and assess the degree of uncertainty avoidance in English and German PILs from the EMA website (see Verplaetse & Wermuth 2014), most notably the criteria of epistemic and non-epistemic modality. But also degrees of science popularization through explicitation and lay terminology can contribute to a higher level of uncertainty avoidance, as these strategies help to ensure that the reader or patient understands the message better, thus increasing correct therapeutic compliance and medicine intake. Uncertainty avoidance through science popularization and explicitation was subsequently the focus of a study on specialized versus lay terminology in 24 PILs from the EMA website for the treatment of infections and tumors (12 PILs in English and their Dutch translations) (see Lambrechts and Verplaetse forthcoming).

The study into degrees of uncertainty avoidance through science popularization and explicitation departed from the hypothesis that the Dutch PILs contain more explicitation of specialized medical terminology than the original English PILs in view of the markedly higher UAI for Dutch speaking nations recorded by Hofstede (2001) compared to the UAI for Anglo-Saxon countries. This was studied in the context of general readability of PILs. Readability may be defined on the basis of different criteria, including syntactic complexity and lexical density, but also terminology and the level of terminological or lexical technicity. In the context of health documents for patients, the relevant assessment of readability is manifested in therapeutic compliance and correct medicine intake by patients. The study analyzed terminological or lexical technicity, rather than syntactic aspects. The term "lay-friendliness" is used henceforth to refer to this general property of readability.

According to Directive 2004/27/EC of the European Parliament (amending Directive 2001/83/EC on the Community code) relating to medicinal products for human use, only one language version is required to be tested for lay-friendliness. However, what constitutes lay-friendly word choice (as opposed to specialized terminology) may differ from one language to another. In a comparison of English and Dutch, the historical integration of Latin-based words in the general lexis of English narrows the

distance with Latin-based scientific terminology. This is not the case for Dutch to the same extent, despite the fact that both are classified as Germanic languages. Thus, to analyze the use of levels of scientific specialization or technicity, different criteria need to be considered for these two languages. A word was generally classified as a scientific term in the Dutch PILs if it was a Latin-based term. But especially for English, since many Latin-based words have penetrated the common lexicon, we may need to apply the additional criterion that a Latin-based term is classified as a scientific term (e.g. "*urticarial*" for 'hives') if another (non-Latin based) lay term is available as well (e.g. "hives" for 'urticaria'). In some cases, no common non-Latin based term is available for English. In contrast, for a word to be classified as a lay term, in the Dutch PILs, the main criterion was that it was not Latin-based. The term "anaemic", for instance, is commonly used in English (e.g. "he's anaemic"), even in general language use, whereas a person would not commonly be described with this Latin-based term in Dutch, the common Dutch lay expression being "*hij lijdt aan bloedarmoede*", which contains the words "blood" and "deficiency" (Dutch term "*bloedarmoede*"). And although the term "iron-deficiency" is available in English, the medical condition is referred to as "iron-deficiency anaemia", and both "anaemia" and "anaemic" are also commonly used in general language in English. (See also Askhave & Zethsen's (2011, 16) recommendation to replace Latin-based medical terms which are part of general English language with other terms when translating into other languages where the Latin-based terms may be incomprehensible or very formal for lay readers).

With reference to the status of words or word groups in PILs it may be argued that both scientific terms as well as lay terms can be labelled "terms" as they both designate concepts from the specialized medical domain. A detailed consideration of this point would fall beyond the scope of the present chapter, however.

The categories of specialized terms and lay terms differ from explicitations, which may contain prepositions, conjunctions or relative pronouns and verbal constructions and may even constitute entire sentences. The following examples further illustrate the use of scientific terms, lay terms and explicitations, and the different possible combinations thereof which occur in the English and Dutch PILs (refer to Examples (11), (12) and (13) and options (a), (b) and (e) from Table 2).

(14) Eczema (inflamed, red, itchy and dryness of the skin with possible oozing lesions)

(15) Inflammation of the veins and formation of blood clots in the veins which could lead to blockage of blood flow to your lungs causing difficulty breathing, chest pain and palpitations.

"*Eczema*" in example (14) was classified as a lay term. Not only do most lay people have a fair idea of what "*eczema*" refers to, but there is also another lesser-known Latin-based term for the general class of conditions referred to as "*eczema*": "*dermatitis*". The term "*eczema*" is explained further (option (f) from Table 2: *lay term* +

explicitation). The use of coordinated adjectival "and" nominal explicitation in this example is stylistically noteworthy with respect to linguistic coherence and uniformity (or lack thereof). Another example of a *lay term + explicitation* in PILs is "cardiac murmur" ('abnormal heart beat sounds'); "Cardiac murmur" is considered a lay term as it could be replaced by the scientific term "*soufflé*".

In Example (15) the term "palpitations" is presented without further explicitation in one specific PIL (option c from Table 2: *scientific term only*). "Palpitation" is a scientific term according to the Medicines and Healthcare Products Regulatory Agency (MHRA) of the UK. Many lay readers will indeed need some explicitation with this term. This is presented in different ways in the corpus (Examples (15a to 15d)).

(15) a. palpitations (when you can feel your heart beat)
b. palpitations (strong heartbeat you can feel in your chest)
c. palpitations (awareness of a forceful heartbeat which may be rapid or irregular)
d. palpitations (pounding heart beat)

The stylistic difference resulting from addressing the reader / patient directly with the second person pronoun in (15a) and (15b) as opposed to the impersonal nominalisations in (15c) and (15d) is noteworthy, notably in the light of the importance of "role relations" which are expressed in PILs (see Verplaetse & Wermuth 2014). In all four explicitations with the scientific term *palpitations* in Example (15) the explicitation (logically) follows the scientific term. When both a scientific term and a lay term are available, the Dutch Medicines Evaluation Board (*College ter Beoordeling van Geneesmiddelen* (CBG)) recommends to use the lay term first, followed by the scientific term between brackets, if mention of the latter is significant or necessary in the PIL (*lay term + scientific term*). When no lay term exists for a scientific term the CBG recommends the use of explicitation following the scientific term between brackets (*scientific term + explicitation*).

Returning to the research question which prompted an analysis of medical terminology in PILs in terms of *uncertainty avoidance* through lay-friendliness in English versus Dutch, one of the conclusions is that any increased *uncertainty avoidance* in the Dutch translated PILs compared to the English PILs was not achieved through more explicitation. Rather, the results showed a noticeably higher number of lay terms in the Dutch PILs, as opposed to more scientific terms in the English PILs, arguably promoting greater therapeutic compliance and medicine intake. In addition, the English PILs contain markedly more Latin-based lay terminology (see Verplaetse and Lambrechts forthcoming for full details).

The matters and examples discussed in this section above provide an introductory account of the relevance and challenges of science popularization in medical and general health information texts. Lay-friendliness in this context is situated on different levels, which involve different intralingual register-specific science popularization

strategies, including lay terminology as well as explicitation. Different strategies and considerations also apply for register-specific adaptations on an interlingual level.

7. Summary

This chapter started with a brief overview of the history of Western medical terminology, which provides basic insight in its Greek and subsequent Latin origins. Medical terminology in the Western world is rooted in a Greek tradition, which we can trace back to the Hippocratic writings of the 4th and 5th centuries BC. The Greek medical tradition was continued in the Roman period, where Greek remained the language of medicine at first. In the 1st century AD, Celsus' *De Medicina*, published in Latin, constituted a turning point. The author's approach for gradual adaptation of Greek medical terms to Latin forms is of great interest. The Middle Ages also saw the translation of Greek medical texts into Arabic, and although original Arabic medical writings existed, few Arabic terms have been preserved in modern Western medical terminology. In the Renaissance, medical Latin flourished. Greek and Arabic texts were translated into Latin, and Latin became the standard language for many anatomical terms. In subsequent centuries, virtually all major medical works were published in Latin, so that Latin effectively became the international *lingua franca* for medicine, comparable to the status of English as a *lingua franca* for science and medicine today. Medical terminology expanded and adopted so-called neoclassical terms, or hybrid Greek and Latin forms. Gradually, however, national languages started to play a more important role in medical communication, notably French and English, which in turn both assumed a more international role in Western medical communication. Since the 1950's English has become the *lingua franca* for medical terminology. And like the terminological acculturation of medical Latin over Greek at the beginning of the Western calendar, the use and integration of English medical terms into other, national languages is an interesting process. Today's medical evolutions result in a highly dynamic medical language, which needs to integrate new concepts and terms. In this process of *terminologizing* words from general language, abbreviations and acronyms, eponyms, slang and jargon words, synonyms, metaphors and metonyms, and neologisms, are integrated in modern medical language and terminology, extending and complementing the original classical Greek and Latin foundation.

The wealth of medical terminology, including new forms of medical terminologization as well as relatively new terms, provides many advantages as well as some challenges, as described and illustrated in Section 3. These relate to a lack of international consistency as well as an unstable term-concept relation. Notably eponyms, abbreviations and acronyms represent problematic areas. The fact that no one-to-one concept term relation applies in many cases (except for anatomical terms) is a

recognized shortcoming in the medical field, which may be attributed to a lack of consistent term definitions. The scope of synomymous and polysemous terms in the medical field obviously entails the need for correct contextual information. Misunderstanding and other risks might result when insufficient contextual information is available. But numerous medical concepts *can* be defined precisely, and the various actors within the medical field are encouraged to define new terms in unambiguous and clear ways.

Medical language is a natural language, and medical terminology, like any domain specific terminology, aims to optimize communication between experts working in the field. Electronic storage, accessibility and retrieval of patient data is a modern development which has been added to modern medical practice. Effective use of medical information in electronic form requires medical terminology in the form of concept systems. Various nomenclatures, vocabularies, terminologies and coding systems have been developed to support the effective communication among medical experts and the recording of patient data. Systems in the fields of Medical Information and Library Sciences and information sciences, including medical informatics and medical linguistics, focus on natural language processing of medical linguistic data for this purpose. Section 4 described some of the most popular health informatics systems. With the need for compatibility and interoperability of terminology between independent systems, national and international medical terminology standardization activities have been initiated by the respective standardization bodies.

Apart from optimization of communication between medical experts and compatibility or interoperability of (electronic) patient data and other professional health informatics, communication between medical experts or professionals on the one hand and patients or other impacted lay people on the other is also an important aspect of medical language in general. The transfer of knowledge from the specialized domain of medicine to the general domain entails science popularization strategies. Our analyses of patient-information leaflets (PILs) and specialized Summary of Product Characteristics documents (SmPCs) have provided insights into intralingual translation in the medical domain between the registers of medical LSP and LGP. In this respect we have argued that these two registers constitute the extreme ends of a continuum, especially for the medical domain, as specialized knowledge, and hence terminology, needs to be transferred to a non-specialist register. This is due to the very nature of medicine, which involves (lay) people and their bodily or mental conditions. As a result, some text types (e.g. PILs) may be situated at an intermediate position on the continuum. On the level of interlingual translation, we also notice different implications in terms of what constitutes lay terminology or specialized terminology for different languages. To a great extent this can be attributed to the different diachronic relations to Latin, the historical medical *lingua franca*, in different languages.

8. Conclusions

From the account in this chapter we believe that both further developments of systems for unambiguous and interoperable expert medical terminology in many languages, as well as science popularization of relevant expert medical knowledge in general health communication texts for lay target groups, deserve further attention. In the former case, on the expert medical level, the challenges of current and newly developing medical terminology to be tackled originate in a lack of international consistency as well as unstable term-concept relations. In this respect, we call for increased efforts by all actors within the medical field towards consistent, unambiguous and precise term definitions for new medical terms. In the latter case, we also call for consistency in the use of science popularization strategies for intralingual translation on different ends of the continuum between medical LSP and LGP. In addition, on the interlingual level we call for special attention by translators of medical texts for lay readers to what is perceived and categorized as lay terminology versus specialized terminology in different languages.

References

Askehave, Inger, and Karen Korning Zethsen. 2011. "Lost in Translation: When Patient Information Crosses Borders." *European Industrial Pharmacy* 11: 14–16.

Bankowski, Zenon, and Alexander Hamish Tearloch Robb-Smith. 1978. "International Nomenclature of Diseases." *Journal of the Royal Society of Medicine* 71 (5): 382. https://doi.org/10.1177/014107687807100517

Cabré, Maria Teresa. 1998. *Terminology: Theory, Methods and Applications*. Amsterdam: John Benjamins. https://doi.org/10.1075/tlrp.1

Celsus Aulus Cornelius. 2015. *De Medicina*. Welwyn, Hertfordshire, UK: Arkose.

Coiera, Enrico. 2015. *Guide to Health Informatics*. 3rd ed. Boca Raton, Florida: CRC press.

Coletti, Margaret, and Howard Bleich. 2001. "Medical Subject Headings Used to Search Biomedical Literature." *Journal of the American Medical Informatics Association* 8: 317–323. https://doi.org/10.1136/jamia.2001.0080317

Crezee, Ineke. 1997. *A Brief Guide to Healthcare Settings and Healthcare Terminology*. Auckland: New Horizons Advisory Services Limited.

Directive 2004/27/EC of the European Parliament and of the Council of 31 March 2004 amending Directive 2001/83/EC on the Community Code relating to medicinal products for human use. 2004. *Official Journal of the European Union* L 136: 34–57. Retrieved from www.eur-lex.europa.eu.

Eckart, Wolfgang U. 2015. "Venter Id Est Hwamba." In *Handbuch Sprache in der Medizin*, ed. by Albert Busch and Thomas Spranz-Fogasy, 3–25. Berlin/Boston: De Gruyter.

European Commission. 2009. "Guideline on the Readability of the Labelling and Package Leaflet of Medicinal Products for Human Use." Revision 1, 12. Retrieved from www.ec.europa.eu/enterprise/pharmaceuticals/eudralex/vol-2/c/2009_01_12_readability_guideline_final.pdf.

European Medicines Agency. 2014. *Quality Review of Documents Human Product-information Template version 9*. Accessed April 2014. www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/document_listing/document_listing_000134.jsp.

Forbis, Pat, and Susan L. Bartolucci. 2004. *Stedman's Medical Eponyms*. Baltimore: Lippincott Williams & Wilkins.

Hofstede, Geert. 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. 2nd ed. Thousand Oaks: Sage.

Institut für Geschichte der Medizin, Charité-Universitätsmedizin Berlin. 2008. *Medizinische Terminologie Skript für das Prakikum der Medizinischen Terminologie*, Edited by Thomas Beddies, Eva Brinkschulte, Martin Brumme, Volker Hess, Ilona Marz, and Thomas Müller. Berlin. Retrieved from medizingeschichte.charite.de/fileadmin/user_upload/microsites/m_cc01/medizingeschichte/Lehre/Terminologie-Skript-inkl-Uebungen-Aufl10.pdf.

International Health Terminology Standards Development Organisation (IHTSDO). 2016. *History Of SNOMED CT*. Accessed May 24, 2016. www.ihtsdo.org/snomed-ct/what-is-snomed-ct/history-of-snomed-ct.

International Standardization Organization (ISO). 2016. *Standards Developments*. Accessed August 1, 2016. www.iso.org/iso/home/standards_development/deliverables-all.htm?type=standard.

Kageura, Kyo. 2002. *The Dynamics of Terminology: A Descriptive Theory of Term Formation and Terminological Growth*. Amsterdam: John Benjamins. https://doi.org/10.1075/tlrp.5

Karenberger, Axel. 2015. *Fachsprache Medizin im Schnellkurs*. Stuttgart: Schattauer.

King, Helen. 1993. "Once upon a Text: Hysteria from Hippocrates." In *Hysteria beyond Freud*, ed. by Sander Gilman, Helen King, Roy Porter, George S. Rousseau, and Elaine Showalter, 3–90. Berkeley/Los Angeles/London: University of California Press.

Lambrechts, An, and Heidi Verplaetse. Forthcoming. "Science Popularization' in English and Translated Dutch Patient Information Leaflets: Specialized Versus Lay Terminology and Explicitation."

Lindberg, Donald A., Betsy L. Humphreys, and Alexa T. McCray. 1993. "The Unified Medical Language System." *Methods of Information in Medicine* 32 (4): 281–291. https://doi.org/10.1055/s-0038-1634945

Montalt, Vincent, and Maria Gonzalez-Davies. 2007. *Medical Translation Step by Step: Learning by Drafting*. Manchester: St. Jerome Publishing.

National Center for Biotechnology Information. n.d. *Mesh*. Accessed August 1, 2016. www.ncbi.nlm.nih.gov/mesh.

Open Clinical. 2016. *Medical Terminologies*. Accessed August 1, 2016. www.openclinical.org/medicalterminologies.html.

Picht, Heribert, and Jennifer Draskau. 1985. *Terminology: An Introduction*. Surrey, Guildford: University of Surrey.

Porep, Rüdiger, and Wolf-Ingo Steudel. 1983. *Medizinische Terminologie. Ein programmierter Kurs mit Kompendium zur Einführung in die medizinische Fachsprache*. Stuttgart/New York: Thieme.

Rogers, Margaret A. 2005. "Lexicology and the Study of Terminology." In *An International Handbook on the Nature and Structure of Words and Vocabularies*, Vol. II, ed. by Alan D. Cruse, Franz Hundsnurscher, Michael Job, and Peter Rolf Lutzeier, 1847–1854. Berlin/New York: De Gruyter.

Sadegh-Zadeh, Kazem. 2015. *Handbook of Analytic Philosophy of Medicine*. Dordrecht: Springer. https://doi.org/10.1007/978-94-017-9579-1

Stahl, Elvira. 1992. "Medical Translation: "It has to be done with Precision"." *Canadian Medical Association Journal* 146 (2): 265–266.

Standardization/TC37-committee, International Organization for Standardization. 2009. *ISO 704: Terminology Work – Principles and Methods*. Retrieved from https://www.iso.org/standard/38109.html.

Stearns, Michael Q., Colin Price, Kent A. Spackman, and Amy Y. Wang. 2001. "SNOMED Clinical Terms: Overview of the Development Process and Project Status." Proceedings of the *AMIA Symposium (American Medical Informatics Association)*, 662–666.

Studdert, Virginia P., Clive C. Gay, and Douglas C. Blood. 2012. *Saunders Comprehensive Veterinary Dictionary*. 4th ed. N.p.: Elsevier Ltd.

Thieme, Stuttgart. 1998. *Terminologia Anatomica. International Anatomical Terminology*, Edited by Ian Whitmore. Stuttgart: Thieme.

U.S. National Library of Medicine. 2016. *UMLS Quick Start Guide*. Accessed August 1, 2016. www.nlm.nih.gov/research/umls/quickstart.html.

U.S. National Library of Medicine. 2016. *pmresources*. Accessed August 1, 2016. www.nlm.nih.gov/bsd/pmresources.html.

U.S. National Library of Medicine National Institutes of Health. 2016. *Pubmed*. Accessed August 1, 2016. www.ncbi.nlm.nih.gov/pubmed/

Van Hoof, Henri. 1998. "The Language of Medicine. A Comparative Ministudy of English and French." In *Translation and Medicine*, ed. by Henry Fischbach, 49–65. Amsterdam: John Benjamins. https://doi.org/10.1075/ata.x.07van

Verplaetse, Heidi, and Maria-Cornelia Wermuth. 2014. "Keys for Reader Response to Written Healthcare Communication: a Contrastive Study of English and Translated German Patient-information Leaflets (PILs)." *Turjuman, Journal of Translation Studies* 23 (2): 11–45.

Vesalius, Andreas, and Ian Jackson. 1988. *De Humani Corporis Fabrica. Basel, 1543*. Amsterdam: Octavo.

Wermuth, Maria-Cornelia. 2005. Een frame-gebaseerde benadering van medische classificatierubrieken. Cardiovascualire rubrieken als een case study. PhD dissertation, Vrije Universiteit Amsterdam.

Wermuth, Maria-Cornelia. 2006. "A Frame-based Approach to Medical Classification Rubrics." Paper presented at the *International Conference of the German Cognitive Linguistics Association*, München, Germany, 5–7 October 2006.

Wermuth, Maria-Cornelia. 2009. "The Framing of Surgical Procedures." In *Proceedings of the First International Workshop on Terminology and Lexical Semantics*, ed. by Amparo Alcina and Marie-Claude L'Homme, 87–98. Montréal.

Wermuth, Maria-Cornelia. 2013. "De l'usage du bon sens en traduction médicale." In *Rivages linguistiques, Le bon sens en traduction*, ed. by Jean-Yves Le Disez and Winibert Segers, 117–130. Rennes: Presses Universitaires de Rennes.

World Health Organization (WHO). 2012a. *Classification of Diseases*. Accessed August 1, 2016. www.who.int/classifications/icd/revision/en/index.

World Health Organization (WHO). 2012b. *International Statistical Classification of Diseases (ICD)*. www.who.int/classifications/icd/en/index.html.

World Health Organization (WHO). 2016. *International Classification of Diseases (ICD) Revision*. Accessed August 1, 2016. www.who.int/classifications/icd/revision/icd11faq/en.

Wikipedia. 2016. *International Statistical Classification of Diseases and Related Health Problems*. Accessed July 31, 2016. www.en.wikipedia.org/wiki/International_Statistical_Classification_of_Diseases_and_Related_Health_Problems.

Wikipedia. n.d. *CEN/TC_251CEN/TC_251*. Accessed August 1, 2016. en.wikipedia.org/wiki/CEN/TC_251CEN/TC_251.

Wikipedia. n.d. *ISO/TC_215ISO/TC_215*. Accessed August 1, 2016. en.wikipedia.org/wiki/ISO/TC_215ISO/TC_215#Standards.

Wikipedia. n.d. *MEDLINE*. Accessed August 1, 2016. en.wikipedia.org/wiki/MEDLINE.

Winkelmann, Andreas. 2009. *Von Achilles bis Zuckerkandl: Eigennamen in der medizinischen Fachsprache*. Bern: Huber.

Wulff, Hendrik. 2004. "The Language of Medicine." *Journal of the Royal Society of Medicine* 97: 187–188. https://doi.org/10.1177/014107680409700412

CHAPTER 5

Medical terminology in the Arab world

Current state and developments

Kassem Sara

The cherished terminological principle of a single term for a single concept seems to be lagging behind in the Arab world despite the serious standardization steps taken to that end. Arabic medical terminology, like terminologies of other disciplines, is unfortunately still in a state of chaos due to the plurality of Arabic terms for the same scientific concept. This article attempts to describe the current state of Arabic health and medical terminology, shedding light on the political, educational and terminological practices followed to overcome this problem. It also highlights certain individual and institutional responses to issues of medical terminology and proposes a number of ways to help standardize Arabic terminology.

Keywords: Arabic terminology, Arabic health and medical terminology, standardization, Arabic terms

1. Introduction

Many researchers in the history of science consider medicine to be the most important channel of communication between civilizations despite their differences in language, visions and in the means they adopt to achieve their objectives. This makes the investigation of medical and health terms a good approach for understanding the terminological condition in all scientific and cultural fields.

Mustafa Shihabi (1957, 165) summed up the situation of scientific terminology, in general, and medical terms, in particular, in the first half of the twentieth century, saying: "We suffer today from two problems: (1) the lack of scientific terminology in the Arabic language and the (2) plurality of Arabic terms for the same scientific concept". This is similar to what was written by William Farr, the Registrar General for medical records in the City of London, about the status of terms at that time in his first annual report in 1839: "Each disease has, in many instances, been denoted by three or four terms, and each term has been applied to as many different diseases: vague, inconvenient names have been employed, or complications have been registered instead of primary diseases. The Nomenclature of Diseases is of as much importance in this

https://doi.org/10.1075/hot.2.06sar

department of inquiry as weights and measures in the physical sciences, and should be settled without delay" (Farr 1839, 99).

While individual efforts to develop medical and biological terms (such as Sharaf's *Medical Dictionary* (1928), Ahmed Issa's *At-Tahḍīb fī 'Usūl At-Taʿrīb* ('On arabization') (1923), and Murshid Khattir, Hamdi Al-Khayat, and Salahuddin Al-Kawakibi's translation of *Clairville's Multilingual Medical Dictionary*(1956) contributed to alleviating the deficiencies identified by Shihabi and ultimately enriched the Arabic language with new terms, at the same time those efforts caused what could be called a state of terminological chaos.

Institutionalized work dominated the scene after the emergence of the Arabic language academies in Damascus, Cairo, Baghdad, and Amman, which established specialized terminology committees, held annual conferences, and cooperated with regional organizations concerned with scientific terminology. These regional organizations include the Bureau for the Coordination of Arabization in Morocco, the Arab Center for the Arabization of Health Sciences (ACMLS) in Kuwait, the Arab Center for Translation, and Arabization and Publishing (ACATAP) in Damascus, as well as international organizations such as the World Health Organization with its Global Arab Program and local technical and professional organizations such as the Arab Medical Union, the Union of Arab pharmacists and the Union of Arab dentists. This cooperation had a major role in changing the landscape and alleviating the aforementioned deficiencies.

Nonetheless, these efforts were limited within each individual organization and there was a general lack of coordination among all. The sustained efforts made by the institutions and language academies soon led to a flood of different terms, and each academy or institution announced the terms coined by it as "unified and unifying" terms to serve standardization purposes. With the exception of the *Unified Medical Dictionary* (UMD), which stands out among medical dictionaries, there is no evidence to say that the terminology of any other field (e.g. zoology, botany, law, etc.) produced through such efforts has won the acceptability of the public to any extent that would make such terms preferable over others. Nevertheless, each of those terminologies emanated from a series of arabization conferences and presumably abide by the decisions about the methodology of terminological neologization issued by language academies and specialized institutions. All of this makes it difficult to know which specialized dictionary is the appropriate reference for translators for a certain translation project. In addition to the general low level of coordination in creating and standardizing medical terms, the human factor, i.e. users' preferences, were not considered by the aforementioned authorities (Al-Bouchikhi 2000). All of this contributed to terminological chaos in the Arabic language.

The field of Arabic medical and health terminology lacked the essential activities for terminology work and research in contemporary terminology science. It did

not use modern tools and methods to research health and medical terms and extract them from documents in both traditional and virtual libraries or even in data banks of texts. Arabic terminology work needed to take inspiration from what has been successfully used in other languages to build glossaries, publish dictionaries, and leverage the Internet (and various search engines) for research. Terminology work in Arabic can also benefit from the use of various tools related to language management such as spell checkers, optical character recognition, alignment tools, translation memory softwares, desktop publishing applications, and linguistic resources (corpora and term databases) (Al-Awadi 1997, 73). When terminology databases and terminology management software became available and therefore health and medical terminology records could be easily managed (addition, update, deletion, creating links, importing, exporting, exchanging and conversion, etc.), opportunities for proper terminology management opened up for the Arab terminologist. (Haj Saleh 2003b)

Furthermore, Arabic only recently introduced curricula for teaching terminology science and, overall, the curricula used to focus on the characteristics of the Arabic language without the slightest interest in the modern developments of this science in Western countries (Al-Jazairy 2007, 10).

2. Current state of Arabic health and medical terminology

2.1 Methods of producing medical and health terms

There was an urgent need to produce Arabic equivalents for medical and health terms that seemed to be introduced daily from other languages. Specialists, academics, researchers, journalists, who were at the front lines of this newly introduced foreign terminology, offered to assist in the terminological work. This prompted lengthy discussions in the language academies, on the pages of periodicals and in various publications about how to coin neologisms, how to evaluate terms and how to collect evidence about the productivity of word patterns from both ancient and modern sources. (Al-Khayat 2005)

The most important of term creation methods that ensued from this dialog are (1) borrowing from the rich Arabic linguistic heritage, (2) derivation, (3) literal translation, (4) semantic extension or metaphor, (5) blending and compounding and (6) transliteration. The transfer of acronyms and affixes also received some attention. (Al-Khayat 2005)

2.1.1 Arabic linguistic heritage as a source of terms

As did a lot of individuals interested in the development of health and medical terminology, the Arabic language academies called for the establishment of a viable mechanism to re-read the Arabic linguistic and scientific heritage (whether printed

or in manuscript form) according to some systematic and comprehensive procedure that covers all texts of the heritage. The aim was to classify terms isolated from the historical texts on the basis of a sound scientific methodology that takes into consideration the specialized fields of the source texts, so that these terms could be linked to terms extracted from other health and medical texts. It was clear that this requires the training of successive generations of terminologists who are specialized in heritage content and who are able to put it to good use, working side by side with peer specialists in different scientific fields. There were also frequent calls for the establishment of an Arabic library of heritage terms, equiped with the proper facilities to enable its effective use, and distribution and/or publication of its content to support the development of dictionaries of traditional medical and health terms. Contemporary academics and terminologists stressed the importance of indexing the Arabic terminological medical stock from all available sources, whether in manuscript or printed (Al-Boushikhi 2006).

While the view that new terms could be inspired from heritage texts was very insightful, it did not produce concrete results. Indeed, despite vigorous calls to utilize the inherited terminological stock, Arab academics did not really succeed in making use of this heritage, at least not to the extent of their faith in the value and wealth of this heritage. To date, they have not proposed a systematic and well-defined methodology for enriching terminology through the Arabic linguistic heritage.

Due to the lack of a clear methodology, cultural, scientific, medical and health terms derived from the Arabic linguistic heritage were limited in scope and number and did not reflect a systematic approach but rather were simply the output of individual efforts. On the other hand, the urgent need for medical terms took the Arab academics by surprise. Torrents of medical and health concepts flooded the language. There was not enough time to search for acceptable equivalents in the Arabic heritage, equivalents that could be discovered either because the scientific concept already existed at that time with an appropriate Arabic term, or because a heritage term could be reused for a new modern concept. Furthermore, the Arabic linguistic heritage in general and the medical and health terminology of that period in particular have not been in actual use for a very long time, which make them almost irretrievable (Al-Kasimi 1993, 37).

2.1.2 Term production by derivation

Arabic is a derivative language. Each word in its vocabulary is a combination of a root and a morphological pattern, forming a stem. The root is a set of three original characters from which a word is built. Each set of three characters signifies a core sense that permeates the words derived from this set. The morphological pattern adjusts the core sense to form a particular meaning. The morphological pattern is the mold or template that gives a function to the stem, while the core sense is preserved in the root.

Derivation is the process by which more words are produced by molding the root or the stem with more morphological patterns, either by gemination, doubling a letter or by inserting one or more letters.

Thus, the root k.t.b. can be molded in many morphological patterns to form different words, possibly more than 1200, such as "*fāᶜil*", "*mafᶜūl*", "*mafᶜal*", "*fiᶜāla*", "*mafᶜal*", "*mufāᶜala*", "*istifᶜāl*", each having a semantic function of its own, such as a "*kātib*" ('writer'), "*maktūb*" ('that which is written'), "*kitāba*" ('the act of writing'), "*maktab*" ('office'), "*mukātaba*" ('correspondence') and "*istiktāb*" ('requesting somebody to write'). If we want to derive other verbs from the verb "*kataba*" ('to write'), we can get thirty six derived verbal morphological patterns ("*faᶜala*", "*fuᶜila*", "*faᶜula*", "*faᶜlala*", "*faᶜᶜala*", "*fāᶜala*", "*ʾafᶜala*", "*infaᶜala*", "*iftaᶜala*", "*ifᶜālla*", "*tafaᶜᶜala*", "*tafāᶜala*", "*istafᶜala*", "*ifᶜawᶜala*", "*ifᶜawalla*", "*fawᶜala*", "*fayᶜala*", "*faᶜyala*", "*fanᶜala*", "*faᶜnala*", "*faᶜlā*", "*tafaᶜlala*", "*tamafᶜala*", "*tafawᶜala*", "*tafayᶜala*", "*tafaᶜyala*", "*tafaᶜlā*", "*ifᶜanlala*", "*ifᶜanlā*", "*iftaᶜlā*"). Each one of these morphological patterns acts as a stem serving to derive noun patterns such as the agent, participle, instance, manner, instrument, time, place, as well as other morphological patterns. It is also possible to derive new terms from nouns denoting concrete objects and particles (Al-Khatib 2000, 560).

2.1.3 Term production by translation

In this procedure, the terminologist considers the foreign terms and their meanings, and tries to find equivalent Arabic terms after fully grasping the meaning of the foreign terms. Translation in this context has specific methods, techniques and tools that are worthy of further investigation and development in the Arabic language to accommodate the flow of new concepts. Multiple Arabic equivalents for a single concept frequently occur because of the multiplicity of languages that come into contact with Arabic (Amin & Tarazi 1984).

2.1.4 Term production by metaphor or semantic extension

Semantic extension can be defined as modifying the original meaning of a word so that it assumes a new meaning. Usually the meaning change is not dramatic – there is a direct or indirect relationship (similarity) between the two meanings. Thus, the meaning of an Arabic word could be changed in a way that makes it acquire a new meaning without affecting its form. Many linguists consider semantic extension a rich source for enriching the Arabic language. They consider it the method that gave rise to most common words. (Al-Khayat 2006)

2.1.5 Term production by blending, acronymy and compounding

In Arabic, blending or *an-naḥt* refers to the coining of a new term from two or more words or from a phrase consisting of words with different meanings and different morphological structures (thus what is known as blending, acronymy and compounding).

The term that is thus created has elements of the sum of meanings and morphological structures of the original words. Some linguists felt that *an-naḥt* was behind all the words that consist of more than three characters. The Arabic Language Academy in Cairo considered this method one of the best ways to help specialists of medicine, pharmacy, chemistry, zoology and botany translate foreign medical and health terms into Arabic. It issued a decision in 1948 allowing *an-naḥt* in the sciences and arts given the urgent need to express concepts in concise Arabic terms. It nonetheless stipulated that the terms that are produced through *an-naḥt* should preserve the harmony of the characters and should follow the phonological and morphological rules and patterns of Arabic in particular phonotactical constraints.

2.1.6 Lexical arabization

Lexical arabization refers to the process of transliterating the foreign term using Arab characters. If the borrowed term is transferred in its original form (without changing the characters or morphological pattern), it is described as *daẖīl* ('alien'), but if the transferred term is made to conform to the Arabic morphological word patterns or phonological system to make it Arabic-like, the transferred term is described as "arabized". Arabization plays an important role in transferring terms that are common to many languages, terms that are difficult to translate or whose Arabic equivalents may not be generally acceptable or may not achieve clarity and simplicity of form. Lexical arabization also plays an important role in the transfer of some of the nouns of concrete objects such as the names of viruses and germs, especially if the source term was originally named after a person or place (Medkoor, 1977).

Choosing the right method of transferring abbreviations and acronyms is still an unsettled issue, and no one method has taken hold. Some terminologists transfer these as they are written and pronounced in their source languages, as is the case in "DNA", "AIDS" and "HIV". Others translate the full phrase behind the acronym or abbreviation into Arabic. In back translation, this could give "deoxyribonucleic acid" (for "DNA"), "Acquired Immune Deficiency Syndrome" (for "AIDS") and "Human Immunodeficiency Virus" (for "HIV"). Others transliterate these into Arabic as separate letters or as blocks as in إي-إن-دي, إيدز, and إيتش-آي-في (Al-Hilali 1995).

The question of how to translate prefixes and suffixes also lacks a consensual response. Indeed, even though there have been multiple resolutions issued by language academies and the like, and there are many glossaries dealing with prefixes and suffixes, a uniform approach has yet to be defined. The Arabic Language Academy of Cairo itself has issued many decisions about the arabization of affixes. For instance, the prefix 'hyper' has been translated as "*farṭ*" as in "*farṭu al-qirā'a*" ('hyperlexia'), "*zā'id*" as in "*at-taṣḥīḥu az-ā'id*" ('hypercorrection') and "*faw*" (an abbreviation from "*fawq*") as in "*faw'anfiyya*" ('hypernasality'). The same thing applies to other prefixes such as 'hypo' as in "hypo nasality", which has been translated as "*du'anfiyya*", whereas Munir

Baalbaki in *Al-Mawrid Dictionary* (Eng-Ar) preferred to translate it as "*taḥ'anfiyya*" considering that "*taḥ*" is a shortened form of "*taḥt*".

2.2 Failure of the political decisions to impose new terminology

In Arabic constitutions and laws there is consensus that Arabic is the official language of transactions and education in Arabic counties. Nonetheless, apart from medical schools in Syria and a few universities in Yemen, Sudan and Libya, Arabic remains a marginal language in most medical education programs. For the time being, hopes for Arabic to become *the* language of medical education are becoming more and more fainter.

2.3 Curricula of medical terminology

Until the beginning of the twenty-first century, the methods of teaching Arabic medical and health terminology suffered from the scarcity of Arabic references and the discontinuity between the traditional content (the heritage), on the one hand, and the recent theories and Western schools, on the other hand. Terminology publications in Arabic only raised questions about the flaws and defects in the specialized dictionaries and reviewed individual efforts in the field of neologization, and the efforts of institutions to endorse those works, pass recommendations and make decisions supporting terminology standardization. While the Maghreb countries have contributed significantly to enriching the translation of the works of modern schools of terminology, the health and medical terms that they introduced have not been well received by their Eastern counterparts.

The first significant development occurred with the release of the book *Terminology Science for Students of the Faculties of Medicine and Health Sciences* by the Network for the Arabization of the Medical Sciences *Ahsin* in the World Health Organization Regional Office for the Eastern Mediterranean in 2007. This book was published in the medical University Book Series with the participation of experts and professors from Eastern as well as Maghreb Arabic countries, supervised by Mohammed Haytham Khayat and Al-Shahed Al-Boushikhi, and it also reflects a diversity of English, French, German and Arabic resources. However, the terminological situation still suffers from a significant vacuum. Health professionals are still in need of the collaboration of two large stakeholder groups: (1) linguists, translators and terminologists on the one hand, and (2) medical doctors and health practitioners on the other, and harmonization work must be carried out by both stakeholder groups together.

2.4 Deficiencies in modern Arabic health and medical terminology

The **deficiency of health and medical terms** is one of the most important problems facing Arabic scholars of the new modern sciences, especially in the various medical, nursing and health sciences (Wakeley, 1953). In the introduction to his book on

scientific terms, Mustafa Shihabi ([1956], 165) considered it the most important issue not only for anyone pursuing higher education in Arabic, but also for the modern expressive needs of the citizenry in general.

The literature on health and medical terms in the beginning of the twentieth century focused exclusively on the topics addressed by linguists of ancient Arabic. Similarly, teachers and writers in the medical and health sciences concerned themselves with the writings or translations of the ancient Arab scientists. This focus on Arabic heritage terms, coupled with a general ignorance among terminologists about the Arabic heritage in medicine and related fields, contributed to the overall problem of a lack of health and medical terminology in Arabic. Ignorance or neglect of the modern terminological contributions from outside the Arab world resulted in delays in the translation and publication of the world's famous theories interminology into Arabic. Thus, there was a low level of awareness or recognition about the contributions made by both Arabic and non-Arabic scholars.

In addition to the slow scientific and technical development, Arab countries suffered from political and administrative dispersion. This resulted in a multiplicity of equivalent Arabic medical and health terms for the same concept in addition to the already large number and diversity of medical and health terms. The diversity of the source languages translated to Arabic, the multiplicity of the institutions entrusted with the development of scientific and technical terms in Arabic, the lack of coordination and the inherent phenomenon of synonymy and homonymy in Arabic only added to this chaos. (Ezzat Mustafa 1973)

The **training of terminologists** also plays an important role in this issue. Some professors in the science of terminology did not know a second language, others claimed that knowing Arabic was enough, and it is unnecessary to know a second language. When scholarly works in modern terminology theory began to be translated, the translators and their readers alike realized that there was a significant gap between those theories and the familiar notions of terminology in Arabic tradition. Some health and medical terms and even some terms in terminology showed symptoms of this underdevelopment in education and theoretical understanding.

These deficiencies in terminology education and theoretical understanding led to deficiencies in the academic pursuit of terminology practice and in the actual products created by terminologists. The latter were restricted to simple glossaries of terms that lacked proper definitions, thus failing to demonstrate the semantic dimension of terminology. Most of these glossaries remained locked in shelves and stock houses, far from circulation, such that what little value they could provide was largely lost. Academic institutions, including those that produced medical and health terms that ended up in those glossaries, neglected to examine the extent of the acceptability, credibility and usefulness of the terms (Souissi 2004, 398). Overall, theoretical and practical studies on the standardization of terminology, on language planning, and

on the training of terminologists, were inadequate. Under these conditions, building the foundations of an Arabic linguistic thesaurus was near impossible. (Souissi 2004).

Linguistic research, for its part, focused on clarifying the specificities of the Arabic language and demonstrating its unique features, ingenuity and superiority over other languages. It dealt exclusively with Arabic, neglecting comparative studies with other languages. Therefore, the results were of little practical value for a multilingual environment. There was a wide gap between the health and medical terminology in the Arabic language and in other languages, a gap so large that the two sets of terminology – Arabic and non-Arabic – seemed to reflect different disciplines: one that is built on a broad base of modern sciences and techniques, and one that is – intentionally or unintentionally – limited to the views of the ancient Arabic scholars. Speakers of Arabic are exposed only to the latter, and their perception of medical concepts is likely to be limited accordingly.

2.4.1 Lack of agreement on a clear methodology for producing health and medical terms

Theoretically, we could say that the methodology used by Arab terminologists in producing medical and health terms abides by the recommendations of the arabization conferences and the decisions made by the Arabic language academies, especially that of Cairo, about terminological issues. The recommendations of the arabization conferences, and the resolutions of the annual conferences organized by the language academies, contain a methodology and a set of basic principles governing terminological work. In practice, however, the preference of one method of producing health and medical terms over another has led to a multitude of different terms that are meant to express the same concept or object (synonymy). This shows that terminological work methods lack rigor standards. In fact, different versions of methodologies have developed, each replicating or confirming previous work, adding a few details or preferring one method over another. There is no real adherence to any specific methodology, and there is a minimum degree of coordination between all those involved in the development of health and medical terminology.

2.4.2 Simple chaos in medical and health terminology

Health and medical terminology has been in a state of chaos and confusion since the beginning of the twentieth century, when it was the work of individuals that stimulated its early development. Doctors strived to produce or translate terms. Some of them had sufficient knowledge of the Arabic language, its rules, and its various mechanisms for generating and translating terms. Others lacked such knowledge, which led to the emergence of health and medical terms that were of low degrees of acceptability and sustainability either because they lacked the required scientific rigor or because they were not built on sound linguistic rules. Furthermore, there was little coordination

and cooperation among those individuals involved in the production or translation of terms. The resulting chaos and conflict in medical terms confused learners and made efforts to unify Arab terminology all the more difficult.

2.4.3 Complex chaos in medical terminology due to calls for standardization

After the appearance of the academies and institutions involved in producing medical and health terminology, the institutional efforts retained some of the characteristics of individual efforts such as being biased towards one way of producing terms over another or the lack of coordination between the parties producing terms. This resulted in a more complex situation than that which prevailed before, particularly in that the published glossaries of medical and health terms were meant to respond to the call to unify the methodology of producing terms in the first instance and ultimately to unify the health and medical terminology, and they more or less failed in both respects. Finally the frantic movement to unify terms resulted in dictionaries claiming to unify terms without any one of them achieving unification or even preference over others. Perhaps this confusion is what justified the compilation of the *Unified Medical Dictionary* and explains its success in unifying health and medical terminology.

3. Developments in Arabic health and medical terminology

After Mohammed Ali founded the *Abū Zaᶜbal* medical school in 1827, Egypt had a lead in the development of health and medical terminology in the Arabic language in modern times. Arabic remained the language of teaching in medical school until 1888, when converted to English. During that period, many medical publications appeared in Arabic, which necessitated the rapid generation of a large number of medical and health terms in the Arabic language, both for knowledge acquisition in the first place and then knowledge transfer through education. Through contributions from various sources, a comprehensive dictionary of the medical sciences was produced under the name of *Bits of Gold in Medical Terms*. (Al-Shayyal 1951, 190) This work was a translation of Faber's famous Medical Dictionary, which was in eight volumes in French and contained a great deal of scientific and technical terminology in medicine, flora and fauna and other sciences. The editors of the Arabic version, who were professors of medicine, headed by Perot and Sheikh Mohammed Bin Omar Al-Tunessi, selected its Arabic vocabulary from the *Al-Qāmūs al-Muḥīṭ* by Al-Fayrūzabādī after extracting from it all words indicating a disease, symptom, plant, mineral or animal. In this manner, the availability of medical and health terminology in the Arabic language supported the publication of dozens of teaching materials in the various medical and health disciplines. (Sara 1986, 43)

In the second half of the nineteenth century, Lebanon had a prominent role in the teaching of medicine in the Arabic language and in the provision of the medical and health terminology, both in the Evangelical Syrian College (later on to become the American University in Beirut) since 1866 and in the Jesuit Faculty of Medicine since 1883. This leadership role lasted nearly two decades. During this period, many scholars who learned, mastered and wrote in Arabic emerged, such as Yohanna Wartabat, who wrote many medical and health books in Arabic covering physiology, anatomy and public health such as *The Layman's Comprehensive Manual to Hygiene and the Management of Sickness*. (Yohanna Wartabat 1881) He also compiled a general English-Arabic and Arabic English dictionary. Other authors include Van Dijk, Butros al-Bustani, George Post, Ibrahim al-Yaziji and Ya'acob Sarruf. During that period, many medical and biological publications, including some lexicographical works, appeared in Arabic. Subsequently, more Arabic dictionaries emerged, such as the *Dictionary of Plant Names* by Ahmed Issa (Sara 1986, 80) which included all names of plants found in Arabic literature, and the medical dictionary by Mohammed Sharaf, which contains more than forty thousand foreign scientific terms equated with their Arabic equivalents, both published in 1926, the *Dictionary of Animals* (Sara 1986, 82) by Amin Ma'alouf in Cairo in 1930, and *Dictionary of Agricultural Terms* by Mustafa Shihabi (Sara 1986, 101), whose first edition appeared in Damascus in 1943 and its second edition in Cairo in 1957.

A number of professors at the Faculty of Medicine in Damascus (Murshid Khattir, Ahmed Hamdi Al-Khayyat and Mohammed Salahuddin al-Kawakibi) translated Clairville's Multilingual Medical Dictionary into Arabic, thus creating a dictionary of medical terminology in Arabic, French, English, German and Latin. This dictionary was published by the Syrian (Damascus) University Press in 1956. It contained 14,534 entries in 960 pages. These professors established a praiseworthy tradition, that is, attaching glossaries in Arabic, English and French to the books they wrote or used in their teaching.

It was clear that the producers of Arabic medical and health terms were no longer exclusively focused on the terms contained in ancient dictionaries – a restricted view that prevailed in the past – but they had started to recognize that the terms used by lay people in their daily lives are worthy of attention and appreciation. For instance, it was observed that "lay people" rarely use in their speech modern words that are built on the traditional morphological patterns indicating nouns of instrument (which are "*mifʿl*", "*mifʿala*" *and* "*mifʿāl*") but they prefer the words that have been molded on the intensive form of the noun of the agent, especially "*faʿʿāla*", thus producing "*ḥaṣṣāda*" ('harvester') and "*darrāsa*" ('combine harvester'), feeling that "*miḥṣad*" and "*midras*" are heavy for pronunciation (Shihabi [1956] 1965, 114–115). The Arabic Language Academy soon recognized the effectiveness of the morphological pattern "*faʿʿāla*" in denoting the noun of instrument. Furthermore, some of the terms spontaneously

produced by members of the public by analogy "qiyās" with existing Arabic word patterns to meet the urgent necessities of neologization were more acceptable than some of the terms that were produced by the language academies. Hence, the language academies realized the importance of taking the attitudes of the term users into consideration while producing health and medical terms (Haj Saleh 2003).

Discussions and exchange of views about the new health and medical terms became widespread on the medical and health pages of journals or periodicals issued by universities such as the *Journal of the Arab Institute of Medicine*, the *Journal of the University of Damascus* and the journals of the Arabic Language Academies. To repeat what Husni Sabh said at the end of his articles criticizing Clairville's Multilingual Medical Dictionary, which were published in 76 articles in the *Journal of the Academy of Damascus*: "I do not pretend that I have come up with the final word. I rather think that if I were to revisit what I have written I would change or add a lot of things". (Journal of Damascus Arabic Language Academy, 76 article; 1958–1977).

3.1 Individual responses to problems in medical and health terminology

Terminologists soon detected the serious problems in Arabic terminology, most notably the use of more than one Arabic term for a single foreign concept and term, the use of one Arabic term for multiple foreign concepts, uncertainty and lack of precision in expression, slowness to respond to new concepts and meanings, delay in the production of the Arabic equivalent terms required for translation, and lack of coordination among those working in this field. In response, they openly discussed these problems in periodicals, publications and dictionaries and glossaries, lobbied the academies, institutions, centers and offices involved in Arabic terminology, and participated in conferences, some of which have made the methodology of the formation, standardization and dissemination of health and medical terminology a priority. Dictionaries and glossaries of terms in the various fields of knowledge were compiled.

Several medical and health dictionaries were also compiled, thus largely satisfying the needs of Arabic writers on the medical and health subjects. A case in point is Hitti's *Medical Dictionary*, which was published in 1967 to mark the centenary of the establishment of the American University. This dictionary is characterized by the fact that its compiler, Yussuf Hitti requested Hosni Sabh, who was President of the Damascus Academy at the time, to review the manuscript of the dictionary and amend it in whatever way he deemed fit. Hence, the dictionary reflects the tendencies prevailing at the time in Damascus.

The efforts of individuals contributed to the unification of medical and health terms. The first attempts to unify the medical and health terminology and thus avoid or at least reduce the number of Arabic synonymous terms that appeared in the early twentieth century in Damascus can perhaps be attributed to a committee on scientific

terms in the Faculty of Medicine at the Syrian (Damascus) University. This committee relied on the direction of late professors Murshid Khattir, Ahmed Hamdi Al-Khayyat, and Mohammed Salahuddin Al-Kawakibi. It was entrusted with the translation of Clairville's *Multilingual Medical Dictionary*, (Clariville 1953), which includes fifteen thousand terms, into Arabic. The Committee's work was published by the Syrian University Press in 1956. (Clariville 1956). The dictionary brought together the works of professors from the Faculty of Medicine at the University of Damascus, their publications in the Journal of the Arab Medical Institute, their glossaries and all previous Arabic works on medicine. The dictionary also paved the way for a lot of debate and criticism aimed at assessing the progress of Arabic medical terminology. For instance, Hosni Sabh devoted 57 articles to the criticism of the dictionary. These articles, whose total number of pages exceeded that of the dictionary itself, were published in the *Journal of Damascus Academy*. In these articles, Sabh was keen on comparing the content of the dictionary with the decisions and recommendations of the Arabic language Academy of Cairo. In the beginning of this dictionary, which was given the title of "a Word of Caution"he translators of Clariville dictionary explained the methodology they adopted in their work and the principles according to which they carried out their translation of terms into Arabic. They declared that the dictionary was the first step in the search for a unified methodology for the formation of health and medical terminology in Arabic.

Successive efforts calling for the unification of health and medical terms brought this subject to the center of each seminar, conference or scientific communication in journals. The solutions and recommendations focused on two important criteria for terminology unification: (1) the need to agree on a common methodology for the production of health and medical terminology and adhere to this methodology, and (2) the importance of the political will to enforce the unified health and medical terms. Again, with the exception of the *Unified Medical Dictionary*, these efforts did not have a significant impact.

3.2 The response of Arabic Language Academies to terminological problems

The Arabic Scientific Academy was established in Damascus in 1919. Its presidency was entrusted to Muhammad Kurd Ali. One of the primary objectives of the academy was the production of scientific, technical, literary and cultural terms, their analysis and finally standardization according to a specific methodology, and dissemination of terminology in the Arab World. The academy was renamed the Arabic Language Academy in 1967.

The Damascus Arabic Language Academy created a suitable environment for addressing the issues of terminology. Mustafa Shihabi, a member of the Academy and later its President, laid the foundations for terminology production synthesizing various approaches including traditional and modern attempts at unification and adding

his own contributions. This work, which is a summary of the suggestions and solutions to the problems of blending, compounding, derivation, Arabic morphological patterns, affixes, transliteration, orthography, and methodology of Arabic terminology production that were common at that time, was published in a book titled *Scientific Terminology in Arabic: the Past and the Present* in 1956. (Shihabi 1956).

One of the advantages of the Arabic Language Academy of Damascus is that some of its members, of whom Hosni Sabh, a long-standing President of the Academy (1968–1986) is particularly worthy of being singled out, were also University teachers at the Damascus Faculty of Medicine. This is especially significant since the Syrian experience in the field of Arabic health and medical terminology in the early twentieth century was rich and unique. This academy started with the establishment of the Arab Medical Institute in Damascus in 1919, an Arabic medical school succeeding the Ottoman Medical School, which had opened in in 1903. The language of instruction at this institute was Arabic. The teachers benefited from the medical and health terminology used by the Turks in their books as well as the health and medical terminology used by the ancient Arab doctors and linguists in their dictionaries, the pioneering Egyptian professors at the *Qaṣr al-ʿAynī* School of Medicine and the professors at the Evangelical Syrian College in Beirut. An adequate lexical stock began to be disseminated by doctors and linguists from the various Arab countries in the *Journal of the Arab Medical Institute*, which was first published in 1924 and which served as a vehicle for researchers to exchange their views about how to coin medical terms.

The decree to establish the Arabic Language Academy in Cairo, (Madkoor 1977) which made it subordinate to the Ministry of Public Knowledge (now the Ministry of Education), was issued in 1932. In Article II, (Hafez 2007, 10) it set the objectives of the Academy, which include preserving the Arabic language, making it adequate to the needs of science, the arts, and the worldly affairs in the present era, providing the means for compiling dictionaries, drawing the attention to Arabic scientific terms and word-patterns, working on a historical dictionary of the language, investigating the modern Arabic dialects in Egypt and other Arab countries and, in short, seeking by all means the development of Arabic. Among its most important publications are an Index of the Holy Quran, dictionaries of scientific terms (including a dictionary of medical terms), a dictionary of styles, and reference manuals about the Academy's decisions on morphological patterning and linguistic issues such as the use of the Hadith as a source of linguistic evidence. Such decisions have become authority for all those involved in health and medical terminology.

The Arabic Language Academy of Cairo has made a number of positive contributions towards Arabic health and medical terminology, including (1) facilitating the teaching of medical sciences in Arabic through the production and derivation of health and medical terms, (2) promoting the translation of the medical science into Arabic, (3) developing a methodology for deriving health and medical terms by analogy

("qiyās") on existing terms, and (4) investigating other linguistic issues to guarantee scientific accuracy. Examples of the latter include the need to form the adjectival form ("*an-nisba*") from the plural to distinguish, for instance, between what is associated with a group of states: "*duwwaliy*" ('international') and what is associated with a single state as an entity or as institutions: "*dawliy*" ('national'). A similar distinction needs to be made for the Arabic words for "physiological", "biological", "entomological", "bacteriological", etc. The Cairo Academy authorized forming the adjectival form from the broken plural when needed for differentiation.

The Arabic Language Academy of Cairo set a good example that was followed by all subsequent academies and institutes. This tradition pertains to the stages of producing or approving medical and health terms. In the **first phase** of a project, experts prepare lists of health and medical terms in their source language and propose Arabic equivalent terms including, whenever relevant, justification for their choices. In the **second phase**, special committees thoroughly investigate the lists of terms to ensure that they are scientifically, linguistically and semantically correct. In the **third phase**, the lists are presented to the Council of the Academy to be further investigated. In the **fourth phase**, the terms are reviewed during the Academy's annual conference by scientists from across the Arab world, which confirms supra-national acceptability. In the **fifth phase**, the Academy presents the terminology to Arabic researchers, scientific academies, and universities and Ministries of Education in the Arab world, requesting their support to disseminate the terminology and invite public feedback. The public review period continues for one year. The Academy gives due consideration to all **feedback** and modifies the terminology when justified. Ultimately, usage is the final judge in determining the validity and viability of terms. This multi-stage methodology including public feedback helps to ensure that scientific terms in Arabic are not simply invented ad-hoc or based blindly on historical language, but reflect as much as possible popular usage.

Founded in 1948, the Iraqi Academy is involved in terminology, in general, and medical and health terminology, in particular. It has succeeded in issuing political decisions that force people to use the Arabic health and medical terminology that it recommends. The Jordanian Academy of Arabic was established in 1972. It has released medical books and terms related to everyday life. The Academy has set up a permanent Committee on health and medical terminology, which is entrusted with the task of finding Arabic equivalents to foreign terms in various areas. The Academy has issued a set of health and medical terms that have been stored in the Academy's term base and that are made available through the Academy's website and through booklets that are offered to interested institutions in Jordan. At the same time, these medical and health terms are distributed to all Arabic language Academies, the Union of Language Academies, the Bureau for the Coordination of Arabization in Rabat (which is affiliated to the Arab Organization for Education, Culture and Science), the Ministries of Higher

Education, and universities throughout the Arab world in an effort to standardize scientific terminology and reach a unified Arabic scientific language.

In Algeria, the Supreme Council of the Arabic language was established in 1996. It has the same powers and functions of the Language Academies in the other Arabic countries. The Moroccan Royal Academy was established in 1978. In Carthage, Tunisia, the House of Wisdom was established in 1983. In 1996, it became known as the Tunisian Academy of Science, Literature and the Arts. It is responsible for the development of sciences in the Arabic language. The Sudanese Academy was founded in 1993 and the Libyan Academy in 1994. In Saudi Arabia, virtual Academies, which are active every now and then, have appeared on the internet.

The Union of Arabic Language and Scientific Academies was established in 1971 by a Committee composed of members of the language academies in Cairo, Baghdad and Damascus. The committee drafted the Union's bylaws and set two main objectives for itself: (1) facilitate communication between the Arabic Language and Scientific Academies and coordinate their scientific and linguistic efforts and (2) unify and disseminate scientific, artistic and cultural terminology in the Arabic language. Shortly afterwards, other Academies and institutions throughout the region joined the Union.

The Arabic Academies and their Union had a pivotal role in standardizing Arabic terms, identifying technical trends that appeared in the West, providing new ways to examine the acceptability of terms and creating mechanisms to enhance coordination between the Arabic countries, especially in contentious issues such as Arabized and borrowed words and transliterating foreign names using Arabic characters. The academics also worked on preparing a guide that could act as an authority on methodological prerequisites and rules for producing and unifying scientific terms. Such rules include principles of derivation, analogy, connotation, arabization and transliteration as methods of term production as well as rules regarding the regularity of a number of morphological patterns (e.g. "*fuᶜāl*", "*faᶜal*", "*faᶜūl*", "*fiᶜāla*", "*faᶜāla*", "*fuᶜūla*", "*faᶜᶜāla*", "*fāᶜila*", and "*tafᶜāl*"), which can facilitate the production of other similar terms.

3.3 The role of institutions in producing terms

Health and medical terminology attracted the attention of many institutions outside the sphere of academies. Such institutions include ministries of education, universities, institutes and international and regional organizations, such as:

- The University of Kuwait, which sponsored the publication of statistical studies of the roots of Arabic words, as found in the major Arabic language dictionaries such as *Lisān Al-ᶜArab, Tāǧ Al-ᶜArūs (Kuwait edition, 35 volumes, 1961–1999)* and *Al-ṣiḥāḥ*, statistical studies which were conducted by Mūsa Ali Hilmi and his colleagues;
- The Institute for Terminological Studies, which is affiliated with the Faculty of Arts and Humanities (Dahr al-Mehraz, Sidi Mohamed Ben Abdellah University

in Fez, Morocco) and is specialized in terminological research and studies. It was founded in 1993 with the aim of serving Arabic health and medical terminology according to an integrated scientific methodology;
- The Food and Agriculture Organization of the United Nations (FAO), which has issued the terminology of food and nutrition with definitions for some of the medical terms and expressions that are currently used in this area;
- The Arab League Educational, Cultural and Scientific Organization (ALECSO) and its affiliated center, the Arab Center for Arabization, Translation, Authorship and Publication (ACATAP) in Damascus;
- The World Health Organization (WHO) through its Regional Office for the Eastern Mediterranean in Cairo;
- The Arab Center for Authorship and Translation of Health Sciences (ACMLS) was established in Kuwait in 1980 by the Council of Arab Ministers of Health. It produced the *Annotated Dictionary of Medicine and Health Sciences*, (ACMLS 1981–2018) which is based on the vocabulary of the *Unified Medical Dictionary*;
- The Arab Organization for Translation is a specialized, independent, non-governmental, organization, with headquarters in Beirut (Lebanon). It aims to enhance and expand translation activities to and from Arabic in various fields of human thought and knowledge and to contribute to the integration of sciences into contemporary Arab culture, and the promotion of scientific research in Arabic.n Saudi Arabia, the King Abdulla bin Abdul Aziz Arab Health Encyclopedia (KAAHE) (www.kaahe.org) published in Arabic. It includes many medical and health terms in simple and clear language.
- Many other encyclopedias in medical and related fields are now available. Similarly, the Kuwaiti Foundation for Scientific Advancement (KFAS) translated a lot of medical and health information, compiled terms and made a wealth of resources available on its Internet pages (www.kfas.org/ar).

3.4 The role of Arabization conferences

The first conference from which emerged the decision to establish a Coordination Bureau for Arabization was held in Morocco in 1961. Since its establishment, the Bureau has held arabization conferences at least once every three years in one of the Arab States, in accordance with Articles 6, 7 and 8 of its rules of procedure. Held by invitation from the Director-General of the Arab Organization for Education, Culture and Science, the main purpose of the conference is to study the research and suggestions made by the Bureau concerning issues related to arabization and the development of Arabic as a language of science and civilization. Representatives from the governments of the Arab States, the Language Academies, Arabic universities, the Union of Academies, organizations, scientific bodies involved in the topics presented

at the conference, scientists and linguists are invited to participate. The fourth, sixth, eighth and ninth arabization conferences were held in Morocco in 1981, 1988, and 1998. The second arabization conference was held in Algeria (1973), the third in Libya (1977), the fifth in Amman (Jordan 1985), the seventh in Khartoum (1994), the tenth in Damascus (2002) and the eleventh in Amman (Jordan 2008). (Khalifa 2011, 171–210)

The decisions and recommendations issued by those conferences and seminars have been characterized by repetition and lack of follow up or evaluation of practical payoff. Nonetheless, they generally involve two directions. The first relates to methodologies for forming scientific and technical terms in the Arabic language. The second relates to administrative and organizational measures such as the role of government in making the use of medical and health terminology binding.

3.5 Standardizing health and medical terminology

Efforts to standardize the health and medical terminology fall into two categories: (1) standardizing the methodologies for forming scientific terms and (2) standardizing the terms themselves.

3.5.1 Standardizing term formation methodologies

Standardizing the methodologies of producing scientific, medical and health terms attracted the interest of individuals and institutions concerned with medical and health terminology. Numerous resolutions that are of direct relevance to the issue were passed. The Bureau for the Coordination of Arabization in Rabat devoted a conference in 1981 in Rabat to the unification of the methodologies for producing new scientific terms in the presence of some of the most important Arabic centers working in the field of terminology (*Al-Lisān Al-ᶜArabī* 1995, 339–341). The Bureau also held a second conference – an extension of the first – in the Arabic Language Academy of Jordan in 1993. The findings and recommendations emanating from that conference were then presented to the seventh conference on arabization that was held in Khartoum in 1994. A scientific committee from among its members was commissioned to consider the report of the conference (Asalmou et al. 1995).

While the Bureau was setting up the methodology, the influence of the ancient Arabic translations on certain terms was evident, particularly in semantic extension, whereby old Arabic words are adopted with new meanings, derivation, whereby new words are derived from existing Arabic or Arabized words, and finally how some foreign words were treated as though they were purely Arabic. Also apparent were many of the recommendations made by academies, especially that of Cairo, about term formation methods. These include (Report, *Al-Lisān Al-ᶜArabī* 1995, 39, 339–341):

- using established methods such as semantic extension and derivation;
- using some foreign words;

- agreeing on the regularity and productivity of a number of morphological patterns (see example that follows);
- approving the regularity and productivity of the so-called artificial (technical) verbal nouns by adding the "*yā*" and "*tā*" indicating the adjectival form;
- authorizing derivation from nouns denoting concrete objects;
- preferring terms of Arabic origin to anciently Arabized ones unless the use of the latter has become widespread;
- preferring ancient Arabic terms to newly derived ones unless the use of the latter has become widespread;
- preferring single terms to complex ones whenever possible;
- using the negative "*lā*" in combination with a single noun;
- using blending and compounding;
- allowing the formation of the plural from the verbal noun;
- allowing only one term for one concept (bi-univocity).

An example of a regular morphological pattern in Arabic would be devoting the morphosemantheme "*fiᶜāla*" to a craft and the like; "*mafᶜala*" to a place where certain objects of the natural world abound, "*fuᶜāl*" and "*faᶜal*" to a disease, "*faᶜᶜāl*" for the one who does a certain job or is closely attached to it, or "*faᶜalān*" for anything that denotes fluctuation or disorder.

There were also general recommendations such as those that were issued by the annual conferences organized by the Arabic Language Academy in Cairo in 2014. Such recommendations stressed the necessity of adopting a binding language policy for the arabization of science and medicine in schools and universities, issuing a binding political decision in this regard, and stressing the necessity of coordination in the Arabic educational system, in the Arab media, and between those associations protecting the Arabic language in addressing scientific abbreviations. Such recommendations also stressed the need to unify the work undertaken by the linguistic and scientific academies and unions, Arab organizations, translators, researchers, academics and journalists, to coordinate stakeholders in the Arab East and the Maghreb, and to continue holding conferences where language academies discuss and coordinate their work, standardize through consensus, and develop dissemination strategies, all in support of the translation and arabization of the language of science.

As an example of the documents that usually emanate from conferences, we refer to the one that was issued by the conference held in Rabat in 1981. It includes two sections. The first features eighteen principles that address the selection and formation of scientific terms. The second section, which comprises eight suggestions, handles phonetic, morphological, syntactical and semantic principles. It should be noted that the document also provides for cooperation with the Committee on Terminology formed by the Arab Organization for Standardization and Metrology, when it comes

to developing rules for term formation, for terms that appear in Arab and National standards (*Al-Lisān Al-ᶜArabī* 1995, 339–340). Ahmad Shafiq Al-Khatib adopted these basic principles in every technical dictionary that he compiled. *The Kuwaiti Arabic Science Magazine*, which is the Arabic counterpart of the *American Scientific Magazine*, sends these principles to whoever is charged with translating or reviewing its scientific articles, expects all contributors to respect them. It might be useful to include them here too:

1. In the case of semantic extension, there must be some appropriateness, association or similarity between the original literal, traditional or ordinary meaning of a word and the terminological or technical meaning that it assumes by extension. A term does not have to reflect by its form all of its scientific meaning;
2. Only one term is used to refer to a single concept in any given specific field;
3. In selecting a term among synonyms or pseudo-synonyms, the specific term is to be preferred to the general one;
4. In finding Arabic equivalents to foreign terms it is a good idea to first explore the Arabic linguistic heritage and to revive those Arabic or Arabized terms that have proved their viability before coining a new term;
5. In order to comply with the international methodology in choosing scientific terms, it is useful to:
    a. seek and maintain similarities between the Arabic and international terms to facilitate the comparison between the two for the benefit of scientists and students alike;
    b. adopt the International Decimal Classification of terms according to their fields and subfields;
    c. update, identify and classify concepts according to each specific field;
    d. involve specialists as users and producers in the formation of terms;
    e. continue the ongoing research and studies to facilitate communication constantly between the producers of terms and their users.
6. In using various linguistic means to generate new scientific terms, priority should be given to heritage terms ("*at-turāt*"), then to neologism ("*at-tawlīd*") including semantic extension, derivation, borrowing and blending;
7. Pure Arabic words are to be preferred to Arabized ones;
8. Colloquial words are to be avoided except when their use is necessary. If this is the case, such terms must be shared among many Arabic dialects;
9. Words built on transparent morphosemanthemes are to be preferred to the awkward and illicit words;
10. Words that allow derivation are to be preferred to words that do not;
11. Single terms are to be preferred to complex ones because they allow derivation, annexation, forming the adjectival form, the dual, the plural, etc.;

12. Specific words are to be preferred to common or ambiguous ones. Even though it is a good idea to maintain similarities between the Arabic and the foreign terms, an Arabic term does not have to be a literal translation or an exact replica of the foreign one;
13. In case of synonyms or quasi-synonyms, the term whose root lucidly denotes the original concept is preferred;
14. Commonly used words are to be preferred to rare or ambiguous ones except in cases of ambiguity;
15. Whenever there are synonyms or quasi-synonyms, identify and determine the exact meaning of each word and select accordingly the appropriate term. In dealing with such terms, it is preferable to group all words with related or similar meanings together for analysis;
16. The terms and scientific meanings agreed upon by specialists within a specific domain are to be respected whether these terms are Arabized or translated;
17. Whenever necessary, terms can be Arabized, especially those terms that have acquired an international dimension such as words of Latin or Greek origin, eponyms used as terms and the names of chemical elements and components;
18. When Arabizing foreign words, the following guidelines should be followed:
    a. favor those terms with the easiest pronunciation;
    b. change the form of terms to make them acceptable to Arabic preferences and morphological rules;
    c. correct Arabic words that have been borrowed by and distorted in foreign languages by reverting them back to their 'eloquent' origin;
    d. fully vocalize all terms, i.e. write down all the vowels, which are only marked in Arabic through optional diacritics;[1]
    e. treat Arabized terms as though they were of Arabic origin in terms of derivation, blending, affixation, and conformity to Arabic morphological and syntactic rules.

Standardizing (or unifying) terminology means agreeing on the use of a particular term to denote a specific concept in a particular scientific field in a given language. The aim is to reduce the cognitive confusion that is caused when multiple terms are used to refer to one concept, which negatively affects the acquisition of scientific knowledge, and impedes communication among scientists and researchers. Standardization reduces the proliferation of terms, regulates the formation of terms and coordinates efforts between the parties involved in terminology development and management.

1. This is especially important in the case of Arabized terms for proper pronunciation.

3.5.2 Standardizing health and medical terms

In addition to the terminology methods and principles referred to above, efforts to standardize specific medical and health terms attracted the attention of Arabic language academies and scientific and professional associations as well as regional and international organizations. A number of conferences were held, works published and plans made (Allam 1966).

The World Health Organization (WHO), as a specialized agency within the United Nations system, has focused on health and medical terminology because, as clearly identified in the preamble to its Statute of 1948, its mission is to provide the highest possible level of health for all people. To achieve that goal, the organization encourages international health programs and coordinates initiatives between the countries by developing health standards, unifying symbols, designations, classifications and medical and health terms. It also works on spreading health awareness and establishing evidence-based medical practices. This presumes that data needs to be collected, stored, processed, and analyzed, and the results of such processes made available to those who need them in a language they understand, and also made available in the medical and health curricula of the community. In its work, the Food and Agriculture Organization of the UN (FAO) is committed to respecting every community's cultural and historical specificities to ensure that individuals and groups accept the health messages sent by the organization, work in accordance with them, consolidate them, transfer them to subsequent generations and promote the teaching and learning of the Health Sciences in the national languages (Sara 2009).

If we consider how the Coordination Bureau for Arabization undertakes the unification of terms, as an example, we find that there are specific stages in the process:

a. Preparation of a tri-lingual glossary (English, French, Arabic), where English is the source language and French and Arabic the target languages. Often the terms are devoid of definitions or explanations. Usually the glossary contains two indices, one in French and the other in Arabic;
b. Sending the glossary to the competent terminological institutions in the Arab world (universities, academies, etc.) for comments;
c. Convening a meeting of experts to review and examine the glossary in the light of the observations sent to the Bureau as well as the remarks of the experts themselves;
d. Preparing an electronic version of the reviewed glossary after implementing the observations of the experts, and sending it back to the competent authorities, individuals and institutions, for further feedback;
e. Convening an arabization conference where experts from Arabic countries examine the glossaries that are presented to them, provide comments and feedback of relevance to their home countries, and then approve the glossaries if appropriate.

4. The acceptability of health and medical terms

Studies of the acceptability of health and medical terms emanating from individuals or institutions did not attract the attention of academies, universities or researchers in terminology science, nor is there any effective mechanism for receiving the views of the groups that use these terms or for interacting with them. We still need to investigate the role of the acoustic features, roots and phonemes that make up terms, the pertinent number of characters that make up a term and the characteristics of familiar and socially and culturally acceptable words, and so on.

Such linguistic studies must be complemented by scientific research methods, similar to those used in market-oriented economic studies, to empirically determine the factors that ensure that a term will be accepted by its users. We need to develop good marketing strategies for newly-introduced terms, we need to review best practices for communicating with stakeholders of terminology, and we need to learn how to identify people's attitudes about new medical and health terms.

In addition to the linguistic factors that contribute to the acceptability of neologisms such as word structure, the root from which the term is derived and its morphological pattern, there are other more subjective factors that come into play, such as individual preferences or contexts, environmental conditions, and cultural, social or political influences. Frequently, we think only about the outcomes of these factors. A term can be said to be characterized by brevity, clarity, ease of pronunciation, accuracy, objectivity, monosemy and consistency within its specific semantic field, etc. But we have not yet provided any empirical proof or statistical measurement of these properties nor have we objectively determined their weight as acceptability criteria. Only by providing data and statistics, can we make comparisons, draw conclusions and reach objectively measurable results. Term acceptability criteria still lack an empirical foundation.

And until the results of studies on the acceptability of terms are available, terminologists will continue to be content with a "general feeling", which is not supported by reliable field work research, that the acceptability of a term is based on its brevity, how easy it is to remember, productivity (possibility of deriving other terms) and transparency with respect to the concept it denotes.

5. The unified medical dictionary: A success story

The *Unified Medical Dictionary* is a qualitative response to the situation that prevailed in the Arab countries in the mid-twentieth century, a response that aimed to improve the health situation in the Arab countries at a time when health and medical documents for patients and employees were written in some Arab countries in English

and in others in French, leaving the patients and their families at a loss. This necessitated agreeing on an Arabic 'unifying' and 'unified' medical terminology that can be used in all Arabic countries and whose use can achieve complete and precise scientific communication, which is needed for the exchange of information, sharing experiences and contributing to research.

The Arab Medical Union established a committee in 1966 to unify medical terminology. The committee was entrusted with the preparation of the *Unified Medical Dictionary*. It consisted of Hosni Sabh (Syria), Abdul Latif Al-Badri (Iraq), Mohamed Ahmed Suleiman (Egypt), Mohammed Haitham Al-Khayat (Syria), Marwan Al-Mahasney (Syria) and Mahmoud al-Jalili (Iraq). The Committee held several meetings in Cairo, Baghdad, Mosul, Damascus and Lebanon before it issued the first edition in 1973 at the Iraqi Academy of Sciences Press in Baghdad. Professor Ahmed Abdel Sattar contributed to the preparation of the first edition, which was edited by Professor Mahmoud Galilee. The dictionary was reprinted in Cairo in 1977. A second edition appeared from Mosul University Press in 1978. Then a working Committee for Arabic Medical Terminology was set up in the regional office of the World Health Organization. It consisted of Jamil Aanoti (Lebanon), Husni Sabh (Syria), Said Shiban (Algeria), Siddiq al-Jady (Tunisia), Adel Hussein Lutfi (Egypt), Abdul Latif Al-Badri (Iraq), Abdul Latif Benchekroun (Morocco), Mohamed Ahmed Suleiman (Egypt), Mahmoud al-Jalili (Iraq), Marwan Mahasni (Syria), and Mohammad Haytham Khayyat (Syria) as a rapporteur. The third edition of the *Unified Medical Dictionary* was published in 1983 after 13 meetings were held in Alexandria, Baghdad, Damascus, Tunis, Rabat, Oman and Algiers. The Regional Office of the WHO Eastern Mediterranean continued to work on updating the dictionary by introducing new terms and consulting professors, linguists and all those interested in Arabic scientific terminology throughout the Arab world, inviting all to express their opinions on the chosen equivalents. The fourth edition, published electronically in 1998 and in print in 2006, contained 150,000 entries.

Thus, the intense interest which characterized the efforts of those in charge of the dictionary since its inception resulted in a unique advantage: agreement on the production and choice of terms according to a clear methodology, a methodology that was described in the introduction to the first three editions. By the fourth edition, the methodology became recognized as suitable for terminological work in all branches of science and arts.

The anatomical terminology adopted by the International Committee for the Anatomical Nomenclature, the members of which were appointed by successive international conferences of anatomists (held in Oxford, Paris, New York, and Wiesbaden in 1950, 1955, 1960 and 1965 respectively), was the first branch of medical and health terminology that the committee of the *Unified Medical Dictionary* agreed upon in Arabic. All members of the committee developing the *Unified Medical Dictionary*, who were joined by Mohamed Tawfiq Rakhawi (Egypt), Ahmed Diab (Tunisia), and Sadeq

al-Hilali (Iraq) as experts, and Mohammad Haytham Al-Khayat (Syria) as supervisor and rapporteur of the Commission's decisions, contributed to the discussion and approval of the anatomical nomenclature. The anatomical nomenclature was then published as a supplement to the fourth edition of the *Unified Medical Dictionary*, which now included 700 anatomical terms, referring to the plural and singular forms whenever necessary.

Outside the scope of anatomy, the committee of the *Unified Medical Dictionary* resorted foremost to searching for Arabic equivalents reflecting the meaning of the foreign terms among the Arabic scientific terms scattered in Arabic dictionaries or used in ancient scientific books. In this respect, they preferred the oldest acceptable term, starting from the ancient Arab doctors (at the time of the prosperous Arab-Islamic civilization) such as Arrazi, Ibn Sina and Ali ibn Abbas and then those who followed them, including the Turkish doctors at the time of the Ottoman Empire (since their terminology was largely if not wholly Arabic), the terms used by the professors of the Faculty of Medicine at Abu Zaʿbal, then at Qaṣr al-ʿAynī at the time of Muhammad Ali, those used by American University professors in Beirut when medicine was taught in Arabic, those used by the Syrian (Damascus) University professors at the turn of the century and finally the terminology approved by the Arabic language academies. If a foreign term refers to a new concept for which no Arabic word exists, the committee of the *Unified Medical Dictionary* attempt to translate it, otherwise they have recourse to one of the available means of neologization in Arabic, namely derivation, semantic extension, blending and compounding. When all the previous methods fail to produce an Arabic term, the committee resort to arabization or transliteration.

The methodology that is set in the *Unified Medical Dictionary* also adheres to and incorporates what people say in their clinics and their laboratories as long as what they say does not clearly violate the Arabic language. It also took into consideration the semantic lists of every branch of medical sciences to reduce polysemous words to a minimum and to avoid synonymy, i.e. the multiplicity of Arabic equivalents for a single concept. The committee of the dictionary also adhered to most of the medical and health terms approved by the Arabic Language Academy in Cairo. Thus, the *Unified Medical Dictionary* synthesized the Arabic medical terminological efforts throughout the different ages, terminological efforts that produced commonly used and acceptable terms.

Indeed, the *Unified Medical Dictionary* was meant to be unique in strictly adhering to the principle of one concept – one term apart from very few synonymous terms that were common in the Arab world and that were recorded between parentheses and in smaller type. The committee also adopted a number of semantic lists, each one including all the words that share a common semantic field. As to the Latin prefixes and suffixes, the committee provided Arabic equivalents to which they adhered. They furthermore adopted special recommendations regarding the designation of bacteria, fungi and

organisms that cause disease to humans. An alphabetic glossary of common acronyms in English and their meanings and equivalents in Arabic was attached to the dictionary as well as two glossaries of prefixes and suffixes commonly used in English, especially those of Latin origin, with their meanings in English, again arranged according to the English alphabet with their Arabic equivalents, along with appendices of Greek symbols, capital and small characters, their proper pronunciation, transliteration, symbols used in the genealogical tree with their meanings in English and Arabic, units of measurement and their equivalent values in Arabic and English, Celsius and Fahrenheit temperature degrees, ways of conversion between them, chemical elements and their symbols in English and Arabic, their atomic weight, atomic density, degree of solubility, degree of boiling, isotopes, discoverers and date of discovery, and so forth. The dictionary also includes some etymological information and a comprehensive index.

After the publication of the fourth edition of the Dictionary on the Internet at the website of the Regional Office of the WHO in 1998 and the paper edition in 2006 by Lebanon Publishers, a trilingual edition (French – English – Arabic) was published in 2009. Spanish, German, and Persian terms were added to the corresponding electronic database of the dictionary for users of those languages. The dictionary was also enriched with Arabic definitions and illustrations to make it competitive with the latest international dictionaries in the health and medical field.

It is worth mentioning that the *Unified Medical Dictionary* is also available on CDs and DVDs, of which thousands of copies were distributed. It is also available since 1996 on-line (www.emro.who.int/ar/Unified-Medical-Dictionary.html). As a term base, it is continuously updated with new terminological stock, and has a sophisticated search and browsing interface.

In summary, the *Unified Medical Dictionary* is the result of distinguished Arabic efforts. Dozens of scientists from all the Arabic countries, from successive generations and from various specializations, have contributed. Its terms are widely used in the preparation of medical, health and other dictionaries. It has also been used in the translation of International Nomenclature of Disease (IND) and International Classifications of Diseases (ICD) and International Classification of Function, Disability and Health (ICF). As far as its terminology is concerned, it is worthy of being considered the authority in all medical and health fields in all Arabic countries.

6. Conclusion and future prospects

No sooner had the twentieth century ended than electronic publication became the norm and cyberspace became the new platform of communication, opening up huge new opportunities for retrieving information. A new generation of Internet users can now become acquainted with medical terminology and actively contribute to its

development and dissemination, without the geographical constraints of the past. Terminological work has become a collective enterprise, better institutionalized and now subject to international standards. Still, terminology unification requires clear administrative and technical procedures that emphasize quality assurance, which is subject to continuous evaluation IHTSDO (SNOMED), 2018). To keep medical and health terminology relevant, consistent, and precise, new sources of linguistic information need to be regularly consulted. Finally, lexicographical work in the modern age necessitates the use of the latest computing technologies for information management and linguistic research. (Hijazi 2013, 123, 53–93)

At the moment, terminologists really need to advance terminological research and applications through the development and documentation of Arabic terminological policies at the national level. They also need to adopt the standards of the International Organization for Standardization (ISO), particularly those of Technical Committee 37, raise awareness about these standards by making them available in Arabic, and implement them in terminology work. Terminologists also need to take advantage of the available technologies to serve medical and health terminology, particularly those based on computers (namely the storage of medical and health terms in term banks), use statistics and empirical analysis, build relationships with stakeholders, share data and exchange medical and health terms, and make good use of the Arabic linguistic and scientific heritage as a source of scientific and technical terms. (Mseddi 2013, 123, 17–51).

Today terminologists are closer than ever to the cherished principle of a single term for a single concept. It is high time that the Arabic community takes full advantage of the modern science of terminology to support the Arabic language, and it is high time that it invests in standardization research. Vast prospects are awaiting terminotics (terminology industry) in the Arabic language. There is still an urgent need to establish the most basic principles and methods of terminology research, unification, and management, as well as specific methods for collecting, classifying, defining, correcting, forming, standardizing and disseminating health and medical terms. We need to start building a general framework for terminological work. This includes identifying health and medical terms in specialized documents and publications, agreeing on the content and format of records and files of medical and health terms, analyzing the concepts, defining concepts according to the principles and foundations of modern terminology, contributing to the standardization movement, disseminating approved medical and health terms, characterizing the exact life cycle of neologisms, identifying the factors that affect their successful implantation, identifying the solid foundations for future linguistic planning and bringing together the right methodology for formulating health and medical terminology, on the one hand, and guaranteeing acceptability, on the other.

References

Al-Awadi, Abdul Rahman. 1997. "The Arabic Experience in Arabizing Science, in General, and the Medical Sciences, in Particular, with Emphasis on the Role of Medical Information Technology." *Al-Lisān Al-ᶜArabī* 43: 68–74.

Al-Bouchikhi, Ezzedine. 2000. "Reality of the Basic Principles in the Production of Terms." *Journal of Arabic Language Academy of Damascus* 75 (3): 755–769.

Al-Boushikhi, Ash-Shahid. 2006. "Thoughts about Scientific Terms in the Arabic Heritage." *Journal of Terminological Studies* 6.

Al-Hilali, Sadiq. 1995. "Developing the Methodology of Producing, Standardizing and Disseminating Scientific Terms: Acronyms and Abbreviations." *Al-Lisān Al-ʾArabī* 39: 59–86.

Al-Jazairy, Hussein, and Abdel-Razzak. 2007. *Introduction to Terminology for Students of the Faculties of Medicine and Health Sciences*. Beirut, Lebanon: World Health Organization and Academia International Foundation.

Al-Kasimi, Ali. 1993. "Why was the Heritage Term Neglected?" *Munathara Journal* 6: 37–48.

Al-Khatib, Ahmed Shafiq. 2000. "Methodology of Producing Terms and its Applications." *Journal of the Arabic Language Academy of Damascus* 75 (3): 560.

Al-Khayat, Mohammad Haytham. 2005. *For the Sake of Arabic*. Cairo: Wahba Library.

Al-Khayat, Mohammad Haytham, 2006. *The Unified Medical Dictionary*. Beirut: Librairie du Liban Publisher, introduction, pp. ط – س.

Allam, Mohammed Mahdi. 1966. *Arabic Language Academy in Thirty Years: The Academicians*. Cairo: General Authority for the Princely Presses.

Amin, Mohammed Shawki, and Ibrahim Tarazi. 1984. *Sum of the Resolutions of the Arabic Language Academy in Cairo in fifty years (1934–1984)*. Cairo.

Al-Shayyal, Gamal ed-din. 1951. *History of Translation, Arabization and Cultural Movement in Mohammad Ali Times*. Dar El-Fikr Al-Arabi, Mattbaat Al-Ittehad, pp. 190–194.

Arab Center for Authorship and Translation of Health Sciences (ACMLS). *Annotated Dictionary of Medicine and Health Sciences, (A–G) 1980–2018*.

Arab League Educational, Cultural and Scientific Organization (Bureau for the Coordination of Arabization). 1994. *Proceedings of the 7th Arabization Conference to Approve Dictionary Projects and Systems of Arabic Scientific Writing*. Khartoum: Alecso.

Asalmou, Walad Sidi Ahmad et al. (eds.). 1995. *Proceedings of the 7th Arabization Conference to Approve Dictionary Projects and Systems of Arabic Scientific Writing* (Khartoum: 25/01/1994–02/01/1994). Salé-Morocco: Arab League Educational, Cultural and Scientific Organization (Bureau for the Coordination of Arabization).

Clairville, A. L. 1953. *Dictionnaire Polyglotte des Termes Médicaux*. Paris: Sipuco.

Claireville, A. L. 1956. *Multilingual Medical Multilingual Medical Dictionary*. Damascus: Damascus University.

Clairville, A. L. et al. 1956. *Clairville's Multilingual Medical Dictionary*. Translated by Murshid Khattir, . Damascus.

Ezzat, Mustafa. 1973. "Introduction to the First Edition of the Unified Medical Dictionary." In *The Unified Medical Dictionary*, ed. by the Union of Arab Doctors. Baghdad: Iraqi Scientific Academy.

Farr, William. 1839. *First Annual Report*. London: Registrar General of England and Wales.

Hafez, Mahmood. 2007. *History of Arab Language Academy 1932–2007*, 10.

Haj Saleh, Abdul Rahman. 2003a. "The Arabic Dictionary and the Real Use of the Arabic Language." *Arabic language Academy on its Sixty-Ninth Session*. Typescript.

Haj Saleh, Abdul Rahman. 2003b. "The Arabic Thesaurus Project." *The Arabic Language Academy on its Sixty-ninth Session*. Typescript.

Hijazi, Mahmoud Fahmy. 2013. "The Future of the Arabic Language in the World." *Journal of the Arabic Language Academy in Cairo* 123: 53–93.

Hitti, Yussuf K. 1967. *Hitti's Medical Dictionary*. Beirut: American University.

IHTSDO (International Health Terminology Standards Development Organisation (SNOMED), 2018: https://www.snomed.org/, visited on Septeber, 25th, 2018.

Issa, Ahmed. 1923. *At-Tahḍīb fī Usul At-Ta'rīb*. Egypt: Egypt's Printing.

Khalifa, Abdul Kareem. 2011. "Arabization Conferences 1961–2011". *Journal of Arabic Academy of Cairo*, 127: 210–217.

Medkoor, Ibraheem. 1977. *Collection of Scientific and Technical Terms Approved by Arab Academy of Cairo*, V. 19, Introduction.

Mseddi, AbdulSalam. 2013. "Arabic: Prospects for the Future and Illusions of Interpretation." *Journal of the Arabic Language Academy in Cairo* 123: 17–51.

Murtada al-Zabidy. 1961–1999. *Tāǧ Al-ᶜarūs min ǧawāhir al-qāmūs*, Kuwait edition. Volume 35.

Report on "Conference on the Unification of Arabic scientific Terms." 1995. *Al-Lisān Al-ᶜArabī* 39: 339–341.

Sara, Kassem Taha. 1986. *Arabization: Efforts and Perspectives*. Damascus: Dar El-Higra.

Sara, Kassem Taha. 2009. "The Role of the World Health Organization and its Arabic Program in the Promotion of the Arabic Language." *The Health Journal for the Eastern Mediterranean* 15 (3): 665–682. https://doi.org/10.26719/2009.15.3.665

Sharaf, Mohammed. 1928. *An English-Arabic Dictionary of Medicine, Biology, and Allied Sciences* (generally known as Sharaf's *Medical Dictionary*). Cairo: Government Press.

Shihabi, Mustafa. 1957. "Compiling an English-Arabic Dictionary for Scientific Terms." *Journal of the Academy of Damascus* 32: 163–168.

Shihabi, Mustafa. (1956) 1965. *Scientific Terms in the Arabic Language: The Past and the Present*. Damascus: Arabic Language Academy of Damascus.

Souissi, Mohammed. 2004, Insights in linguistics and phonitics. *Journal of the Arabic Language Academy of Damascus* 79 (2): 398.

Union of Arab Doctors. 1978. *The Unified Medical Dictionary*. Baghdad: Iraqi Scientific Academy.

Wakeley, Sir Cecil. (1953) 1965. *The Faber Medical Dictionary*. London: Faber and Faber.

Wartabat, Johanaa, 1881, *The Layman's Comprehensive Manual to Hygiene and the Management of Sickness*, 1st edition, Beirut, Lebann.

CHAPTER 6

The dilemma of legal terminology in the Arab world

Said M. Shiyab

In an age where the Arab world is becoming interconnected with the global community, legal translation is now on the rise. Because of international accords, societal and global conflicts, international trade and joint business enterprises that have impacted and continue to impact the Arab world, the need for accurate and uniformed legal terminology in Arabic is becoming more vital than ever. So what is it that puts the translation of legal terminology at the forefront of this emerging field? Could it be the lack of proper steps that are being taken by the Arab Language Academies or legal translators or is it because of the clear-cut and distinctive language quality of this changing and challenging field? One of the main purposes of this chapter is to examine the status of legal translation and terminology in the Arab world. The chapter explores the problems facing Arabic legal terminologists and translators such as lack of uniformity, general and specific differences within and across legal systems, and the ambiguity of the legal language, all of which contributes to the confusion surrounding this legal and culture-bound profession. This chapter concludes with implications and applications for further studies, and provides practical solutions to the most common difficulties of translating legal terminology.

Keywords: legal translation, legal language, terminologists, Arabic terminology, challenges, unified terminology, translation dilemma

1. Status of terminology and translation in the Arab world

Since the seventh century, Arabic has been a scriptural language (i.e. the language of the Holy Qur'an) and has reflected the major works of Muslim theology and law. It is a language with a classical history, the medium of a body of literary, technical, philosophical and scientific writing which is regarded as exemplary and authoritative not only by Arabs, but also by Muslims all over the world (Lewis 1980, 41). This perception of Arabic as a classical language has now changed and so has the role of translators and the nature of legal language in particular. Lack of standardization at both linguistic and organizational levels presents challenges to translators, and the legal domain is no exception. Ibrahim (1989, 51) points out that, linguistically speaking,

https://doi.org/10.1075/hot.2.07shi

Arabic is typified by strong diglossia, i.e. numerous regional dialects and rich synonyms. Therefore, variations and confusion in technical language and terminology is a major problem facing translators in general and legal translators in particular. Ibrahim is appalled to see that "different Arabic equivalents for the same English or French terms in glossaries and dictionaries are printed by the same publisher".

Furthermore, it is unfortunate nowadays that most scientific, technological and social advances (at least considering those with global reach) take place outside the Arab world. In order for Arabic to align itself with modern technologies and advances in the world, it has to import the findings and scientific discoveries of these technological fields from a number of languages such as English, French and German. This means that for one term in Arabic, there may be many foreign synonyms in use coming not only from different Middle Eastern countries, but also from English, French, German and some North African countries. This multiplicity of synonyms and inconsistencies resulting from foreign imports is further aggravated by the fact that within each source language itself, disparities and differences exist. Therefore, in Arabic, one sometimes finds many different terms corresponding to one concept.

At the organizational level, Arabic has been and still is being influenced by other countries around the world. While most of the countries that use Arabic are located in the Middle East, Arabic is also the official language of some countries in North Africa, and it is widely used in other parts of the world. Countries such as Chad, Comoros, Djibouti, Maldives, Mauritania, Somalia, among others are all a case in point. The legal terminology that comes out of these countries comprises not only variants of the Arabic language, but in some cases is inconsistent with the semantic and phonological properties of Arabic. In the same vein, Alsulaiman (2011) argues that the different legal systems in the Arab world further contribute to terminological variation. For example, Arabic legal terms may come from various laws such as Sharia or Islamic law, Napoleonic law, English Common law, Arab customs and traditions, and so forth.

In his work on *Terminology and Reality of Terminological Work in the Arab world*, Elyaboudi (2004, 153) argues that the desire of many Arabs for more accurate and precise terminology is indisputable. However, there are twenty-two Arab countries that produce terminology at both institutional and professional levels. There are also other institutions outside the Arab world that produce terminology based on local criteria, such as the United Nations (UN) and its affiliated organizations. Therefore, there is not one single institution that oversees the creation of terminology. Many terms used in all sorts of fields are borrowed from foreign sources, when an Arabic term already exists (for example "pyğāmā">"bīğāmā">"Manāma"). Other terms adopt a foreign phonology when their origin is actually Arabic, such as "Sofa-">"soofaa-">"sofa" (see Al-Kasimi 2003, 202). This situation of foreign influence has and still is hindering the efforts of standardizing terms, despite genuine efforts made by the Arab League

Educational, Cultural and Scientific Organization and its Arabization Coordination Bureau. Elyaboudi (2004, 153) goes further to illustrate the magnitude of this problem by showing six suggested terms to describe the terminology discipline itself (the *study of terminology*):

a. *al-dirāsa al-'iṣṭilāḥiyya* (الدراسة الاصطلاحية)
b. *al-'iṣṭilāḥiyya* (الاصطلاحية)
c. *'ilm al-muṣṭalaḥ* (علم المصطلح)
d. *'ilm al-'iṣṭilāḥ* (علم الاصطلاح)
e. *'ilm al-muṣṭalaḥāt* (علم المصطلحات)
f. *'ilm al-muṣṭalaḥiyya* (علم المصطلحية)

The above example shows that for the concept "discipline of terminology", there are six possible translations. In the legal field, such a multiplicity of equally acceptable translations for a single concept can be a serious problem. Legal translators need to strive for univocity: one standardized term for each (legal) concept.

2. Problems facing Arabic legal translators

Legal translation requires linguistic and cultural competencies on the part of translators to understand the context in which the term is used. It also requires understanding the culture of the target audience. Translators need to know that using word-for-word translation can result in serious legal repercussions and ultimately to miscommunication. Therefore, Arabic translators, particularly those who are interested in translating Arabic legal terms into English or English legal terms into Arabic, need to understand that the English legal system relies heavily on the common law system, whereas the Arabic legal system is based on many different laws, i.e. Sharia law, English law, French law, among others. Lack of understanding and providing false cognates and other types of different (and unequal) legal terms, can lead legal translators to use terms that have completely different meanings than those intended by the source language text. Since Arab countries have various legal systems, one of the main challenges facing Arabic legal translators is the lack of uniformity of legal terms used or produced by legal translators. Uniformity here refers to the conditions where one and the same term is used consistently to express a given legal concept.

3. Lack of uniformity

There is no doubt that legal terms in Arabic differ from one country to another and sometimes even from one translator to another. One of the most challenging tasks

facing Arabic legal translators is the lack of uniformity. The different legal systems embraced by Arab countries reflect different legal conceptual systems, and therefore different systems of legal terminology. Foreign influences further accentuate the terminological diversity: borrowed terms, cultural transfer, and dissimilar legal systems. In addition to the challenges of translating culturally-specific terms, legal translators must overcome the conceptual differences between the two languages involved. Speaking about translation, Newmark (1988) clearly states that if a word denotes an object or an institution in the source language community that does not exist in the target language community, then it becomes extremely difficult to translate it accurately. Therefore, translators need to come up with a solution, particularly for concepts that do not have equivalents in the target language. As a result, legal translators may inadvertently render English legal terms into Arabic in a way where they are semantically and culturally different. Within this context, Arabic legal translators find themselves struggling with the lack of uniformity among Arabic legal translations. For example, the word "file" in English can be translated by "*malaff*" (Jordan, Gulf, Maghreb and Egypt), "*muṣannaf*" (Syria) and "*iḍbāra*" (Iraq and Syria). The legal word "article" can have different Arabic renderings: "*mādda*" (Jordan, Syria, Iraq, Egypt and the Gulf) and "*band*" (Maghreb). Also, the word "guarantor" can be rendered by either "*kafīl*" (Jordan, Syria, Iraq and the Gulf) or "*ḍāmin*" (Egypt and Maghreb). The legal word "code" as in "penal code", can be translated by either "*misṭara*" (Maghreb) or "*qanūn*" (Jordan, Syria, the Gulf, Egypt, and Iraq). If the English term "penal code" is translated by "*al-misṭara al-ǧinā'iyya*", it will only be understood in the Maghreb region (Didawi 1992).

Furthermore, the legal term "liabilities" can be translated as "*ḫuṣūm*" or "*madyūniyyāt*" (Egypt) or "*mas'ūliyyāt*" (Jordan, Syria, Iraq and the Gulf). The term "agent" can be translated as "*ʿamīl*" (Syria, Jordan, Iraq), "*wakīl*" (Egypt and the Gulf), or "*ʿawan*" in Maghreb. Even at the non-legal level, differences in terminology are evident among Arab countries. For example, "minister of labor" can be rendered as "*wazīr al-ʿamal*", which is prevalent among Arab countries except in the Maghreb (i.e. Tunisia, Algiers, Libya and Morocco), where the term is translated as "*wazīr al-šuġl*". The term "cessation court" can be rendered as "*maḥkamat al-tamyīz aw al-ṭa'n*" (in the Gulf, i.e. Kuwait) or "*maḥkamat al-naqḍ*" (Egypt, Syria and Maghreb). The term "marriage contract" can be rendered by "*ʿaqd zawāǧ*" (Iraq, Egypt and Jordan), "*ʿaqd nikāḥ*" or "*ʿaqd qarān*" (Maghreb and the Gulf), or "*ṣakk zawāǧ*" (Syria). Even the word "marriage" can be rendered into "*zawāǧ*", "*nikāḥ*" or "*ʿaqd qarān*" (Iraq, The Gulf and Maghreb). The number of examples demonstrating the lack of uniformity among legal translations in Arabic is staggering. Table 1 provides a sample of some legal terminological differences among Arab and Maghreb countries:

Table 1. Legal terminological differences among Arab and Maghreb countries

English legal term	Arabic equivalent (Iraq)	Arabic equivalent (Egypt)	Arabic equivalent (Jordan)	Arabic equivalent (Syria)	Arabic equivalent (Maghreb)	Arabic equivalent (Gulf)
File	إضبارة	ملف	ملف	مصنف/ إضبارة	ملف	ملف
Article	مادة	مادة	مادة	مادة	بند	مادة
Contract	عقد	عقد	عقد	صك	عقد	عقد
Cessation court	محكمة التمييز	محكمة النقض	محكمة الاستئناف	محكمة النقض	محكمة النقض	محكمة التمييز/ محكمة /الاستئناف محكمة الطعن
Minister of labor	وزير العمل	وزير القوى العاملة	وزير العمل	وزير العمل	وزير الشغل	وزير العمل
Marriage contract	عقد زواج	عقد زواج	عقد زواج	صك زواج	عقد نكاح	عقد نكاح
Guarantor	كفيل	ضامن	كفيل	كفيل	ضامن	كفيل
Code	قانون	قانون	قانون	قانون	مسطرة	قانون
Penal code	قانون العقوبات	قانون العقوبات	قانون العقوبات	القانون الجزائي	المسطرة الجنائية	قانون العقوبات/ القانون الجنائي
Radiation	إشعاع	إشعاع	إشعاع	أشعة	إشعاع	إشعاع/أشعة
Ascendants	الأصول	الأسلاف/ الأجداد	الأصول	الأصول	الأصول	الأصول
Descendants	الفروع	الأحفاد	الفروع	الفروع	الأحفاد	الفروع
Liabilities	مسؤوليات	خصوم / مديونيات	مسؤوليات	مسؤوليات	مسؤوليات	ديون /مسؤوليات / التزامات
Cloning	استنساخ	الاستنسال/ الاستنساخ البشري	استنساخ	استنساخ	استنساخ	استنساخ
Privatization	خصخصة	تخصيص/ خصخصة	خصخصة	خصخصة	خوصصة	خصخصة/ تخصيص
Agent	عميل	وكيل	عميل / زبون	عميل	عون	وكيل
Assets	الأصول/ الممتلكات	الأصول أو الممتلكات	ممتلكات	الأصول/ الممتلكات	ممتلكات	ممتلكات /أملاك
Demarcation	ترسيم	ترسيم الحدود	ترسيم الحدود/ تحديد / ترسيم	ترسيم الحدود	تعيين الحدود	تعيين الحدود/ تخطيط / ترسيم

Furthermore, like all sub-languages, legal language changes continuously. Lawmakers are constantly introducing changes to meet shifting social, political, criminal and constitutional conditions. Husni and Newman (2015) observe that in the US states of Arizona and New Mexico, new features are being added to state laws that are influenced

by Civil Law. Civil Law is used in Mexico, from which a large sector of the state population originates. In the same vein, the fact that countries such as Algeria, Morocco, Syria and Tunisia adhere to Civil Law alongside the Islamic Sharia Law is noticeably due to French influence during the colonial era, whereas Oman's close ties with Britain have resulted in a legal system rooted in the English Common Law. These differences are highly significant for Arabic legal translators because each system has a unique vocabulary to express its concepts, rules, and techniques.

4. Differences within the same legal system

While the preceding section demonstrates differences in legal terms across distinct Arab legal systems, Table 2 demonstrates differences in legal terminology within the same legal system, this time using English as an example. The effect of such differences often results in dramatically varying terminologies relevant to the legal profession, i.e. courts and areas of law. Husni and Newman (2015, 109) examine the differences between the UK and US legal systems. They argue that the terms "lawyer", "attorney", "solicitor", "barrister", "advocate", "counselor" and "counsel" can all be translated into Arabic as lawyer (محام). While in the US, the term "lawyer" and "attorney" can be used interchangeably, in the UK, the word "attorney" is used specifically to refer to someone who can work on behalf of a private organization or serves the government, and is short for "attorney-in-fact" (وكيل), as in "power of attorney" وكالة). By the same token, the difference between "solicitor" and "barrister" in the UK and Australia is unknown in the US. In Scotland, however, the term used is "advocate". As for the word "counsel", it occurs in the phrase "Queen's counsel" denoting "a senior barrister", with "counselor" being equivalent to "lawyer". There are similar examples in Arabic where two similar legal terms refer to two different meanings. For example, the word عدل (plural عدول) is used in Morocco, Algeria and Tunisia to refer to "*qadi's assistant*", and this term is often used in Europe to refer to duties performed by (كاتب عدل) "a notary public". Husni and Newman (2015, 109) demonstrate, in Table 2, the terminological diversity relating to the courts and their hierarchical structure in the English-speaking world:

Table 2 shows that legal translators need to be mindful of the fact that identical terms can denote different concepts especially between different legal systems, but sometimes even within one legal system. Within this context, and in order to avoid mistranslation, translators should carefully determine term equivalency at the semantic level rather than the lexical level (Husni & Newman 2015). As indicated in Table 2, the term "High Court" in New Zealand is equivalent to the term "Supreme Court" in both the UK and the US. However, the term "District Court" has different meanings in the Irish Republic, US, and Scotland. Husni and Newman argue that translators within the same system or across systems should be aware of these differences. Certainly, it

Table 2. Terminological diversity relating to courts and their hierarchical structure in the English-speaking world

Canada	New Zealand	England & Wales	Scotland	Northern Ireland	Irish Republic	USA
Supreme Court	High Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court
Federal Court of Appeal	Court of Appeal	Court of Appeal	Court of Session	Court of Appeal	Court of Criminal Appeal	State Supreme Courts
Federal Court	District Court	High Court (of Justice)	High Court of Judiciary	High Court	High Court	District Court
Provincial/ Territorial Court	Family Court	Crown Court	Sheriff Court	Crown Court	Circuit Court	County Court
	Youth Court	Magistrates' Court	District Court	County Court	District Court	
		Family Proceedings Courts	Justice of the Peace Courts	Subordinate Court		
		Youth Courts				
		County Courts				

could be argued that differences among various legal systems could explain some of the inconsistent translations in *Faruqi's Law Dictionary* such as:

1. Supreme Court: محكمة عليا، محكمة تمييز، محكمة نقض وابرام
2. High Court: محكمة العدل العليا
3. Court of Appeals: محكمة الاستئناف، محكمة المراجعات
4. District Courts: محاكم محلية ذات اختصاص مكاني يقتصر على المنطقة التابعة لها
5. Justice of the Peace Courts: محاكم جزئية غير تدوينيه

It is difficult, Husni and Newman argue, to see how such translations of these legal entities can be useful to legal translators. Such inconsistent translations reflect a lack of knowledge and familiarity with legal terminology among different legal systems. It should be noted that most, if not all, Arab countries have established a legal system where courts apply certain terms or concepts, but in reality, these legal terms or concepts are far from being uniform. Therefore, the problems encountered in legal terminology are far from being resolved. Table 3 presents an overview of the court systems within the Arab world:

Table 3. Overview of the court systems in the Arab world according to Husni and Newman (2015)

Country	محكمة الصلح	محكمة البداية	محكمة ابتدائية	محكمة الدرجة	محكمة	محكمة التمييز	محكمة التعقيب	محكمة النقض	المحكمة العليا	المحكمة لخصلة للعدل	محكمة ناحية	محكمة جزئية	محكمة جزائية	محكمة	محكمة شرعية
Jordan	Magistrates Court	Court of First Instance			Court of Appeal	Court of Cessation									Sharia Court
Tunisia			Court of First Instance		Court of Appeal		Court of Cessation				District Court				
Morocco			Court of First Instance		Court of Appeal				Supreme Court	Special Court of Justice					Sharia Court
Egypt			Court of First Instance		Court of Appeal			Court of Cessation				Court of limited Juris-diction		Family Court	Sharia Court
Lebanon				Court of First Instance	Court of Appeal	Court of Cessation							Criminal Court		Sharia Court
Syria			Court of First Instance		Court of Appeal			Court of Cessation							Sharia Court
Oman			Court of First Instance		Court of Appeal				Supreme Court						Sharia Court
Saudi Arabia			Court of First Instance			Court of Cessation			Supreme Court						Sharia Court
Kuwait			Court of First Instance		Court of Appeal	Court of Cessation									Sharia Court
UAE			Court of First Instance		Court of Appeal	Court of Cessation									Sharia Court

Table 3 shows some inconsistent or variable terminology within the Arab legal court systems. This multiplicity of terminology, Husni and Newman argue, is also reflected in a variety of terms for legislative bodies in Arab countries, "each of which has its own recognized translations, which does not necessarily correspond to the same source language term in another country, nor does an exact Arabic term suggest that the legal body functions in the same way" (Ibid., 110). Table 4, from Husni and Newman (2015, 110), provides an overview of the names of legislative bodies in the Arab world.

Table 4. Names of legislative bodies in the Arab world

Country	Official translation	Arabic term
Algeria	National's People Assembly	المجلس الشعبي الوطني
Kuwait	National Assembly	مجلس الأمة
Bahrain	Council of Representatives	مجلس النواب
Iraq		
Jordan	House of Representatives	
Morocco		
Yemen		
Lebanon	National Assembly	
Tunisia	Chamber of Deputies	
Libya	General People's Congress	
Egypt	People's Assembly	
Syria	People's Assembly	مجلس الشعب
Sudan	National Assembly	المجلس الوطني
Sudan	Council of States	مجلس الولايات
Palestine	Legislative Council	المجلس التشريعي الفلسطيني
UAE	Federal National Council	المجلس الوطني الاتحادي
Algeria	Shura Council	مجلس الشورى
Egypt	Advisory Council	
Qatar		
Oman	Consultative Council	
Saudi Arabia		
Yemen		
Jordan	Senate	مجلس الأعيان
Morocco	Assembly of Councillors	مجلس المستشارين
Tunisia	Chamber of Councillors	
Oman	State Council	مجلس الدولة

The English terms shown in Table 4 are recognized, official translations of legal terms within the Arab world's legislative bodies. They demonstrate a lack of understanding of legal terms used in these countries. The translations also demonstrate that the Arabic terms do not even denote or have the same function as their English equivalents.

5. Translator's lack of familiarity with legal terms

One of the main problems in Arabic legal terminology is the lack of equivalent Arabic terms for a given legal concept. Even if there are equivalent legal terms, they tend to be different from one country to another and even from one individual or translator to another. Unfortunately, there are legal terms in one language that may not have equivalents in other languages, and a literal translation of such terms may not be adequate to convey the exact meaning. Terms such as "*invoice*", "*agreement*", "*contract*", "*white paper*", "*back-up documents*", and "*scripts*" invite different nuances of meaning. If legal translators are unaware of the meanings of these terms and their equivalents in other languages, they will be faced with an open-ended list of choices that can give rise to all sorts of legal terminology problems.

Due to differences in text types, translators need to be aware of the multiple meanings (polysemy) of terms, and this applies to all fields not just legal ones. Translators in general should be able to comprehend the text, understand its particular context, and select the most appropriate term in the target language. Translators should also look through parallel texts and familiarize themselves with the language and terminology used in the target language (i.e. archaic words, repetition, ambiguity, etc.) in the particular domain. Therefore, understanding legal language within and across various legal systems can help translators to understand that a legal language is written to describe a particular legal system, and to make the appropriate distinctions in the target language. Legal language is not written to entertain or to inform, but to apply the law. Indeed, misinterpreting a legal term can have serious legal consequences, including significant financial costs.

Furthermore, in many parts of the Arab world, translation as a whole is perceived as an easy task, and just like any other form of translation, legal translation is perceived as a profession that requires just basic knowledge of the two languages involved (Rubrecht 2005). As a result of this misconception, legal translation is rarely practiced by qualified and skillful professional legal translators. Many translators do not have adequate knowledge of the legal field. Also, there are not many schools or organizations in the Arab world that provide training specifically for legal translation.

Moreover, many academics teaching translation at public or private institutions lack sufficient knowledge and pedagogical experience in legal translation to teach and

train students to become proficient legal translators. This has misled and continues to mislead students and individuals who work in this profession to believe that legal translation is not a highly specialized form of translation requiring specific experience in the legal field, good knowledge of the legal systems concerned, and understanding of the cultures of the two languages, but rather is limited to a task that requires only the ability to speak and write in the two languages involved. The absence of qualified translation teachers coupled with the lack of political will to organize and regulate the profession has given rise to poor quality terminology and translations in all legal fields.

Abid (1986) explains that despite these shortcomings, scholarly research has been published to help translation specialists create Arabic terms in different fields. There are also some specialized dictionaries, lexicons, and glossaries that were published in this area. These efforts, as Ibrahim (1989) argues, have greatly enhanced the Arabicization of teaching materials at both secondary and tertiary levels in several Arab countries. Unfortunately, these efforts have been unable to cope with the enormous flow of terms being created at the rate of a hundred or so every day world-wide (UNESCO report 1957).

6. Ambiguity of legal language

In addition to inconsistencies and differences within or across legal systems, and lack of knowledge of legal translators regarding legal systems, vagueness and ambiguity of the legal language is another problematic issue that needs to be addressed. Unlike lay persons, those who work directly with the language of law are certainly more aware of its complexities, and that such complexities (i.e. archaic words, repetition, ambiguity, etc.) are inherent within any legal system. Legal language by its very nature is more likely to mislead if not fully understood. However, the question that many people still ask is whether there is a clear-cut definition of what is called "legal language". And for a particular legal text, such as a law, the person or persons involved in its writing may have a bearing on its interpretability. Is it written by lawyers and judges? If so, then are they the only people who can interpret its full legal meaning? If laws are written to persist unchanged, can they in fact be changed if and when they are subjected to testing? These questions challenge the very ability of individuals, including translators, to fully and unambiguously comprehend, and therefore precisely translate, legal texts. Plato in *Laws*, (Book X, 189), states:

> The greatest help to rational legislation is that the laws when once written down are always at rest; they can be put to the test at any future time, and therefore, if on first hearing they seem difficult, there is no reason for apprehension about them, because any man however dull can go over them and consider them again and again.

Plato argues that laws are unchangeable. While laws are fixed, they can be so to the extent where they can be amended. Although we, as ordinary individuals, do not know exactly how to explain this contradictory statement, the only way to deal with laws, more specifically with legal language, is to leave it to those who created such laws. Therefore, legal language entails inconsistency, ambiguity, illogicality and incoherence.

Benson (cited in Husni & Newman 2015, 94), provides an interesting definition of legal language. Benson believes that despite empirical evidence that legal language is characterized by ambiguity and illogicality, only lawmakers and judges can fully comprehend and interpret legal language. Benson states:

> There is plentiful evidence that lawyers' language is hocus-pocus to non-lawyers, and that non-lawyers cannot comprehend it. There exist scores of empirical studies showing most of the linguistic features found in legalese cause comprehension difficulties. Legalese is characterized by passive verbs, impersonality, nominalization, long sentences, ideas stuffed sentences, difficult words, double negatives, illogical order, poor headings, and poor typeface and graphic layout. Each of these features alone is known to work against clear understanding.

Christie (1964, 886) argues that language has a huge impact on the interpretation of the law. However, legal language is sometimes littered with vagueness and ambiguity. Christie believes that vagueness is necessary in legal language, and the exploitation of vagueness reaches a pinnacle when groups in control of the legislators and those in control of the courts defend conflicting positions. Therefore, ordinary people seem to be excluded from this particular use of language. It is no wonder that people have to hire lawyers if they find themselves in the unfortunate situation of having to deal with the legal system. The way legal language is vaguely construed makes it hard for the uninitiated to understand. Christie (1964, 889) states:

> Vagueness has some uses in law which permits men, through the use of language, to achieve more sophisticated methods of social control, for example, the use of vague language in legal directives to postpone ultimate decisions. Such postponement may be desired for a variety of reasons that are often interconnected.

Despite the various views about the vagueness of legal language, Husni and Newman (2015) believe that legal language is widely used in a variety of contexts; it is also aimed at a wide variety of readers. Legal language is not restricted to lawmakers and judges, but is also used by society at large. Of course, we have all experienced the difficulty of understanding legal terminology through reading a PC warranty or the license agreement for a software. These terms are not among the easiest-to-read or understand, and they often cause confusion. One may think of words or phrases such as "Ancillary Relief", "Bench Warrant", "Master of the Rolls", "*A fortiori*", which are all difficult to understand. What begs the question is whether or not terms such as these have been correctly translated across various languages.

7. Strategies for translating legal terms

Legal terms are technical terms in the sense that their meaning is fixed. Legal terms reflect a "specific" way of using language. Therefore, legal translation falls under what we call technical translation. In an article entitled *Translating Law*, Cao (2007, 8) explains:

> Legal translation falls under the specialist category of technical translation. It is a type of the translational activity involving special language use, that is, language for special purpose (LSP) in the context of law or language for legal purpose.

Legal terms are not emotive terms. They are created to denote specific concepts for a specific legal system. That is, a legal term or concept must be rendered by only one term in the target language. The creation of legal terms must take into account linguistic and cultural values along with the social and legal experience of a given country. Many legal terms are culture-bound. In order to translate legal terms, Arabic legal translators must have good knowledge of both the source and target legal systems. The determination of appropriate Arabic legal terms must be based on linguistic, cultural and ideological contexts.

As for the strategies of translating legal terms, they can be both source language oriented (SLO) and target language oriented (TLO). SLO strategies attempt to preserve the semantic meaning of a given term, whereas TLO strategies attempt to assimilate a given legal term into the target language and legal system. In addition to the above two strategies, functional and formal equivalence, borrowing, paraphrasing, foreignization, and domestication are common strategies for translating legal terms.

7.1 Functional equivalence

According to this strategy, translators use the closest equivalent legal concept in the target language to replace the source legal concept. The functional equivalency of the target legal concept to the source concept is the translator's ultimate priority. Capellas-Espuny (1999) maintains that aiming for functional equivalence of certain technical terms is impossible because institutions and legal systems in one country may differ from those in another country due to social, cultural and historical differences. In such cases, functional equivalence is the ideal – but not necessarily attainable – property of translation.

7.2 Formal equivalence

According to this strategy, legal translators may resort to a linguistic or literal equivalence. Linguistic equivalence helps translators maintain the semantic content of source language terms, in terms that are natural in the target language. The result is clear lexical equivalents in the target language. Literal equivalence, on the other hand, focuses on the linguistic structure of the source text and ignores the semiotic, pragmatic and

contextual connotations of text structure. While literal translation is not commonly used in translating non-legal texts, it is fundamental for the study of legal language structures.

7.3 Borrowing

This strategy involves transliterating a word that has no equivalent in the target language. Sometimes, a source language text contains a legal term that has no equivalent in the target language. In some of these cases, borrowing the source language term and adapting it to the target language is the only way to render the concept. It should be noted here that adapted legal terms can become borrowed terms in the target language. Sometimes borrowed legal terms can be followed by an explanation, although legal translation should avoid frequent use of explanations or footnotes.

7.4 Paraphrasing

Paraphrasing is the provision of a short description of the legal terms or concepts in an attempt to make the meaning clear and accessible to the target reader. One of the advantages of using paraphrase strategy is ensuring clarity and transparency of terms. Target language readers can easily recognize the meaning of source language terms from the short description provided.

7.5 Foreignizing and domestication

According to Venuti (1995, 240), foreignizing is oriented towards the source language whereas domestication is oriented towards the target language. The process of foreignizing seeks to evoke a sense of "the foreign" in the target text whereas domestication involves assimilating the source language terms or concepts into the target language and culture to ensure immediate and natural comprehension. Domestication also has the effect of making the text appear less like a translation.

According to Venuti, foreignizing is used in literary translation whereas domestication is used for technical translation. Venuti argues that domesticating source language terms and concepts is designed to support scientific research, geopolitical negotiations, and economic exchanges; it is "constrained by the exigencies of communication and therefore renders foreign texts in standard dialects and terminologies to ensure immediate intelligibility" (Venuti 1995, 244).

8. Conclusion

This chapter has examined the status of legal translation and terminology in the Arab world and explored the problems facing Arabic legal terminologists and translators.

The problems discussed were lack of uniformity, general and specific differences within and across legal systems, and the ambiguity of the legal language. These problems contribute to the confusion surrounding this legal and culture-bound profession. The chapter also provided practical solutions to the most common difficulties of translating legal terminology. Among those practical solutions were source language oriented strategies and target language oriented strategies for translating legal terms. The former attempt to preserve the semantic meaning of a given term, whereas the latter attempt to assimilate a given legal term into the target language and legal system. In addition to the strategies of *functional and formal equivalence*, *borrowing* and *paraphrasing*, Venuti's *foreignizing* and *domestication* strategies were also discussed.

Furthermore, due to the variety of legal systems within the Arab world, legal translators, lawmakers, lawyers and judges are challenged by the frequent occurrences of synonymy and polysemy in Arabic legal terminology. Therefore, translators in general and legal translators in particular need to be fully aware of the legal text's terminology, phraseology, syntax, and register (i.e. tone) as these are significant parameters that can fundamentally influence the translation outcome. Legal translation requires good knowledge of the law in general and mastery of the specialized field in particular. It is hopeful that this chapter opens venues for more research on the reasons behind the lack of uniformity, differences within and across legal systems and the complexity of legal language.

References

Abid, A. 1986. "Experience of Bourghuiba Institute in Terminology Teaching in Tunisia". In *Linguistic Efforts in Modern Scientific Terminology*, ed. by M. A. Zargan. Damascus: The Arab Writers Union Publications.

Al-Kasimi, A. 2003. *Arabic Lexicography Theory and Practice*. Beirut: Librairie du Liban Publishers.

Alsulaiman, Abied. 2011. "Iškāliyāt at-takāfu' al-wazīfī fī t-tarğamah l-qānūniyya: qānūn al-'usrah al-maġribī 'unmūḏağ-an." *Turjuman* 20 (2): 11–66.

Benson, Robert W. 1985. "The End of Legalese: *The Game Is Over*." *New York University Review of Law and Social Change* 13 (3): 519–573.

Cao, Deborah. 2007. *Translating Law*. Clevedon/Buffalo/Toronto: Multilingual Matters. https://doi.org/10.21832/9781853599552

Capellas-Espuny, Gemma. 1999. "The Problem of Terminological Equivalence in International Maritime Law: The Case of *Hypothèque and Mortgage* in the document *Final Act and International Convention on Maritime Liens and Mortgages*." *Translation Journal* 3 (3). Retrieved from www.bokorlang.com/journal/09legal1.htm.

Christie, George C. 1964. "Vagueness and Legal Language." *Minnesota Law Review* 48: 885.

Didaoui, Mohammed. 1992. *Science of Translation: Theory and Practice*. Sousa, Tunis: Dar alma'arif waslnashr.

Elyaboudi, Kh. 2004. *Al-muṣṭalaḥiyyatu wa wāqi'u al-'amal al-Muṣṭalaḥi fi al-'ālam al-'Arabī* المصطلحية وواقع العمل المصطلحي بالعالم العربي (*Terminology and Reality of Terminological Work in the Arab world*). Fez: Dar mā Ba'da al-Ḥadāṯah.

Faruqi, Harith Suleiman. 1988. *Faruqi's Law Dictionary – English-Arabic*. 5th ed. Beirut: Librairie du Liban.

Husni, Ronak, and Daniel Newman. 2015. *Arabic-English-Arabic Translation: Issues and Strategies*. London & New York: Routledge.

Ibrahim, Muhammad H. 1989. "Communicating in Arabic: Problems and Prospects." In *Language Adaptation*, ed. by Florian Coulmas, 39–59. Cambridge: Cambridge University Press.

Lewis, Bernard. 1980. "Translating from Arabic." *Proceedings of the American Philosophical Society*, 124 (1): 41–47.

Newmark, Peter. 1988. *A Textbook of Translation*. New York & London: Prentice Hall.

Plato. 2016. *The Laws of Plato*. Translated by Benjamin Jowett. England: Create Space Independent Publishing Company Platform.

Rubrecht, Brian. 2005. "Knowing Before Learning: Ten Concepts Students Should Understand Prior to Enrolling in a University Translation or Interpretation Class." *Translation Journal* 9 (2). Retrieved from www.bokorlang.com/journal/32edu.htm.

UNESCO. (1957) 1958. *Scientific and Technical Translating and Other Aspects of the Language Problem*. Switzerland: UNESCO.

Venuti, Lawrence. 1995. *The Translator's Invisibility: A History of Translation*. London: Routledge. https://doi.org/10.4324/9780203360064

CHAPTER 7

There is nothing like Him: A syntactic, semantic, rhetorical and translational analysis of Qur'anic terminology

Ahmed Allaithy

This paper provides a syntactic, semantic and rhetorical (*balāġi*) analysis of the term-statement made in the Holy Qur'an 42:11, namely ﴿لَيْسَ كَمِثْلِهِ شَيْءٌ﴾ '*laysa ka-miṯlihi-šay'un*', which may be loosely translated as 'There is nothing like Him' in reference to Allah (God). A method of analysis is established based upon consideration of the syntactic values of the components making up the structure of the term-statement or expression, and how they impact and/or dictate the overall meaning. This method of analysis is aimed to establish a methodology in determining the meaning of Qur'anic terminology in general. Issues involved and therefore, considered, are: the structure and the implications thereof, the concept of God in major religions in general and in Islam as manifested in the Qur'an in particular and the rhetorical aspects involved. Additionally, English translations of this term-statement are contrasted with the Arabic wording in order to determine if a more accurate translation may be reached.

The paper reveals that qur'anic term structure – based on analysis of Q42:11 – incorporates an inherent 'manual' outlining how the overall meaning should be derived and determined. This study offers in its conclusion two insightful and original contributions that have been completely overlooked by old as well as modern linguists, Qur'anic exegetes and translators alike. The result, in turn, is the provision of a more accurate English rendition of the Arabic term-statement under investigation. Proper understanding of Qur'anic term structure is bound to lead to better understanding of the Qur'anic message, and, in turn, results in improved translation.

Keywords: Qur'an, terminology, Arabic syntax, term translation, semantics, Arabic rhetoric

Qur'anic terminology imposes an interesting challenge on both the linguist and the translator. Rich in meaning with an extremely high degree of accuracy and precision of expression, the Qur'an, in many places, leaves no room for speculation regarding what it is saying. In Q3:7, the Qur'an states ﴿هُوَ الَّذِي أَنزَلَ عَلَيْكَ الْكِتَابَ مِنْهُ آيَاتٌ مُّحْكَمَاتٌ هُنَّ أُمُّ الْكِتَابِ﴾ 'It is He who has sent down upon you (O, Muhammad) the Book; some of its Āyāt (verses) have definitive meaning – they are the essence of the Book'. Those verses are the 'mother of the Book' and are indeed the cornerstone of the Qur'an owing

https://doi.org/10.1075/hot.2.08all

to their unequivocal, clear and precise meaning. Other verses, as Q3:7 continues to inform us, are not so clear in meaning, leaving room for specialized scholars to offer their own informed views and opinions by way of *iğtihād*.

One of the main themes of the Qur'an is related to Allah. Statements are made so tight in meaning to avoid misunderstandings and confusion. The Qur'an preaches, for example, that Allah is undisputedly one and only (Q112:1). He also cannot be perceived by vision while He perceives all vision (Q6:103). Therefore, while one is told precisely what Allah is, one is also left with a sense of determination that God's nature is beyond human intellectual capacity. This, in fact, is in conformity with the Islamic logic that since the creator is superior to the created, the created cannot fully comprehend its maker. The Qur'an sums up this whole issue in a clear statement in Q42:11 ﴿لَيْسَ كَمِثْلِهِ شَيْءٌ﴾ 'There is nothing like Him'. This statement forms the basis and foundation for how God as well as His attributes should be understood. The history of Islamic philosophy is full of examples of how the scholars have greatly disagreed about some of the attributes God ascribed to Himself in the Qur'an. The disagreement has been so vast that, in some situations, various groups had branded the others blasphemous and ruled that they were out of the fold of Islam (See al-Ḥifni 1993; al-Ḥarbi 2010; ad-Dorar as-Saniyyah 2017). It is for this particular reason, among others, that Q42:11 is so crucial a statement. Determining what it is exactly saying and how that is said is fundamental to correct understanding to both the believer and non-believer; to the specialist and non-specialist; and to the linguist and the translator.

To address the translator's position briefly here, I contend that cognitive knowledge based on a translation which is, by default, impacted by a cognitive reality (of the source language/culture) different from his/her own, is bound to be erroneous in spite of the fact that the target text (TT) may be a correct reflection of the original/source wording/idea as represented in the source text (ST). This implies an anomaly owing to the fact that since a translator is not expected to be a cleric specialized in the art of decoding the message of God as presented in His own words, translation by default makes it look like this is exactly the role played by the translator as he or she interprets the ST in another language. To avoid this trap, translators prefer to stick as closely as possible to the wording – and sometimes form and structure – of the ST and adopt a literal translation approach when dealing with religious texts. A quick glance at any random page in any of the translations of the Qur'an in existence will provide ample evidence to the veracity of this statement. However, in dealing with a religious text such as the Qur'an, literal translation, which can sometimes be an excellent representation of the ST, is bound to lead to misunderstanding as it creates mental images that may not be intended in the ST owing to the gap that exists between languages on the one hand and cultures on the other. So, while trying to step away from being the interpreter of the text and let the text speak for itself, the translator, by default, has indeed been carefully planning his own downfall. Striving not to interpret the ST

seems to be in itself an impossible act. Yet, existing translations testify to the opposite with unavoidable repercussions.

To clarify this further, I will need to consider what is termed 'conceptual metaphor'. To put it simply, a conceptual domain (any coherent organization of experience) that is understood in terms of another is called a conceptual metaphor. Thus, for example, when we say "life is a journey", we have coherently organized knowledge about journeys that we rely on in understanding life (see Benczes 2006).

As Lakoff and Turner put it (1989): "We usually understand them (conceptual metaphors) in terms of common experiences. They are largely unconscious, though attention may be drawn to them. Their operation in cognition is almost automatic. And they are widely conventionalized in language, that is, there are a great number of words and idiomatic expressions in our language whose meanings depend upon those conceptual metaphors."

According to Benczes (2006), conceptual metaphor is distinguished from metaphorical linguistic expressions. When we say "(Their love is in *full bloom*)", "*full bloom*" is a metaphorical linguistic expression while "love is in *full bloom*" is a conceptual metaphor. Basically, when one utters a word, normally this word conjures up an image in one's mind allowing one to understand what the item referred to is. Owing to sharing some sort of common/universal human experience, this assists us in recognizing what the 'referent' is.

In Islamic theology, there has existed a debate among various Muslim groups/sects regarding some of the attributes of God which stand as a clear example of this situation. The not-so-rigid dichotomy between a conceptual metaphor and its related metaphorical linguistic expression takes a completely different turn here. In various places in the Qur'an, references are made to the 'Hand' of God (Q3:73; 5:64; 48:10; 57:29; 3:26; 23:88; 36:83; 67:1) or to His 'two Hands' (Q5:64; 7:57; 27:63; 38:75). Other references are made to His 'Face' (Q2:115; 2:272; 13:22; 30:38; 30:39; 55:27; 76:9; 92:20; 6:52; 18:28; 28:88), 'Eyes' (Q20:39; 1137; 52:48; 54:14), and 'Fist' (Q39:67).

The debate referred to here has been a direct result of the differences among scholars regarding what those attributes mean and how they should be understood. While some groups have opted for metaphorical interpretations denying those attributes altogether, others stated that they only ascribe to God what He has ascribed to Himself without *kayf* 'how'. In other words, if God says He has a Hand, then He has a Hand. However, it is out of the question to this later group to ask what that Hand is like and, most definitely, they state, it is not like a human hand. The same goes for other such attributes (see www.dorar.net/enc/firq/314). This situation has led to a translational problem as well since the words 'hand, eye, fist, face, etc.,' conjure up certain images in the minds of the readers of the target text as it does/did in the minds of the readers of the source text. As a result, the argument regarding how such attribute should be understood continues till the present day.

While there is indeed room for difference regarding what God's *Hand* – among other attributes – is like, one will need, from linguistic and translational perspectives, to consider many factors such as the context, the audience, the purpose of the text, and even pre-conceived ideas about the referent or even the speaker, etc. All these play a significant role in shaping our understanding. If such is the case within the boundaries of one language and culture, it is safe to assume that in translation, the gap may be even wider since the term for 'hand' in Arabic for example does not even sound the same as its English counterpart. While this added phonic difference may be so superficial and insignificant, in some situations it could be so drastic that the meaning is completely distorted if not lost.

As a result, it seems that the appropriate way to determine how God's attributes and divine actions and manifestations may be understood, is to use the parameters of the Qur'anic statement ﴿لَيْسَ كَمِثْلِهِ شَيْءٌ﴾ (*laysa ka-miṯlihi-šay'un*). However, to be able to do so, the meaning of this very statement needs to be precisely determined first. A number of issues need to be resolved first if a correct understanding – and in turn translation – is to be reached of how the Qur'anic message is conveyed in general and in relation to ﴿لَيْسَ كَمِثْلِهِ شَيْءٌ﴾ in particular. Those issues are related to certain Arabic syntactic aspects, concept of God and Arabic rhetoric and semantics.

Syntactic aspects

To put it simply, translation is about transfer of meaning. How meaning is expressed through syntactic structures of sentences is an issue of great relevance to this present work. While Noam Chomsky in his renowned *Syntactic Structures* (2002, 17) had rightly concluded that "grammar is autonomous and independent of meaning," it is undeniable that syntax does play a significant role in determining the meaning of an utterance or a sentence. Although proper reading of syntax is not necessarily a precondition to understanding, it can be easily established that different grammatical sentence structures do produce sentences of different meanings. It is a fact that correct grammar can produce semantically empty sentences such as Chomsky's "nonsensical" example: "Colorless green ideas sleep furiously" (Chomsky 2002, 15). However, one needs to stay clear from such meaningless sentences. It is indeed safe to state, though, that in normal situations syntax may function as the vehicle that delivers the intended meaning. To be more precise, when dealing with a text whose wording is deliberate, namely the holy Qur'an, sentence structure, word order and grammar play a crucial role, not only in conveying the intended message, but also in determining the meaning as well. The Qur'anic sentence also comes with a manual showing how meaning is or should be derived and understood. The choice of words as well as sentence

structure are key factors in that process. Qur'anic wording is so accurate to the point that any slight change can and will easily have a double impact of rendering the sentence un-Qur'anic, as well as distorting the intent of the divine message with undesirable consequences.

Taking into consideration that there are many differences between Arabic and English, one may point out here an important parting of the way with regard to the types of sentences Arabic and English have. This distinction is relevant to the current discussion, as will be shown shortly. Unlike English, Arabic has what is called 'verbal sentence'. This is in contrast with 'nominal sentence'. The former type is one that *begins* with a verb while the latter *begins* with a noun regardless of what comes next. In English, a sentence may only begin with a verb in two situations, namely, in yes-no questions where an auxiliary *verb* is used, and in imperative sentences (giving an order or requesting something, for example). As a result of the existence of more than one type of sentence in Arabic, that is, verbal and nominal, the Arabic speaker has potentially much more freedom and flexibility in expressing ideas using a basic structure with exactly the same words. To clarify this point, consider the following Arabic sentences (going from *right to left*) which basically mean 'God created Man':

(1)

iii	ii	I
الإنسانَ	اللهُ	خلقَ
al-'insān-a	*Allāh-o*	*Halaq-a*
Man	God	created
object	subject	verb

(2)

iii	ii	i
الإنسانَ	خلقَ	اللهُ
al- 'insān-a	*halaq-a*	*Allāh-o*
Man	created	God
object	verb	subject

Example (1) is verbal as it begins with the verb *halaq-a* (created), while (2) is nominal as it begins with the noun *Allāh-u* (God). The meaning, as is clear from the above English translation, is identical in the sense that the same English words are used in translating both Arabic examples. The only difference between (1) and (2) is that the verb and the subject have swapped places. To the untrained eye, one may say that since the grammatical units comprising both examples, namely, subject, verb, object, are the same, and considering that languages are different in the way they express

meaning, then both Examples (1) and (2) are not different in meaning. To go a step further, one may be willing to concede that there is indeed a great deal of similarity in meaning shared between (1) and (2) above. But similarity does not mean exactness. It would be appropriate at this stage to say that there is rather a universal or global correspondence – not exact equivalence. This is owing to the fact that there is indeed a significant difference in meaning between the two examples above. This difference is a direct outcome of one sentence being nominal in structure, the other verbal. It is not uncommon to hear the explanation that the issue in these examples is one of emphasis. In other words, sentence (2) emphasizes that it was God (not anyone else) who created Man. My contention here is that the difference between a verbal and a nominal sentence is not necessarily, if at all, an issue of emphasis. Arabic uses many emphatic devices in both nominal and verbal sentences. Emphasis is not achieved by simply converting a verbal sentence to a nominal one. The linguistic competence of those who claim so needs to be brought to question.

To elaborate, a fundamental difference between a verbal sentence and its nominal counterpart is not one of emphasis, but rather one that is related to the initial set of assumptions in the mind of the speaker making the statement. Those assumptions are based on how much information is known to the addressee regarding the issue in question. Arab rhetoricians and grammarians agree that an Arabic speaker assumes to be addressing one of three types of audience: *hāli-ddihn* (uninformed), *monkir* (challenger) or *šākk* or *mutaraddid* (in doubt-questioner/reluctant to agree). Each type requires a speech variation in terms of the utterance being nominal or verbal depending on the requirements of the situation. One type of addressee may also be dealt with differently based on circumstantial changes or situational considerations deemed more important. Generally speaking, for the *hāli-ddihn* the verbal sentence is more apt. If the addressee happens to be a monkir, the verbal response will not suffice to counter the challenged information. Additionally, when the addressee is *šākk* or *mutaraddid*, more than one linguistic/rhetorical device may be required to dispel the doubt and bring the addressee to agreement with the statement made. In both cases, a nominal sentence is used and the required piece of information is *foregrounded*. In other words, a nominal sentence of the basic constituents of (S, V, O) for example, may start with the object or the subject depending on what information is required first.

Example (1), being verbal, consists of three units in this order (V+S+O). Owing to this word order, this sentence assumes that the addressee is uninformed of any of the three units of meaning. In other words, the addressee is unaware of any part of the speaker's utterance. As a result, this verbal sentence is informative. It introduces the idea of creation as an action (verb) and informs the addressee that the action is/was performed by someone (an action doer – subject) and it also informs to whom the action is done (object).

If the addressee happens to know that there was an act of 'creation' which produced 'Man', but does not know 'who' carried out that action, he or she may ask 'Who created Man?' A response using the verbal sentence (2) above would be out of the question since the addressee cannot be considered completely 'uninformed'. In this case, the speaker will have to respond using a nominal sentence that begins with who did the action, that is '*Allāh-o ḫalaq-a l-ʿinsān*: God created Man' (S+V+O). Beginning the sentence otherwise would be considered an act of linguistic incompetence. Additionally, there is no need to use any complex sentence such as 'It was God who created Man'. Such a statement would be a response to a different question such as 'Was it God or nature who created man?' As the initial assumptions change, the word order of the utterance changes. Considering these examples, the Arabic nominal sentence suffices to express the intended meaning without the inclusion of any added linguistic emphatic device along the lines of words of the truly-surely-certainly-definitely type.

The speaker/respondent may also answer by stating who performed the action only without the need to include anything else. The Qur'an states in Q43:87 ﴿وَلَئِن سَأَلْتَهُم مَّنْ خَلَقَهُمْ لَيَقُولُنَّ ٱللَّه﴾, 'and if you ask them *who created them?* They would certainly say 'Allah' (did).' The Arabic response does not require more than the word 'Allah'. The word 'did' is only an English requirement. The assumption implied in the Arabic is that since the question includes all the required words, there is no need to repeat them in the response and only the missing part is what is needed and should be provided; hence 'Allah'.

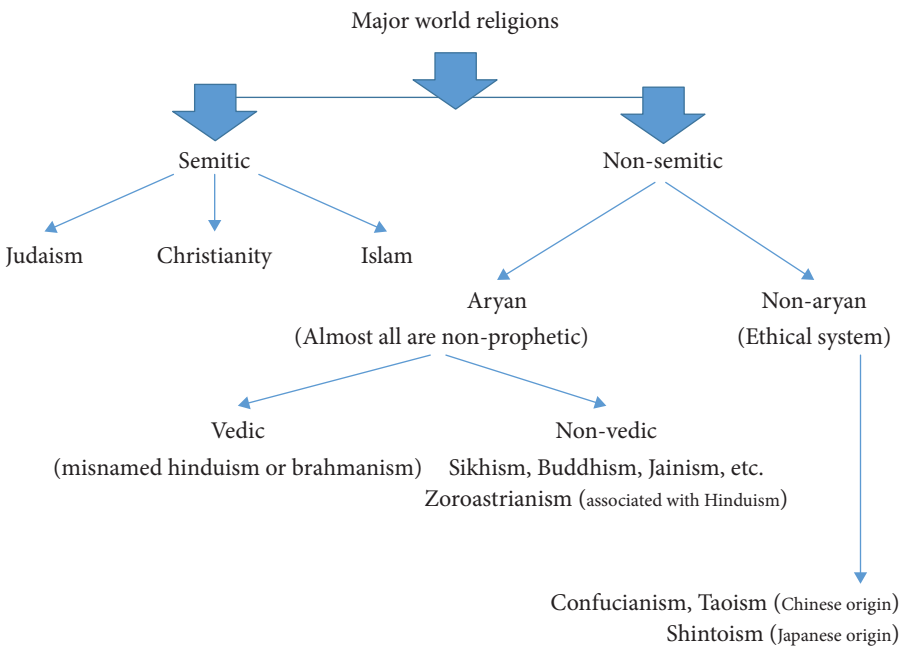
Another important aspect that has a clear impact on meaning in relation to the verbal vs nominal sentences in Arabic is the fact that a verbal sentence is restricted by time. In Arabic a verb may only be either past or present. Time is inseparable. A characteristic of the Arabic verb is that it does not exist without a time reference. As for nouns, they are by default timeless. This means that a nominal sentence in Arabic may exist without a verb at all. In actual fact, this is a very common type, that is, the verbless. For example, the Qur'an states in Q20:14 ﴿إِنَّنَا ٱللَّهُ﴾, 'I (am) Allah.' The Arabic literally says 'I Allah' without 'am' which is required in English. Since the meaning in English is mainly conveyed by means of a verb, an English sentence may only be considered as such when it contains a verb. This is mainly the reason that while 'I Allah' is a complete, coherent and meaningful sentence in Arabic comprising a subject and a predicate, it is not so in English.

Concept of God

The second point to consider here is in relation to the concept of the Divine Being. Talking about God (Allah) in the Qur'an is one of the main themes around which

the Qur'an revolves. Believed to be the Word/Speech of God, this does not come as a surprise. Both the Qur'an and the Hadiths of the Prophet, Muhammad, provide plentiful information about the attributes of God. Some of those attributes are also found in other scriptures of major religions. In this section, we aim to shed some light on this particular aspect with special emphasis on the similarities as this will assist in putting things in perspective in terms of understanding the concept of God in Islam in general and how the Qur'anic reference under study, that is, *laysa ka-miṯlihi-šay'un*, should be comprehended and then translated from Arabic into other languages.

Naik states that "A common feature of all major religions is the belief in a Universal God or Supreme Divine Authority that is Omnipotent and Omniscient. Followers of all major religions believe that the God they worship is the same God for them as well as for others." (p. 2). Broadly speaking, there exists what may be termed as Semitic and non-Semitic (the latter being Aryan and non-Aryan) religions. The following chart shows the division adopted in this study:



God in Hindu scripture

While many Hindus would "profess belief in multitude of Gods, … learned Hindus who are well-versed with their scriptures insist that a Hindu should believe in one God" (ibid, p. 4). This is in spite of the fact that there is a common Hindu belief in

Pantheism. As far as the oneness of God is concerned, the Hindu scriptures of the Upanishads state "Ekam evaditiyam", that is "He is One only without a second" (Chandogya Upanishad छान्दोग्योपनषिद्, VI,2,1 in Müller 1884, part II, p. XV). God has "no master of his in the world, no ruler of his, not even a sign of him. He is the cause, … and there is of him neither parent nor lord," as per *S*vetâsvatara Upanishad 6: 9 (Müller 1884, part II, p. 263).

What is of great interest, however, to the topic of this research is that Chapter 4, verse 19 of the same *S*vetâsvatara Upanishad states "Na Tasya pratima asti", that is "There is no likeness of Him whose name is great glory." (Radhakrishnan 1968, p. 737). The fourth Adhy âya of the Upanishads, verses 19–20, go further: "na saṃdṛśe tiṣṭhati rūpam asya na cakṣuṣā paśyati kaścanainaṃ, " that is "19. No one has grasped him above, or across, or in the middle. There is no image of him whose name is Great Glory. 20. His form cannot be seen, no one perceives him with the eye" (Müller, p. 253–4)

God in Sikh scripture

As a religion, Sikhism may be described as strictly monotheistic, believing in "only one Supreme God who is, in the unmanifest form called 'ek omkara'" (Naik, p. 9). It rejects incarnation, and is against idol worship (Naik, p. 10). In the Sikh scriptures of Shri Guru Granth Sahib: Jup, Section 01 – Jup – Part 001, one reads that there is "One Universal Creator God. The Name Is Truth. Creative Being Personified. No Fear. No Hatred. Image Of The Undying (*i.e., immortal*), Beyond Birth, Self-Existent." (www.sacred-texts.com)

God in Zoroastrian scripture

Zoroastrianism is also commonly known as Parsiism, and its adherents believe in "the wise Lord" or Ahura Mazda, as they call Him. Their sacred scriptures are the Dasatir and the Avesta. According to the Dasatir, God is one; nothing resembles Him, without an origin or end; has no parents, or body or form; neither eye can behold Him, nor the power of thinking can conceive Him; and is above all that one can imagine (see Naik, p. 11).

God in Jewish scripture

In Judaism, God is one. Deuteronomy 6:4 clearly states "שְׁמַע יִשְׂרָאֵל: יְהוָה אֱלֹהֵינוּ, יְהוָה אֶחָד" that is "Hear, O Israel: the LORD our God, the LORD is one" (www.mechon-mamre.org/p/pt/pt0506.htm). Interestingly, Isaiah 46:9 states: "אֵל וְאֵין עוֹד, אֱלֹהִים וְאֶפֶס כָּמוֹנִי זִכְרוּ רִאשֹׁנוֹת, מֵעוֹלָם: כִּי אָנֹכִי" which means "Remember the former things of old: that

I am God, and there is none else; I am God, and *there is none like Me*." (www.mechon-mamre.org/p/pt/pt1046.htm) (italics added here for emphasis).

God in Christian scripture

In spite of the various beliefs regarding God and Jesus in the New Testament, fundamentally, the Bible does not support the divinity of Jesus nor his equality to God, nor the concept of the Trinity. John 14:28 states: "οτι ο πατηρ μου μειζων μου εστιν," that is "for my Father is greater than I." (King James Version). This idea is also found in John 10:29 "ο πατηρ μου ος δεδωκεν μοι μειζων παντων εστιν", meaning "My Father, which gave them me, is greater than all." (KJV). Additionally, Mark 12:28–9 states: "και προσελθων εις των γραμματεων ακουσας αυτων συζητουντων ειδως οτι καλως αυτοις απεκριθη επηρωτησεν αυτον ποια εστιν πρωτη πασων εντολη. ο δε ιησους απεκριθη αυτω οτι πρωτη πασων των εντολων ακουε ισραηλ κυριος ο θεος ημων κυριος εις εστιν", that is "[28] And one of the scribes came, and having heard them reasoning together, and perceiving that he had answered them well, asked him, Which is the first commandment of all?[29] And Jesus answered him, The first of all the commandments is, Hear, O Israel; The Lord our God is one Lord." The reiteration by Jesus of the exact words of Deuteronomy 6:4 quoted above are a clear testimony that the Christian scripture acknowledges that God is only one.

God in the Qur'an

In the Holy Book of Islam, references to God are made repeatedly. God's attributes and actions are found throughout this Holy Book. However, for our purposes here, it suffices to quote Sūrah 112, 1–4, where it is stated ﴿قُلْ هُوَ اللَّهُ أَحَدٌ * اللَّهُ الصَّمَدُ * لَمْ يَلِدْ وَلَمْ يُولَدْ * وَلَمْ يَكُن لَّهُ كُفُوًا أَحَدٌ﴾, that is, 'Say: He, Allah, is One and only. Allah, the Eternal, Absolute. He does not beget, nor is he begotten. And none is comparable to Him.' Many other attributes are ascribed to God and are referred to in Q7:180, for example, as 'the most beautiful names.' In Q6:103, the Qur'an states: ﴿لَّا تُدْرِكُهُ الْأَبْصَارُ وَهُوَ يُدْرِكُ الْأَبْصَارَ وَهُوَ اللَّطِيفُ الْخَبِيرُ﴾ that is 'Vision does not perceive Him, but He perceives [all] vision; and He is the Subtle, the Aware.' In Q24:35, God is ﴿نُورُ السَّمَاوَاتِ وَالْأَرْضِ﴾ 'the light of the heavens and the earth'. In Q89:22, we read that on the Judgement Day God will 'come' with the angels ﴿وَجَاء رَبُّكَ وَالْمَلَكُ﴾, while Q20:5 states ﴿عَلَى الْعَرْشِ اسْتَوَى﴾ that is, God 'rose over the throne'.

Those attributes and actions have, as previously stated, caused major controversy among the scholars of Islam over the ages. The view adopted in this paper is that all matters related to God in the entire Islamic theology need to be considered in terms of Q42:11. The consensus of Muslim scholars is that in terms of 'how', whatever image that one's mind imagines or conjures up regarding what God is like, He is not in any way like that (see Ibn Taymiyah 1426AH, v.1, p. 436; Al-Barrak 2008, p. 45). The following discussion sheds light on this specific aspect.

There is nothing like Him

Taking all the aforementioned points into account, one may now turn to Q42:11. In relation to 'God', the *Sunni* understanding suppresses or is rather dismissive of any mental activity that is typically necessary to recognize an item of abstract or concrete existence through the creation of an image for such item. The idea of what God is 'like' is somewhat a taboo: not open for discussion. The Sunni writings do not entertain any ideas that ascribe shape and/or form to God. The Sunni mindset rejects any and all ideas that lead to or result in anything that can remotely lead to giving a visual or mental image of "the Lord of all beings" (Q1:2). This conviction is based upon an unequivocal statement made in the Qur'an (Q42:11) regarding Allah, that is, ﴿لَيْسَ كَمِثْلِهِۦ شَيْءٌ﴾. This statement may be loosely translated as "there is nothing like Him." Analyzing this statement will reveal why the word 'loosely' is very important here since a modified and more accurate rendition will be proposed.

Addressing Toshihiko Izutsu's views on human recognition of reality, Kojiro Nakamura, in his *Foreword* to Izutsu's 2004 edition of *Ethico-Religious Concepts in the Qur'an*, stated that according to Izutsu "there are no words of any language systems that coincide completely with any equivalents in other languages both in denotation and connotation, since each term has a unique semantic field and structure in its language system" (p. viii).

It is clear from the above statement that an interlinear rendering of the Arabic for 'there is nothing like Him' could shed a better light on what exactly this part of the Qur'anic Ayah aims to state.

i	ii	iii
لَيْسَ laysa	Ka-miṯli-hi كَـ مِثْلِـ ـهِ	شَيْءٌ *šay'un*
is not	Like-similar (to)-Him	(a) thing

Here, we have three words in Arabic, the second of which comprises three morphemes: the first is ك (*ka*), an article used to indicate that something or someone *resembles* another. It therefore, means 'as/like/similar'. The second is مثل (*miṯl*), a noun in Arabic meaning 'as/like/similar' while the third is the connected pronoun هـ (*h*) in the genitive case, meaning 'Him' referring to 'God'.

There is a clear consensus among Muslim scholars of *Tafsīr* (Qur'an Commentary) as well as linguists – and in turn, existing English translations – that the meaning is 'there is nothing like Him' (Him refers to God).

This Qur'anic statement starts with *laysa*, which is a verb that belongs to the *kāna* family, and as such it comes at the beginning of a nominal sentence regardless of which of the two other components of the sentence comes first. It can precede a noun or a verb equally. It functions in the sentence as negation agent. One may say لَيْسَ الْـجَـوُّ جَمِيلًا

(the weather is not nice) where 'is not' translates *laysa* which, here, has preceded the noun. Similarly, one may say لَيْسَ يَعْنِينَا الأَمْرُ (the matter does not concern us), where *laysa* has come before the verb 'concern' and effected the negation 'does not'. In both cases, the sentences with *laysa* are considered verbal since *laysa* is an Arabic 'verb', and that the nouns translated as 'weather' and 'a matter' have lost their original grammatical designations and have now become *laysa*-noun related (*ismu laysa*).

To apply this to the aforementioned Ayah statement, the *ismu laysa* is indeed the word *šay'un* (a thing), which in this word order comes last, while *(ka-miṯli-hi)* comes first before *šay'un* owing to the fact that *šay'un* is an indefinite noun and *(ka-miṯli-hi)* is a *šibh ǧumlah* (prepositional phrase) necessitating this particular word order of the predicate coming first. The norm for a nominal sentence in Arabic is to start with a definite noun, being the *mubtada'* or subject. When the subject happens to be an indefinite noun, one of the ways of making this admissible is to move the indefinite subject from its default place at the beginning of the sentence and place it after the predicate which would be a *šibh ǧumlah* consisting of a preposition and a noun. This is exactly the situation here. The default wording of this part of the Ayah would ordinarily be *šay'un (ka-miṯli-hi)* (شَيْءٌ كَمِثْلِهِ). However, as*šay'un* (the subject) is indefinite while *(ka-miṯli)* is the predicate consisting of *ka* (preposition) and *(miṯli)* (noun in genitive case), the prepositional noun phrase is foregrounded. This change in sentence structure has a clear impact on the meaning since the negative *laysa* precedes the prepositional noun phrase. This means that it is the similarity or resemblance stated in the word *(miṯl)* that is being negated. In other words, the part of the Ayah in question does not start with 'There is nothing …', rather, it starts with 'There is no similarity …'. This is an extremely important point in understanding the intended message correctly and in showing that the reason for foregrounding the prepositional noun phrase (the predicate) is not simply a way for Arabic grammar to allow the subject to be an indefinite noun by moving it to a position after the predicate. Basically, this word order plays a multi-purpose role in terms of satisfying the grammar and dictating how the meaning should be derived, what the meaning is and how the statement should be understood.

What this really means is that the original affirmative nominal sentence has not only been negated by *laysa* but has also been converted to a verbal sentence by virtue of the fact that *laysa* is a verb. In spite of the fact that as a verb *laysa***,** is unlike other verbs, in the sense that it does not have a past, present or imperative form, a verb indeed it is. It conjugates with all Arabic pronouns, but remains largely unchanged, hence, its name 'ǧāmid', *uninflected* or *frozen verb***.** In the Qur'an, *laysa* is mentioned 89 times in the following forms: *laysa* (75 times), *lastum* (three times – conjugated with masculine plural *you*), *laysū* (twice – conjugated with masculine plural *they*), *laysat* (three times – once conjugated with feminine singular *it* and twice with feminine plural *they*), *lasta* (three times – conjugated with the second person masculine pronoun *you*), *lastu* (twice – conjugated with first person pronoun *I*), *lastunna* (once – conjugated with second person feminine plural *you*).

The significance of this particular point is the fact that verbal sentences in Arabic serve purposes different from those of nominal sentences as explained previously. The statement ﴿لَيْسَ كَمِثْلِهِ شَيْءٌ﴾ (There is nothing like Him) is peculiar because it is indeed *verbal with a twist*, that is, it starts with *laysa* which precedes a nominal sentence and effects a grammatical and diacritical change without impacting the word order of the original nominal sentence. The implication is that this statement becomes factually informative. It is so emphatic that no room is left for doubt about its veracity. The gate for questioning or 'interpretation' is closed. This is an air-tight kind of negation.

This may also be verified through analyzing the *laysa ka-miṯlihi-šay'un* statement from a different angle. If one were to assume that, before negation, this statement was originally *šay'un ka-miṯlihi* and that is in accordance with the default Arabic sentence beginning with a noun, the conclusion would be that what is negated here is *šay'un* (thing). This would be in contradiction to my conclusion in the previous paragraph. The gist of this view is that *šay'un* only came last after *ka-miṯlihi* owing to the fact that it is an indefinite noun. As a result, Arabic syntactic rules forces this word order to take place.

Additionally, the argument may continue that since Arabic grammarians and syntacticians agree that a nominal sentence may begin with an indefinite noun if that noun is preceded by negation, in the case of '*ka-miṯlihi šay'un*', the addition of *laysa* at the beginning means the sentence is being negated. Consequently, it is in order to say *laysa šay'un ka-miṯlihi* following the default word order.

On the face of it, this two-point argument seems to be valid. In response, one needs to consider (a) when a nominal sentence in Arabic may begin with an indefinite noun, and (b) why the statement in question did not follow the norm. The great majority (*al- ǧumhūr*) of grammarians agree that the default of a nominal sentence is that it begins with a definite noun (Al-Raḍī 1993, p. 258). For the purpose of this discussion, I am not going to rely on the view of some grammarians that a nominal sentence may indeed begin with an indefinite noun unconditionally ('owayḍah 2004, p. 148). It is worth noting, however, that this view is based upon the number of exceptional cases enumerated by grammarians to be more than thirty (Ibid, pp. 149–152).

In terms of (a) above, grammarians agree that a nominal sentence may begin with an indefinite noun if that noun is followed by an adjective – adjectives come after nouns in Arabic. The adjective may be either stated, assumed or implied. In the case of '*šay'un ka-miṯlihi*', since the noun *šay'un* has no stated adjective nor does its meaning imply one, one would expect that the speaker had also assumed the presence of one, namely, meaning 'existing or existent'. The Arabic sentence will then loosely mean: 'An existing thing (is) like Him'. If this is accepted to be the case, then the Arabic statement will have to allow for another interpretation, i.e. that it is possible that some non-existing thing could be like God (whenever it comes into existence). This would certainly be a ridiculous interpretation since the existing wording through its emphatic devices contradicts this. To elaborate, while allowing the indefinite *šay'un*

to begin the sentence will necessitate the assumption of an adjective existing after it; moving it to the end – after the prepositional phrasal predicate *ka-miṯlihi* – means there is no need for such an assumption to even exist. In other words, while *laysa* negates the 'similarity', it still governs *šay'un* without the need for anything to qualify it. That's why none is mentioned or used in spite of the fact that there is nothing grammatical nor syntactical that would prevent such from happening. This, in turn, means that the negation is so emphatic that the simple English rendering 'there is nothing like Him' does not do justice to the Arabic wording and/or structure. Following the default word order here would have led to a message not intended at all by the Speaker. The absence of the adjective has aided the comprehensiveness of the indefinite property of the subject *šay'un*. By virtue of this and in consideration of the negation, *šay'un* now has the meaning of 'nothing whatsoever', 'nothing at all', 'nothing of any kind, shape or form', 'absolutely nothing' or the like. This is also consolidated by the fact that when an item is foregrounded in an Arabic sentence where it should normally occur later on, this indicates 'exclusivity'. In other words, the foregrounding of *ka-miṯlihi* is a categorical statement of the absolute non-existence of anything whatsoever like God.

Moreover, *laysa ka-miṯlihi šay'un* involves a simile. In Arabic, a simile has four components: the primum comparandum or tenor (***mu**šabbah*), the secundum comparatum or vehicle (***mu**šabbah bih*), the tertium comparationis or ground (***waǧhu al-**šabah*), and the instrument (***'adātu al-ta**šbīh*). When the four components are found, this is known as a 'detailed simile'. There cannot be a simile without a tenor and a vehicle. The common ground may, however, be purposefully omitted for various rhetorical purposes such as leaving the image open to interpretation and/or not restricting it to one aspect of comparison as is the case with the detailed simile. The Arabic instrument – meaning like or similar to or resemble – of a simile may be a particle such as *kea*, a noun such as *(miṯl)*, or a verb such as *yomāṯil*. In this Q42:11 statement, the tenor is *šay'un* (thing), the instrument is *ka* (like), and the vehicle is the connected pronoun *hi* (referring to God). The tertium comparationis or ground is not mentioned. The statement also includes the noun *miṯl* which is usually rendered by the preposition 'like'. The word *ka-miṯl* is indeed of two parts/morphemes: *ka* being a particle, and *miṯl* being a noun; both may loosely be rendered to mean 'like'. According to rhetoricians, the purpose of using the 'ك' then 'مثل' is to negate the similarity between God any anything whatsoever (see Al-Zamaẖšarī 2009, p. 975).

The view that the Arabic statement is negating *the likeness of God's likeness* is unworthy of any discussion as basic knowledge of Arabic suffices to refute this proposal. However, this understanding does appear in the English translations by Shakir and Mir Aneesuddin, which state "nothing like a likeness of Him" and "There is nothing like His likeness" respectively (islamawakened.com). The rejection of this understanding is based upon the fact that the translation allows for the hypothetical

existence of something like God, and then it negates the existence of anything similar to that likeness. This is considered most unacceptable theologically and is indeed linguistically bizarre. As a result, it should suffice to say that any native speaker of Arabic with a reasonable knowledge of the Arabic language would have to admit that when one says *laysa ka-miṯli Zaydin ʿaḥadun*, this is very similar in meaning to *laysa miṯla Zaydin aḥadun* (with the deletion of *ka*) or *laysa ka-Zaydin ʾaḥadun* (with the deletion of *miṯli*). In other words, the existence of *ka* and *miṯl* together has the same meaning as having one of them only. This sentence, therefore, does not mean 'There is no one like the likeness of Zayd'. Only ignorance of the Arabic language and rhetoric can lead to such a *mis*understanding. Saying this, Shakir and Mir Aneesuddin might have got it right had they had better knowledge of Arabic syntax and rhetoric, and also if they had avoided strict adherence in their renditions to literal translation. More on this in point (2) below.

After careful consideration of the 52 English translations listed in Appendix 1, it is clear that none of the translators was able to determine the reason for having *ka* and *miṯl* together beside the usual understanding and use mentioned above. The majority of the translations render '*laysa ka-miṯlihi- šayʾun*' as 'there is nothing like Him'. Some of the translations seem to reflect the emphatic aspect of this statement by adding "certainly" or "whatever" or "whatsoever" or "in the universe" (see translations no 4, 5, 16, 19, 20, 22, 23, 31 and 40 below). However, none was able to go beyond this.

To extract the correct meaning and in turn offer a more accurate translation, one needs to consider the following:

1. The *ka* and *miṯl* connections

- While *ka* and *miṯl* are used in Arabic similes as instruments linking the tenor and the vehicle together, *miṯl* is stronger in meaning than *ka*. This is by virtue of the fact that *miṯl* is a noun and *ka* is a mere particle. The meaning of a noun in Arabic is independent of anything else, while the meaning of a particle is dependent upon something else, be it a noun or a verb. This means that *ka* by itself is meaningless, while *miṯl* is not.
- When comparing two things one to the other using an instrument, the resulting simile does not make the tenor and vehicle one and the same. In other words, the resemblance existing between the tenor and vehicle is in one aspect but not all. To say, for example, 'Zayd is *like* a lion' does not mean 'Zayd *is* a lion'. In quantitative terms, this means that the tenor is one 'step' farther from being the vehicle.

- The '*laysa ka-miṯlihi- šayʾun*' statement makes use of two – not one – instruments to create the simile. Quantitatively again, this means that the tenor is two steps farther from being the vehicle.

Therefore, Q42:11 is conveying a message that '(there is nothing) (remotely) like Him (whatsoever)', where 'there is nothing' deals with the negation, 'whatsoever' takes care of the emphasis, 'like' caters for the particle '*ka*', while 'remotely' compensates for the use of the second device *miṯl* which has been ignored by both linguists and translators alike dealing with this Āyah.

2. Determining the type of simile in Q42:11

It has been stated above that a typical Arabic simile has four components; the presence of which makes the simile a 'detailed' one (*mufaṣṣal*). Simile is subdivided into types based upon the presence or absence of the common ground component. Table 1 sums up the main types and the differences between them:

Table 1. Simile types and components

Type	Tenor	Instrument	Vehicle	Ground	Note and/or example
Mufaṣṣal (detailed)	✓	✓	✓	✓	Zayd is like a lion in bravery, or (Zayd is as brave as a lion). See Q2:74 and Q3:59.
Balīġ (elevated)	✓	x	✓	x	Zayd is a lion. See Q2:187 and Q33:6.
Muǧmal (open)	✓	✓	✓	x	Zayd is like a tree. See Q16:77 and Q27:10.
Tamṯīlī (multi-ground)	✓	✓	✓	✓	The image depicted by the simile is derived from more than one ground. See Q14:24–27 and Q18:45.
Ḍimnī (implied)	?	?	?	?	The simile is implied and the components are not clearly defined. Analogy is required. See Q10:42–3 and Q49:12.

It is obvious that the simile in Q42:11 is not a *balīġ* one. Based on (1) above, the simile here is of the *Muǧmal* type since only the ground is missing. In this discussion, I contend that the ground is indeed explicit in the Ayah and taking it into consideration is bound to lead to better understanding and better translation as well. It is also clear from the above that *ka* and *miṯl* are understood by Qur'an exegetes, linguists and, in turn, translators to mean the same thing and their use is for emphasis being both simile instruments. My contention is that the particle *ka* is the simile instrument, but *miṯl* is not; rather *miṯl* is the ground. To clarify, one needs to consider the following example where *miṯl* is replaced by another noun: Example: *laysa ka-ǧūdi-hi- šay'un*.

The word *ǧūd* means 'generosity'. Accordingly, this sentence loosely means 'There is nothing like his generosity'. It is probably now clear how Shakir and Mir Aneesuddin have ended with "nothing like a likeness of Him" and "There is nothing like His likeness" as translations for Q42:11. In this example, it is clear that *ǧūd* is the ground. Since *ǧūd* and *miṯl* occupy the same place and function in exactly the same way in this structure, my proposal above that *miṯl* is the ground is undoubtedly correct. A better rendition based on this analysis is now possible. However, a "compensation in place" (Dickins et al. 2006, pp. 40–48) is required to avoid awkwardness. Therefore, *laysa ka-miṯli-hi-šay'un* may be rendered as follows: 'In terms of similarity/resemblance, there is nothing remotely like Him."

This proposed translation takes into consideration all aspects necessary for better understanding of the Arabic Ayah-statement in terms of syntax, semantics and rhetoric. Surely, there is a degree of translation loss, but, as Dickins et al (2006, p. 21) put it, it is not "a loss of translation, but a loss in the translation process. It is a loss of textual effects." This is something that translators can live with owing to the fact that they deal with issues of this nature almost all the time. Experience has shown that in translation "it useful to avoid an absolutist ambition to maximize sameness between source text and target text in favour of a relativist ambition to minimize difference: to look not for what is to be put into the target text, but for what one might save from the source text. There is a vital difference between the two ambitions. The aim of maximizing sameness encourages the belief that, floating somewhere out in the ether, there is the 'right' translation, the target text that is 'equivalent' to the source text, at some ideal point between source language bias and target language bias. But it is more realistic, and more productive, to start by admitting that, because source language and target language are fundamentally different, the transfer from source text to target text inevitably entails difference – that is, loss" (Dickins et al. 2006, 20–21).

Conclusion

In this age of rapprochement between the religions, Qur'anic exegesis plays a vital role. Since the Qur'an is Allah's revelation to the Prophet Muhammad (peace be upon him), evidence has been shown that the Qur'an cannot be replicated. The best one may hope for is introducing the message in the form of exegesis and/or commentary. However, this understanding has never deterred translators from attempting to translate this Holy scripture and to provide a more manageable and concise volume for the use of both the specialist and non-specialist. The importance of such translations cannot be underestimated in any way. They are manifestations of the production of human genius in attempting to introduce the Word of God to all within the limitations of the translation process and the undisputed differences between languages and cultures.

As a result, it is of vital importance that accurate translation is provided especially when such is possible. It is understood however, that this 'possibility' is not an absolute notion, but rather a relative one depending on the how an ST is analyzed and understood. The accumulation of human experience as manifested in the many translations and exegeses acts as a starting point upon which one may build a new or, as this paper has shown, more accurate picture of what is really at stake. A translation that is more accurate than another is bound to better our understanding of the source text. When the source text is a religious one, such as the Qur'an, the benefits are immeasurable. The Qur'an is believed to be a book of guidance (see Q2:2) and clearer, more accurate translations serve to achieve not only the goal of the book as perceived by the 'believer', but also assist the 'non-believer' in having a better understanding of what the Qur'an says, and how it conveys the message. Since translation loss is unavoidable, there is always the danger that part of the message may be lost beyond retrieval leading sometimes to major misrepresentations of the original message. The existing literature and translations of the Qur'an show clearly that, in relation to Q42:11, this has been the case until now. Exegetes and translators alike missed the clues provided in the wording which acted as an inbuilt guide as to how meaning should be derived and determined. As a result, every attempt to elucidate the ST and bring it a step closer to the target audience has to be considered a welcome endeavor. This research paper has had this idea as it focal point all along, that is, proper understanding of the intended message through the realization that all required instructions are linguistically and rhetorically provided.

Three major aspects in relation to the Qur'anic term-statement '*laysa ka- miṯli-hi-šay'un*' have been analytically examined. Those are: syntactic, semantic and rhetorical. The analysis has also taken into consideration the available English translations of this statement. It has additionally offered a method of analysis and has concluded with two main, unprecedented and original contributions in terms of understanding the use of allegedly two instruments in the simile incorporated in Q42:11 as well as offering a more accurate English translation. Recognizing the in-built guide of the Qur'anic term structure is bound to improve understanding and, in turn, a better, more balanced and accurate translation can be produced.

References

A Hebrew-English Bible according to the Masoretic Text and the JPS 1917 Edition. Deuteronomy 6:4: http://www.mechon-mamre.org/p/pt/pt0506.htm

A Hebrew-English Bible according to the Masoretic Text and the JPS 1917 Edition. Isaiah 46:9: http://www.mechon-mamre.org/p/pt/pt1046.htm

Al-Barak, Abdul-Rahman ibn Nasir. (2008). *Šarḥ al-ʿAqīdah al-Ṭaḥāwiyyah*. Riyadh: Dar al-Tadmuriyyah.

Al-Dorar al-Saniyyah. (2017). *Mawsū'at al-Firaq*. http://www.dorar.net/enc/firq downloaded 10 January, 2017.

Al-Harbi, Mamdouh. (2010). *Mawsū'at al-Firaq wal-Madāhib wal-'Adyān al-Mu'āṣirah*. Egypt: Alpha for Publishing and Production.

Al-Hashimi, Alsayyid Ahmed. (1999). *Ğawāhir al-Balāġah fī al-Ma'āni wal-Bayān wal-Badi'*. Edited by Yusuf al-Sumaili. Beirut: al-Maktabah al-'Asriyyah.

Al-Hifni, Abdul-Mun'im. (1993). *Mawsū'at al-Firaq wal-Ğamā'āt wal-Madāhib al-'Islāmiyyah*. Egypt: Dar al-Rashad.

Al-Qur'an al-Kareem. Medina: King Fahd Complex for the Printing of the Noble Qur'an.

Al-Radi, Muahammd ibn al-Hassan al-'Istrabadhi al-Samanna'i al-Najafi. (1993). *Šarḥ al-Raḍi li-Kāfiyat ibn al-Ḥājib*. Tahqiq: Hassan ibn Muhammad ibn Ibrahim al-Hifzi and Yahya Bashir Mustafa. Egypt: Hajar for Printing Distribution and Advertising.

Al-Zamakhshari, Abul-Qasim Jarullah Mahmoud ibn Omar. (2009). *Tafsīr al-Kaššāf 'an Ḥaqāiq al-Tanzīl wa 'Oyūn al-'Aqāwīl fi Wujūh al-Ta'wīl*. Hadiths commented on by Khalil Ma'moun Sheha. Beirut: Dar al-Ma'rifah.

Benczes, Réka. (2006). *Creative Compounding in English: The Semantics of Metaphorical and Metonymical Noun-Noun Combinations*. Amsterdam: John Benjamins.

Biblegateway.com. John: 10:29, https://www.biblegateway.com/passage/?search=John+10%3A29&version=TR1550;KJV

Biblegateway.com. John 14:28, https://www.biblegateway.com/passage/?search=John+14%3A28+&version=TR1550;KJV

Biblegateway.com. Mark 12:28-29, https://www.biblegateway.com/passage/?search=Mark+12%3A28&version=TR1550;KJV

Chomsky, Noam. (2002). *Syntactic Structures*. Berlin/New York: Mouton de Gruyter.

Dickins, J, Sándor G. J. Hervey, Ian Higgins. (2006). *Thinking Arabic Translation*. London and New York: Routledge.

Ibn Taymiyah, Ahmed ibn Abdul-Haleem. (1426AH). *Bayān Talbīs al-Jahmiyyah fī Ta'sīs bida'ihim al-Kalāmiyyah*. Tahqiq: Yahya ibn Muhammad al-Hineidi. Medina: King Fahd Complex for the Printing of the Holy Qur'an.

Islam Awakened. http://www.islamawakened.com/quran/42/11/default.htm downloaded 10 January, 2017.

Izutsu, Toshihiko. (2004). *Ethico-Religious Concepts in the Qur'an*. Kuala Lumpur: Islamic Book Trust.

Lakoff, George, and Mark Turner. (1989). *More Than Cool Reason*. Chicago: University of Chicago Press.

Müller, Max (Trans.). (1884). *The Upanishads, Part II (Sacred Books of the East, Volume 15)*. Oxford: Clarendon Press.

Naik, Zakir Abdulkarim. *Concept of God in Major Religions*. Downloaded from https://d1.islamhouse.com/data/en/ih_books/single/en_Concept_of_God_in_Major_Religions.pdf on 24 December 2016.

Nasr, Seyyed Hossein, Maria Massi Dakake, Joseph E.B. Lumbard, Mohammed Rustom. (2015). *The Study Quran: A New Translation and Commentary*. New York: Harper One.

Radhakrishnan, S. (editor). (1968). *The Principal Upanishads edited with Introduction, Text, Translation and Notes*. London: George Allen & Unwin Ltd.

Sacred Texts, Sikhism at http://www.sacred-texts.com/skh/granth/gr01.htm downloaded on 12 November 2016.

Uwadah, Jamil Abdullah. (editor). (2004). *Al-Ta'liqah 'alā al-Muqarrab, Šarḥ al-'Allamah Ibn al-Naḥḥās 'alā Muqarrab ibn 'Usfūr fī 'Ilm al-Naḥw*. Kitab al-Shahe Series. Amman: Ministry of Culture.

Appendix 1

فَاطِرُ السَّمَاوَاتِ وَالْأَرْضِ جَعَلَ لَكُم مِّنْ أَنفُسِكُمْ أَزْوَاجًا وَمِنَ الْأَنْعَامِ أَزْوَاجًا يَذْرَؤُكُمْ فِيهِ لَيْسَ كَمِثْلِهِ شَيْءٌ وَهُوَ السَّمِيعُ الْبَصِيرُ

The following translations are taken from the website *Islam Awakened* www.islam-awakened.com/quran/42/11/default.htm

	Translator	Translation
1	Muhammad Asad	The Originator [is He] of the heavens and the earth. He has given you mates of your own kind just as [He has willed that] among the beasts [there be] mates – to multiply you thereby: [but] **there is nothing like unto Him**, and He alone is all-hearing, all-seeing.
2	M. M. Pickthall	The Creator of the heavens and the earth. He hath made for you pairs of yourselves, and of the cattle also pairs, whereby He multiplieth you. **Naught is as His likeness**; and He is the Hearer, the Seer.
3	Shakir	The Originator of the heavens and the earth; He made mates for you from among yourselves, and mates of the cattle too, multiplying you thereby; **nothing like a likeness of Him**; and He is the Hearing, the Seeing.
4	Yusuf Ali (Saudi Rev. 1985)	(He is) the Creator of the heavens and the earth: He has made for you pairs from among yourselves, and pairs among cattle: by this means does He multiply you: **there is nothing whatever like unto Him**, and He is the One that hears and sees (all things).
5	Yusuf Ali (Orig. 1938)	(He is) the Creator of the heavens and the earth: He has made for you pairs from among yourselves, and pairs among cattle: by this means does He multiply you: **there is nothing whatever like unto Him**, and He is the One that hears and sees (all things).
6	Dr. Laleh Bakhtiar	One Who is Originator of the heavens and the earth. He made for you spouses of yourselves and of the flocks, pairs by which means He makes you numerous in it. *There is* not like Him anything. And He *is* The Hearing, The Seeing.
7	Wahiduddin Khan	Creator of the Heavens and the Earth, He has made spouses for you from among yourselves, as well as pairs of livestock by means of which He multiplies His creatures. **Nothing can be compared with Him**! He is the All Hearing, the All Seeing.
8	T. B. Irving	Originator of Heaven and Earth, He has granted you spouses from among yourselves, as well as pairs of livestock by means of which He multiplies you. **There is nothing like Him**! He is the Alert, the Observant.
9	Safi Kaskas	the Creator of the heavens and earth who separated them and gave each a purpose. He has made mates for you from among yourselves, and gave mates to the animals, so that you may multiply. **There is nothing like Him**. He is the All-Hearing, the All- Seeing.

	Translator	Translation
10	[Al-Muntakhab]	He is Allah, the Generator of the heavens and the earth, Who provided you with wives and mated you to your kind and provided you with cattle and mated them to their kind so that you procreate and increase in number by natural generation. **Nothing material or immaterial is like unto Him**; He is AL-Sami' (the Omnipresent with unlimited audition) and He is AL-Bassir (the vigilant who hears and sees all things.)
11	[The Monotheist Group] (2011 Edition)	Initiator of the heavens and the Earth. He created for you from among yourselves mates, and also mates for the livestock so they may multiply. **There is nothing like unto Him**. He is the Hearer, the Seer.
12	Abdel Haleem	the Creator of the heavens and earth.' He made mates for you from among yourselves – and for the animals too – so that you may multiply. **There is nothing like Him**: He is the All Hearing, the All Seeing.
13	Abdul Majid Daryabadi	The Creator of the heavens and the earth: He hath made for you mates of yourselves, and of the cattle also mates, whereby He diffuseth you. **Not like Unto Him is aught**, and He is the Hearer, the Beholder!
14	Ahmed Ali	Originator of the heavens and the earth, He has made your consorts from among you, and made pairs of cattle. He multiplies you in this way. **There is no other like Him**. He is all-hearing and all-seeing.
15	Aisha Bewley	the Bringer into Being of the heavens and the earth: He has given you mates from among yourselves, and given mates to the livestock, in that way multiplying you. **Nothing is like Him**. He is the All-Hearing, the All-Seeing.
16	Ali Ünal	The Originator of the heavens and the earth (each with particular features and on ordered principles); He has made for you, from your selves, mates, and from the cattle mates (of their own kind): by this means He multiplies you (and the cattle). **There is nothing whatever like Him**. He is the All-Hearing, the All-Seeing.
17	Ali Quli Qara'i	The originator of the heavens and the earth, He made for you mates from your own selves, and mates of the cattle, by which means He multiplies you. **Nothing is like Him**, and He is the All-hearing, the All-seeing.
18	Hamid S. Aziz	The Originator of the heavens and the earth, He made pairs for you from among yourselves, and pairs of the cattle too, multiplying you thereby. **There is no thing like unto Him**; and He is the Hearer, the Seer.
19	Muhammad Mahmoud Ghali	The Originator of the heavens and the earth-He has made for you, of yourselves, pairs, (i.e., spouses) and of the cattle (includes cattle, camels, sheep and goats) (also) pairs, whereby (Literally: wherein) He propagates you. **There is not anything like Him (whatsoever)**, and He is The Ever-Hearing, The Ever-Beholding.

	Translator	Translation
20	Muhammad Sarwar	He is the Originator of the heavens and the earth. He has made you and the cattle in pairs and has multiplied you by His creation. **There is certainly nothing like Him**. He is All-hearing and All-aware.
21	Muhammad Taqi Usmani	He is the Creator of the heavens and the earth. He has made for you pairs from among yourselves, and pairs from the cattle. He makes you expand in this way. **Nothing is like Him**. And He is the All-Hearing, the All-Seeing.
22	Shabbir Ahmed	Originator of the heavens and the earth! He has made for you pairs from among yourselves, and pairs among the quadrupeds, whereby He multiplies you. **There is nothing whatsoever like unto Him**. And He is the Hearer, the Seer.
23	Syed Vickar Ahamed	(He is) the Originator (Fa'tir) of the heavens and the earth. He has made for you pairs (male and female), from (people) among yourselves, and (He has made) pairs among cattle: Also by this means does He create you: **There is nothing whatever like Him**, and He is the All Hearing (As-Sami') and sees All Seeing (Al-Baseer).
24	Umm Muhammad (Sahih International)	[He is] Creator of the heavens and the earth. He has made for you from yourselves, mates, and among the cattle, mates; He multiplies you thereby. **There is nothing like unto Him**, and He is the Hearing, the Seeing.
25	Farook Malik	the Creator of the heavens and the earth. He has made for you mates from among yourselves and also mates among the cattle from their own kind; by this means does He multiply you. **There is no one like Him**. He Alone hears all and sees all.
26	Dr. Munir Munshey	(He is) the Maker of the heavens and the earth! He created spouses for you from your own kind. He created the cattle in pairs, too. Thus, He (multiplies and) scatters you on the earth. He hears and observes everything!
27	Dr. Mohammad Tahir-ul-Qadri	He has brought into existence the heavens and the earth from nothingness. He is the One Who made pairs for you from your own kind and made pairs of cattle as well, and with this (pairing) He multiplies and spreads you. **There is nothing like Him** and He alone is All-Hearing, All-Seeing.
28	Dr. Kamal Omar	The Creator of the heavens and the earth! He has made for you mates from yourselves (i.e., of the people of your own species). And He has made various kinds of quadrupeds. He spreads you herein (i.e., in this earth). **(There is) not any thing like unto Him**, and He is the All-Hearer, the All-Seer.
29	Talal A. Itani (new translation)	Originator of the heavens and the earth. He made for you mates from among yourselves, and pairs of animals, by means of which He multiplies you. **There is nothing like Him**. He is the Hearing, the Seeing.

	Translator	Translation
30	Bilal Muhammad (2013 Edition)	The Creator of the heavens and the earth. He has made for you pairs from among yourselves, and pairs among livestock. By these means does He multiply you. **There is nothing like Him**, and He is the One Who hears and sees all things.
31	Maududi	The Originator of the heavens and the earth, He has appointed for you pairs of your own kind, and pairs also of cattle. Thus does He multiply you. **Naught in the universe is like Him**. He is All-Hearing, All-Seeing.
32	Ali Bakhtiari Nejad	Creator of the skies and the earth, He made spouses for you from yourselves, as well as mates for the livestock, by which He multiplies (and disperses) you in it. **There is nothing like Him**, and He hears all, sees all.
33	[The Monotheist Group] (2013 Edition)	Initiator of the heavens and the earth. He created for you from among yourselves mates, and also mates for the livestock so they may multiply. **There is nothing that equals Him**. He is the Hearer, the Seer.
34	Mohammad Shafi	The Originator of the heavens and the earth! He has made for you mates of your own kind – just as He has made mates among the animals – to multiply you thereby. **There is nothing like Him**, and He is the One Who hears all, sees all.
35	Bijan Moeinian	God is the Initiator of the heavens and the earth. He is the One Who has created for man, and other living species, spouses of the same kind so that you populate [the earth.] **There is nothing similar to God**; He sees everything and hears everything
36	Faridul Haque	The Maker of the heavens and the earth; He has created pairs for you from yourselves and pairs from the animals; He spreads your generation; **nothing is like Him**; and He only is the All Hearing, the All Seeing.
37	Hasan Al-Fatih Qaribullah	The Originator of the heavens and the earth, He has given you from yourselves, pairs, and also pairs of cattle, thereby multiplying you. **There is nothing like Him**. He is the Hearer, the Seer.
38	Maulana Muhammad Ali	The Originator of the heavens and the earth. He has made for you pairs from among yourselves, and pairs of the cattle, too, multiplying you thereby. **Nothing is like Him**; and He is the Hearing, the Seeing.
39	Muhammad Ahmed – Samira	Creator/bringer to being (of) the skies/space and the earth/Planet Earth, He made/created for you from yourselves spouses/pairs/kinds, and from the camels/livestock spouses/pairs/kinds, He creates/seeds you in it, **(there) is not like Him/similar to Him a thing**, and He is the hearing/listening, the seeing.
40	Sher Ali	HE is the originator of the heavens and the earth. HE has made for you pairs of you own selves, and of the cattle also HE has made pairs. HE multiplies you therein. **There is nothing whatever like unto HIM**, and HE is the All-Hearing, the All-Seeing.

	Translator	Translation
41	Rashad Khalifa	Initiator of the heavens and the earth. He created for you from among yourselves spouses – and also for the animals. He thus provides you with the means to multiply. **There is nothing that equals Him**. He is the Hearer, the Seer.
42	Ahmed Raza Khan (Barelvi)	The Maker of the heavens and the earth. He has made for you pairs of your own selves and male and female cattle, whereby He spreads your race. **Nothing is Like Him**, and He is the All-Hearing, All-seeing.
43	Amatul Rahman Omar	He is the Originator of the heavens and the earth. He has made your mates from your own species and has made mates of the cattle (also from their own species). That is the way (of mating together) whereby He multiplies you. **Naught is as His exegesis, (He is beyond all comparison,)** and He is the All-Hearing, the All-Seeing.
44	Muhsin Khan & Muhammad al-Hilali	The Creator of the heavens and the earth. He has made for you mates from yourselves, and for the cattle (also) mates. By this means He creates you (in the wombs). **There is nothing like unto Him**, and He is the All-Hearer, the All-Seer.
45	Arthur John Arberry	The Originator of the heavens and the earth; He has appointed for you, of yourselves, pairs, and pairs also of the cattle, therein multiplying you. **Like Him there is naught**; He is the All-hearing, the All-seeing.
46	Edward Henry Palmer	The originator of the heavens and the earth, He has made for you from yourselves wives; and of the cattle mates; producing you thereby. **There is naught like Him**, for He both hears and sees.
47	George Sale	the creator of heaven and earth: He hath given you wives of your owns species, and cattle both male and female; by which means He multiplieth you: **There is nothing like Him**; and it is He who heareth and seeth.
48	John Medows Rodwell	Creator of the Heavens and of the Earth! he hath given you wives from among your own selves, and cattle male and female – by this means to multiply you: **Nought is there like Him**! the Hearer, the Beholder He!
49	N J Dawood (draft)	Creator of the heavens and the earth, He has given you spouses from among yourselves, and cattle male and female; by this means He multiplies His creatures. **Nothing can be compared with Him**. He alone hears all and sees all.
50	Ahmed Hulusi	He is the Fatir of the heavens and the earth! He has formed for you partners from your selves (the original self + constructed identity self) and from the cattle (animalistic body) mates (biological + radial [spirit] body)… Thus He multiplies you! **There is nothing that resembles Him**! He is the Sami, the Basir.
51	Mir Aneesuddin	The Initiator of creation of the skies and the earth, He has made mates for you from among yourselves, and pairs of the cattle, whereby He multiplies you. **There is nothing like His likeness** and He is the Hearing, the Seeing.

The following translation taken from Nasr et al. (2015).

52	The Study Qur'an (2015)	The Originator of the heavens and the earth, He has appointed for you mates from among yourselves and has appointed mates also among the cattle. He multiplies you thereby; **naught is like unto Him**, yet He is the Hearer, the Seer.

CHAPTER 8

Sufi terminology and aspects of interaction with symbols

An investigation into the orientalists' approaches to the study and translation of Sufi terms: The case of Massignon

Khalid Elyaboudi, Abdelhamid Zahid & Hassane Darir

The Sufi (mystical) experience is characterized by a constant quest for the divine secrets in the universe: the mysteries of life and death, soul and spirit, and the mind and the heart. This experience varies from one *ʿĀrif* (Gnostic, Sufi Knower) to another according to the relevant pattern of connection between the *individual self* (*al-ḏāt al-fardiyya*) of the Sufi and the *global self of the supreme monism* (*al-ḏāt al-kulliyya li al-'uḥadiyya al-ʿulyā*).

It is clear that the universe or existence itself provide innumerable symbols and unfathomable signs. It is not surprising then that the Sufi discourse is founded on the 'symbol', which is a problematic word whose meaning is hidden in common speech and is, therefore, only grasped by the Sufis. Synonymous with a sign, whose meaning is hidden from a speaker because it is so subtle, it is also synonymous with a 'hint'.

Symbolism has spread through Sufi poetic and prose writings because it was needed. The Sufi express meanings and psychological sensations which are not within the expressive capacity of language. They long to transfer their experience, but this experience can only be expressed by using a set of symbols that hint but lack clarity.

In this article we address the symbols employed by the Sufis to express their thoughts in translating the set of facts and secrets that Allah revealed to them after a long struggle. We formulate the problematics of this research as follows: How was it possible for the people of the Sufi Order to resort to symbolism, which usually indicates ambiguity and secretiveness, in coining terms to name the concepts and ideas that are inspired to them or that penetrate their inner souls? In this regard, we raise the following questions: Is the symbol a sign? a term? a word? an icon? a signal? a subtlety? a fragment (*šaḍara*)? a piece of wisdom (*ḥikma*)? a proverb? a metaphor? or a case of polysemy? Or is it all of this at the same time? What criteria enable Sufi words to contain both symbolic and terminological dimensions? What is the role of context (or pragmatic field) in identifying the essence of the Sufi symbol? How can we uncover the nucleus of the symbol from its external shell? How can we unveil the essence of symbols? What is the best approach to study symbols? Can we reduce

https://doi.org/10.1075/hot.2.09ely

symbols to semantic features following Rastier (1987), to highlight their essential meaning and extract their original nucleus? Or is this deconstructive approach useless in our treatment of the multifaceted symbol?

We will consider orientalist approaches (through Louis Massignon's model) in the study of Sufi terminological systems by identifying their links with Islamic and gnostic origins and considering their modes of transfer into Western languages.

Keywords: Sufi terms, symbol, signal, sign, translation, semantics, context, exegesis

Introduction

Since ancient times, the difficulties of identifying the boundaries of symbols[1] has constituted a complex for Western people. The Sufis' writings, on the other hand, welcomed this characteristic difficulty because it underlies the openness of symbols to various worlds in the same way 'Hermes' is characteristic of volatility and vagueness in Illuminationist Gnosticist Culture. It is vagueness that allows a compromise between contradictions. A symbol is a prominent feature in the mystical language of the Muslims and is always given priority in the dichotomies developed by the *'ahl al-ḍawq (people of taste)* as in: sign vs. expression, that which is hidden vs. that which is apparent, *al-Fuhūm*, i.e. innate knowledge or taste vs. *al-Rusūm*, i.e. acquired knowledge or exoteric, outer learning, and the truth vs. the *Sharia*.

A symbol is a crossing (a bridge or means) through which the Sufi hides his inability to communicate through common language, an inability that was also expressed by Abu Ḥayyān al-Tawḥīdī (1982, 94). Evidently, during the process of communicating, language becomes affected both semantically and structurally. A symbol becomes a salvation that unchains the *Sālik* (the person who is engaged in Sufism) to express the absolute. Roland Barthes (1992, 6) explains that: "Through symbols, a sender can express the supreme and the spiritual in the human experience."

The Sufi's perception of absolute truth compels him to express it, yet he only finds words that fail to grasp the vastness of that truth. This limitation results from the depth of the internal experience of the *Sālik* and the superficiality of the available linguistic stock, which makes it necessary to resort to 'artificial methods' in an effort to capture the intricacies of this experience. The symbol is the most effective way to get out of the dilemma residing in the difficulty of translating the subconscious and sketching the working of the mind and heart.

---

1. Umberto Eco (2009, 36) explains the Romans' concern with delimitations through the myth of Rome's foundation. When Romulus established the boundaries of the City, his brother transcended them. This resulted in his death.

The symbol becomes an imperative necessity given the breadth of perception, on the one hand, and the limitations of linguistic expression, on the other hand. The first points to the extension of the discovery process and the strength of the facts and secrets disclosed. The second distorts the reception process and impedes communication. There is no doubt that the discrepancy between breadth and narrowness or stretching and shrinking is the secret behind the Sufi's suffering both at the existential and cognitive levels. There is no way to alleviate the intensity of this suffering without relying on symbolism and using implicit style. According to Coleridge (in Barthes 1992, 123), symbolism is a way to combine these opposites or seemingly contradictory binaries.

It is, then, clear that the Sufis' insistence on employing symbols is a distinct and original method of writing, which is very different from those of predecessors and peers. In this respect, the Sufi approach agrees with Louis Aragon's (1970, 58) characterization of creative writing.

The function of symbols between two different fields

The field where symbols are used determines their nature. In the language of science and technology, symbols function to capture the concept and convey its significance. In poetic and prose literature expressing feelings, symbols reveal their broad semantic scope: they reveal or hide meanings depending on the sensitivity of the receiver. There is no harm for the positive sciences, whose subjects refer to material facts, in making use of symbols that codify the data of the physical world.[2] The facts of the *'Ulūm kašfiyya* (disclosing sciences), on the other hand, are idealistic, spiritual and metaphysical. They deviate from the world of the senses. Therefore, there is no way to communicate them or attempt to bring them closer to the mind except by using open symbols that are not amenable to standardization or codification. It is this openness that explains the multiplicity of definitions of Sufi terms.

Sending and receiving symbols

Addressing symbols in the language of Sufism requires two skills: an executive ability of the sender and an interpretative ability the receiver, which develops into positive interaction when the symbol finds a recipient who can explore its depths and pump

2. Aristotle had already divided symbols into three different types: Theoretical Symbols used in the different branches of knowledge, Practical Symbols used in applications and models, and Poetical or aesthetic symbols associated with psychological and emotional states (Baudouin Decharneux and Luc Nefontaine, *Le symbole*, PUF, Collection Que sais je? 3rd edition, 2014. Thomas J. J. Altizer, et al. (editors) *Truth, Myth, and Symbol*, Prentice-Hall, 1962, pp. 116–117.

fresh blood into it to acquire new meanings. There is negative interaction when the symbol is rejected by those who are described as the people of *Rusūm* or people of the *Ġirra* (i.e. absent-mindedness), who have a burning desire to put an end to the symbol as early as possible or, as the Arabic expression goes, "to put an end to it in the cradle". The different forms of interaction with the symbol compels us to understand the reasons behind the symbolization of the Sufis' discourse.

The rationale for using symbols

There are various reasons for using symbols, of which the following are perhaps the most notable:

- The desire to resort to dissimulation (to protect oneself)
- Diversifying the symbolic markers that describe the Sufi's spiritual insights (*tağaliyāt*) or rather bring their essence to the mind
- The urgent desire to distinguish the thing (or case) from that which is similar or opposite (Zaki Mahmoud 1969, 68–69)
- The burning (unrest) inside the *Sālik*
- The intention to stimulate the recipient to the maximum in the light of the span of time needed to preview the symbol and grasp its hints
- Contempt for the obvious meanings, which are suitable only for the people of *Rusūm* since "the price of clarity is the loss of depth" (Ricœur 2005, 357).

The Sufi people were clearly keen on influencing the recipient by drawing his intention to the magic of symbols and signs, which require procedures of interpretation to decipher their multiple backgrounds, backgrounds that differ according to the different fields of use. It is a tempting style that seeks to communicate a tempting knowledge.

Two functions of Sufi words emerge:

- A purely symbolic function meant for concealment in the case these words were to fall in the hands of the commoners or the people of the *Rusūm*.
- A purely terminological function based primarily on agreement and convention when addressing the people of the *Bāṭin* (inner truth, *Fuhūm*).

Through these two functions, the pivotal role of symbols becomes manifest in the Sufi discourse. Symbols become a defining feature characterizing the way the Sufi people express their inner thoughts, describe the nature of reality, and ultimately grasp true meaning. In fact, al-Jili (1997, 11) stresses the necessity of symbols when he states that there are meanings that can only be communicated by a hint or something similar. If such meanings were explicitly stated, they would almost certainly be misinterpreted.

So what are the dimensions of the use of symbols in Sufi discourse and in similar discourses that transmit the truth by relying on conscience?

Dimensions and prospects of symbols

We will not follow the example of Paul Valery (who believes that there is no real meaning of a text) and claim that there is no real meaning of a symbol. We emphasize, however, the fact that there are multiple meanings in a single symbol along the lines of faith of Umberto Eco (2009, 173), who believes that it is possible for a text to possess several meanings while admitting at the same time that it is not possible for a text to contain all meanings.

Disclosing the semantic dimensions of symbols would restrict the interpretation of readings, and reject the principle of their openness. Modern critical theorists (Ricœur 1959; 1986, among others) recognize the fact that as soon as a literary or intellectual creation is transmitted by a sender (its creator), it no longer belongs to him or her, but becomes public property.

Nonetheless, Ibn Arabi, in his fear of perdition and exposure to the same fate as his predecessor al-Ḥallāğ – who disclosed that which is not immediately comprehensible to the common people (people of the *Rusūm*) – was obliged to warn the readers of his collection of poems *Turğumān al-'Ašwāq* (the translator of yearnings) against interpreting them as meaning flirtation.

Commentators of Sufi poetical collections followed Ibn Arabi's strategy. Thus, Al-Qashāni (d. 736 A.H.)[3] (2005, 39), in turn, alerts the reader to the pitfalls of being driven to the apparent meanings in his commentary of *Tā'iyatu ibn Al-Fāriḍ*. Abdulghani al-Nabulsi, the commentator of the poetical collection of Ibn al-Fāriḍ followed suit (al-Nabulsi 2000; 2013). In order to avoid misinterpretation, sometimes the Sufi was obliged to warn the reader to these caveats, as did Ibn Arabi.

In what follows, we reveal degrees of interaction between the symbol and related or neighboring concepts.

Position of symbols within the hierarchy of genres

The majority of the Sufis do not answer the perplexing question of the position of symbols within the hierarchy of genres, even though some of them situate symbols in mid position between signals and subtleties (laṭā'if). A symbol is superior to a proposition

3. d.: died, A.H.: anno Hegirae (in the specified year of the Hegira according to the Muslim calendar).

and inferior to the truth because the former (a symbol) always seeks to translate the latter (the truth) from the world of ideals to the world of images (Zayʿūr 1979, 123).

The relationship between the symbol and the sign

Is it correct to consider the sign an element of the physical world while the symbol an element of the human world? Doesn't the symbol, in its turn, tell us about the components of the physical world? Furthermore, isn't the human world itself part of the physical world?

Charles S. Pierce claims that the sign ramifies into an index, an icon and a symbol. This triplicity reflects – according to Umberto Eco (2009) – an excessive obsession with the Trinity. It becomes clear then that the relationship between the symbol and the sign is that of the part to the whole. This distinction is very different from that made by the ancient Arabs who divided meaning into mental, natural and positive.

We are entitled then in the light of this overlap between these two concepts (symbol and sign) and their common characteristics when used in the Sufi discourse to wonder what is preventing us from considering the Sufi term a sign and a symbol at the same time? Is is correct to assume that the Sufi term falls within the system of signs given its material (lexical) aspect as well as the system of symbols on considering its functional semantic aspect? This duality will inevitably help us in understanding the dimensions of symbols.

Interference between the symbol and the word in Sufi discourse

With regard to the borders between the word and the symbol, we note that the differences between the two concepts are evident in the common language recorded in general dictionaries, but in the field of specialized languages recorded in sectorial dictionaries, the boundaries between the two concepts diminish to the extent that the two terms become similar for some Sufis, as is the case with Ibn Arabi. This overlap becomes manifest by considering the contexts where the concept of the 'word' is used in the writings of the famous Sufis. Ibn Arabi, for instance, has used this term (i.e. the word) to express different meanings such as those observed by the researcher Abu al-ʿUlā ʿAfifi (1969):

- From a purely metaphysical point of view, Ibn Arabi considers that 'the word' is a rational force exerting influence over the entire universe. It is the beginning of creation, life and planning. In this sense, it replaces the 'first intelligence' in the doctrine of Plotinus and the global intelligence in the doctrine of the 'Stoics'.
- From a Sufi perspective, the word for Ibn Arabi is the 'Origin' from which is derived all divine knowledge. It is the source of inspiration and revelation. In this

sense, it is synonymous with *Al-Ḥaqīqa al-Muḥammadiyah*, and *Ruḥ al-Ḫātim*, and *'Miškāt Ḫātim al-Rusul'*, which can only be grasped by a Sufi.

– Considering the link between the word and human beings, Ibn Arabi calls the word *Adam*, *al-Ḥaqīqa al-'Ādamiyya* (Adam's truth), *al-Ḥaqīqa al-'Insāniyya* (human truth) and *al-'Insān al-Kāmil* (the perfect man).
– In terms of the relationship between the word and the whole world, Ibn Arabi (2002: 42–43, 88) calls the word: *Ḥaqīqatu al-Ḥaqā'iq* (truth of the truths), which means God's words are infinite.
– In light of the fact that the word denotes the *'Record'* (*Siğil*) devoted to counting all things, Ibn Arabi calls the word: the book and *al-'Ilmu al-'Aʿlā* (highest knowledge).

It is no wonder, then, after this elicitation that the concept of the word overlaps with that of the symbol as a result of their ability together to include various senses to various degrees and to explore nuances and shades of meaning.

Interference between the symbol and the signal

The Sufis frequently used the terms 'symbol' and 'signal' interchangeably (as synonyms) while defining either one of these two concepts. Thus, "a symbol is a signal of a language which the others do not know" (Al-Qushayri 1969, 58). The term 'others' here, of course, refers to people other than those of the Sufi doctrine (*'Ahl al-Ṭarīq*). In this perspective, using signals becomes part of symbolism as is clear in the work of Abdelwahhab al-Shaʿrani (d. 973 A.H.) (1999, 128–129).

There are, however, minute semantic differences between the two concepts for Ibn ʿAğība (d. 1161 A.H.) (1913, vol. 1: 118), who intentionally distinguished between the pillars of the trilogy: the symbol, the signal and the expression. While he claimed that a symbol is more accurate than a signal, he did not provide us with any characteristics to distinguish between the two apart from stating that a signal hints whereas a symbol rejoices (*yufarriḥu*). This leads us to interpret his statement as meaning that a symbol is a revelation (*kašf*) for those who know it (i.e. the *ʿĀrif*), thereby eliminating the mystery and secrecy from it from the Sufi perspective.

Some modern researchers consider that the symbol covers all types of metonymy, simile and metaphor, including complex semantic relationships between things (cf., for example, the entry symbol in the *Shorter Oxford Dictionary* or Abu-Zaid 1985, 5). As to signals, there is only one signification which does not accept diversification, nor does it differ from one person to another since people have agreed about its meaning. In this context, we note that symbolism and the allusive method draw on that which is hidden as well as that which is manifest (Zarrūq 1975, 47).

The symbol between the challenges of expression and indication

The negative dimension of a rigid expression compared with the divine dimension of the living signal based on the symbol is evident in the writings of the majority of *ʾArbāb al-ʾAḥwāl* (masters of the Sufi Spiritual States, which are gifts from Allah to the Sufi seeker). It appears that the duality common to rhetoricians (*ʾAhl al-Bayān*) to the effect that "the words are finite whereas the meanings are nonfinite" has been well received by the people of the *Bāṭin*, who understood it as meaning that "the expression is transient and recessive whereas the signal is renewed constantly". The signal is a treasure that is never exhausted because of the breadth of its semantic horizon (Ibn al-Fāriḍ n.d., 97).

In fact, resorting to symbolism is a sign of refined taste. Explicitation, on the other hand, is a sign of its abasement or rather its absence. It is a slope that leads to doom (Ibn al-Fāriḍ n.d., 97). There is no doubt that this high esteem which is attached to symbolism is closely related to the idea linking symbols to secrets.

It is natural that the sanctity of the signal induced the people of the *Bāṭin* to establish an independent science which is concerned with the subtleties and characteristics of the signal, a science which is sought by any *Sālik* because it is the only way towards the realization of the divine secrets residing in the Holy Book and revealed on the heart of the *ʿĀrif* (Ibn Arabi 1992, vol. 4, 252). It is either endowed upon oneself or is inherited but it is not earned because only the sciences of the people of Rusūm can be earned (Ibn Arabi 1853, 2305-2311).

Between a symbol and a puzzle

There is no doubt that the common characteristic between a symbol and a puzzle lies in their vagueness and mystery. In particular, vagueness has become a basic feature in both of them. A puzzle, however, is different from a symbol in that it can occur in a short story or a narrative that includes an imbroglio that the listener has to grasp and give an answer about its signification (www.almaany.com). A symbol, on the other hand, is more of a term. It can take the form of a single term, a phrase or an expression.

It is likely that the association between symbols and puzzles for Ibn Arabi and his successor, Al-Jili, does not necessarily imply synonymy between the two concepts. Nonetheless, it appears from his remarks that they are similar as far as their functions are concerned but they are different in essence (Ibn Arabi 1992, vol. 3, 196–197).

The relationship between symbols and divine secrets

There are hints in a number of definitions of the term *ʾAsrār* (divine secrets or mysteries) that suggest that this term signifies a blessing from Allah bestowed on his 'close

servants' who can disambiguate meanings that are related to the divine and spiritual matters. In this regard, al-Sarrāǧ Al-Ṭūsī (d. 378 A.H.) (1960, 303) quoted some Gnostics as saying: "The mysterious is what is made unseen by Allah and is being supervised by Him."

Abdul Rahman As-Sullami (d. 412 A.H.) codifies the ways of reading secrets, saying: "The Secret is what is read by a 'servant" but is not read by a king or a devil. It is not felt by the soul nor is it witnessed by the mind. It is hidden and is not overcome by zeal nor is it grasped by intelligence …. it is pure inspiration" (www.altafsir.com). Al-Jili (2004) among other Sufis consider these secrets to be the exclusive matter between the ʿ*Ārif* and Allah, the almighty, to which no human can have access.

It is clear that secrets do not acquire their holiness just because they are the fruit of the Sufi way and the essence of Sharia but because of the common link between Allah the Almighty and the faithful servants of the people of the Sufi doctrine. Secrets represent the connection in force between a person and the Lord. They are certainly the secrets saved "between the heart and the soul," (al-Buruswi 1330[4] A.H. vol. 5, 367), disseminated by the science that the trustworthy Prophet described as being 'concealed' (Al-Jilāni 1997, 72). Among the signs of this holiness is the observation that "Secrets are lighter than the *ʾAnwār* (*Lights)* since the latter are for the qualities whereas the former are for the self. The *ʾAnwār*, in fact, represent the impact of secrets" (Ibn ʿAǧība n.d., 73). After all these quotations, does it come then as a surprise to know that the Sufis created a special science of mystical secrets, a science which is similar to what they did for *signals*, *characters* and *semiotics*. It is a science that only prophets and saints can explore to any length (Ibn Arabi 1992, vol. 1, 140).

Sufi secrets are closely related to symbols; both are dynamic and reproductive. Furthermore, according to Ibn Arabi, "any secret which is not reproductive is unreliable" (fr.scribd.com/doc/37737549). This is a relationship that assumes a permanent connection between secrets and symbols, on the one hand, and interpretation, on the other hand. The fact that the language of the Sufi adherents has no inclination towards direct reporting is what perhaps justifies the secrets' critical need for interpretation. If put in words, the *Science of Secrets* "becomes unrefined, uninteresting and incomprehensible and ultimately rejected by the narrow minded people who are not predisposed to make use of the search and reflexion faculties they are endowed with" (Ibn Arabi 1992, vol. 1: 146–147).

What we stated previously about the centrality of '*secrets'* in the Sufi discourse also applies to our discussion about talismans, which literally indicate the writings of magicians, but also refer to puzzles and mysterious things (*Al-Muʿǧam Al-ʿArabī ʾAsāsī*, 796). There is no better proof of the centrality of talismans in the Sufi thought than the

4. This is the Islamic calendar. The Gregorian year of publication is not available.

fact that some Sufis consider a talisman as the *Perfect Man* himself, "earned through the secrets of the Divine Names" (*Al-Muʿğam Al-ʾArabī ʾAsāsī*, 244).

Undoubtedly, the primary challenge facing *ʾAhl al-Ṭariq* (the people of the Sufi Doctrine) consists in distinguishing between the magicians' and fortune tellers' talismans, on the one hand, and the Sufis' talismans, on the other hand, which are associated with self-strife and renunciation. Ibn Khaldun (d. 808 A.H.) (1996, 116), the sociologist, was aware of the necessity of separating the two models for the sake of defending the behaviors of *ʾArbāb al-ʾAḥwāl* lest they be confused with charlatans' rituals.

The importance and sanctity of symbols stems from the sublimity of their source. They are received from the almighty creator without any mediation. Thus, it is not surprising that the emitter of these symbols, after receiving them from the Highest and most Sublime emitter in his *Waqafāt* (*Halts)*, reports them saying: "He stopped me in … and said to me", or in his dialogues: "O servant ". It seems that there are educational motives behind the hint about the backgrounds of symbols.

The sanctity of symbols surely stems from a primitive belief in the close link between the *Symbolic* and the *Religious*. All that is symbolized is associated with what is heavenly religious (Mircea Eliade & Joseph M. Kitagawa, eds. 1959, 98–100). This link between symbolism and religion – in addition to the ones that we have enumerated – may be one of the reasons behind the Sufis' fall in the arms of mystical symbolism.

Disclosing the hidden aspects of terms/symbols has purely educational motives

The Sufis have always called for preserving the divine secrets lest they fall into the hands of the common folk who follow what is manifest and only believe in what they can see. However, "following facts exclusively and ignoring peoples' opinions" never prevented the people of the Sufi doctrine from expressing their inner thoughts in order to translate these 'Facts' into the form of signs with a symbolic mark.

What is surprising for someone who follows the Sufi writings is the intense lexicographical activities (in the form of dictionaries and glossaries) which were achieved by the Sufis themselves and which aimed at clarifying the symbolic dimensions of the terms that they used to translate their inner insights and disclose the minute divine facts. Is this activity in contradiction with their principles calling for the maintenance of secrets?

Imam Al-Qushayri (1989, 130) provides a straightforward answer that justifies the explanatory approach to Sufi symbols, by providing behavioral and educational justifications. The aim behind clarifying the purposes of the Sufi signals which are embedded in symbolism is to facilitate "understanding for those who want to understand their meanings [the meanings of the people of the *Bāṭin*, the followers of their ways and their traditions]".

According to this explanation, the *Mašyaḥa* (having a *Sheikh*, or an elder as a guide) is no longer the sole factor in identifying the Sufi world and assimilating the spirit of faith. A number of dictionaries and glossaries as well as annotations to the various Sufi texts were compiled for the sake of anyone willing to follow Allah's path.

Nonetheless, these important works, which are meant for every *Sālik* and *Murīd* (disciple or person who has accepted a spiritual director), do not detract from the value of the Sheikh and the need to follow his instructions and guidance and take him as a model to the last *Maqām* (Sufi station or rank on the spiritual path to Sufism),[5] which is *Wuṣūl* (attainment). In fact, from the Sufi perspective, the Sheikh is next to a prophet (Al-Shaʿrani 1988, vol. 1, 173). Attainment here – as a Maqām – means to see (i.e. to perceive mentally) and bear witness (Al-Ghazali n.d., 26). It is also discovering the light of truth concerning the science of *Yaqīn* (certainty) (al-Tustari 2004, 18–19, 44). What, then, are the ways of approaching the Sufi symbols?

The power of symbols

One obvious characteristic of a symbol is that it is never direct. It only suggests, hints and stimulates. Another characteristic of an outstanding symbol is its 'breadth of scope'. The most successful symbol in achieving its symbolic function, which consists in approaching the realities of existence, is the one which successfully and steadily absorbs the whole truth, such as the symbols produced by the Sufis and the poets who reach ideal perfection (Barthes 1992, 29). Futhermore, a symbol attracts us – if we allow ourselves to be attracted. To use a simple metaphor, it is like a snowball that grows larger at an accelerating rate and encompasses everything on its way when rolling.

Relativity of recognizing the semantic dimensions of symbols

Our recognition of symbols is not absolute for we ourselves are not perfect. Does the *'Perfect Man'* (in the Sufi sense) overcome this dilemma? It can be seen from some of the definitions of the concept of the *'Perfect Man'* that he is able to apprehend the hidden aspects of symbols. The *'Perfect Man'* -in the Sufi literature- is an active knowledgeable investigator. He is fully inspired by the almighty. He initiates *Šams al-'Uḥadiya* in the Global Darkness (*al-Ẓulma al-Kawniyya*) as if he accelerates its sundown thus hiding it from the eyes of the Suspicious (*al-Murīb*) (Barthes 1992, vol. 2, 175).

5. The term *Maqām* refers to one's spiritual station or developmental level, which is generally a product of spiritual Sufi practices and, as such, it is distinct from one's *hāl*, or state of consciousness, which is a gift.

So what is the most effective approach in our study of symbols? Can we deconstruct a symbol into its semantic features as did Rastier (1987) in highlighting the essence of meaning and extracting its original nucleus?

Disadvantages of the deconstructive approach to symbols

Given the multiplicity of objectives contained in a symbol, it is obvious that the approach consisting in its deconstruction into semantic features and the search for the common feature is neither effective nor fruitful. This is contrary to what we saw in our study of homonymy (Elyaboudi 2014, 50–74), which demonstrated that homonymous terms do indeed share semantic features which are common to their respective fields of use, as in *Naḥw al-Qulūb* and *Naḥw al-Luġa* (Elyaboudi 2013).

The symbol never leaves us indifferent. On the contrary, it involves us in its experience, which is also that of the symbolizer and his/her world. Symbolic poetry is inevitably a 'reuniting poetry' (Barthes 1992, 66). It is certainly impossible to formulate symbols of this universe and its manifestations without being armed with 'imagination'.

Imagination is an essential source in the generation of symbols

The Sufis resorted to imagination in the generation of symbols in an attempt to break the ancestral customs of language transmitted through generations. The presence of imagination on the part of the critic and, more generally, the receiver does not necessitate the classification of the Sufi writings within 'Literature'. Imagination is more of a stock of provisions that writers, poets, and philosophers use to express their feelings and thoughts. Al-Jili (1997, 52) explains the reasons why imagination is holy and why it can be legitimately considered a primary characteristic for any *Sālik*. In Sufism, the concept of imagination comes alive and beats like the heart of any creature. Evidently there is a correlation between imagination and symbols. In fact, for Coleridge, imagination is the faculty of creating symbols (Barthes 1992, 18).

Standards for understanding the dimensions of Sufi Symbols

Researchers and scholars who are concerned about the language of the Sufi discourse have suggested that unlocking the Sufi symbols could be achieved through one of two approaches:

1. Affective participation, which requires trust from whoever aspires to explore the dimensions of the Sufi symbol. This is an approach that is represented by the Sufis themselves, who believe that it is only through undergoing the whole Sufi experience

that one discovers the Sufi language. In this respect, the great Sheikh Ibn Arabi is a great defender of the *Ṣawn al-'Asrār* (secrecy of mysteries) (see Amili 1975, 455–489).

2. Employing a mechanism of interpretation in the treatment of Sufi symbols as a technical means in analyzing the Sufi discourse (e.g. Abu Zaid 1983).

How does the broad dimension of symbolism contribute to embracing the interpretation mechanism?

Openness of the Sufi discourse and the wide horizons of interpretation

Being heavy laden with symbols, the Sufi text becomes more open to interpretation than other scientific or literary genres. In fact, there is "no more open text than a closed one" (Umberto Eco 1996, 71). It should be noted that the act of 'openness' is not intended by the sender but is a spontaneous approach by the receiver, an approach that makes Sufi writings a model to be followed by many modern writers and poets who emulate the ways of the people of the *Bāṭin* in resorting to the allusive style in expressing their inner feelings.

The interpretative ability of the people of the *Bāṭin* has become a spiritual discernment of the depths of symbols and signals. In its interaction with the Sufi thought, language is no longer just a tool or a means, but it has become an end in itself. It has become free from the lexical and stylistic norms and limitations. Language, so to speak, is considered freedom itself (Adūnis 2006, 136). Undoubtedly, the openness of the Sufi discourse calls in interpretation mechanisms due to the possibility of having several readings of the same text or even the same symbol depending on the diversity of readers and their cognitive backgrounds.

Sufi texts have attracted the utmost attention from researchers investigating aspects of interpretation and scholars interested in discovering the multiple purposes of texts. All of this contributed to the enrichment of these Sufi texts and ultimately led to their re-writing thanks to the diversity of readings, explanations and interpretations that these texts were subjected to.

The more depth and ambiguity of symbols, the more is the need for interpretation. Furthermore, the deeper a symbol is, the more important it is since it contributes to the beauty of the symbolizer's style, whether a poet or a prose writer. A symbol "is as deep as man himself and as extensive as the whole world. It is within and outside time. It extends knowledge to all that man can know" (Barthes 1992, 19).

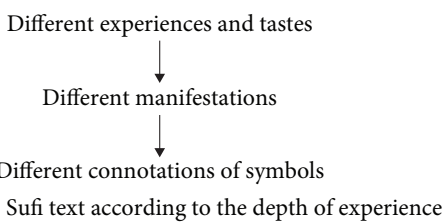
The flame inside the *Sālik* generates a language that allows multiple meanings, which causes confusion for the receiver, forcing the sender to sometimes interpret lest the receiver takes the message literally. This prompted Ibn Arabi (1966, 4–6), in his turn, to alert the readers of *Ḏaḥā'ir al-'Aʿmāq Turǧumān al-'Ašwāq* to the consequences of falling into the pitfalls of direct meanings, which seem so evident considering the lexical

meanings that are widespread in the common language. We suspect that Abdulghani al-Nabulsi (2003, 61), one the annotators of the poetic collection of Ibn Al-Fāriḍ, was influenced by this strategy.

In the context of deconstructing the types of symbols employed in *Turjumān al-Aŝwāq*, we consider that the work of Ibn Arabi (1968), *Ḍaḫā'ir al-'Aʿmāq*, is like a deconstructive reading of those symbols used in the collection of poems. This work provides an interpretation that moves from the hidden meanings of symbols to their obvious meaning. This, however, is not the only possible reading (not to say the proper reading) because – after being sent to the public – these symbols are no longer the sole property of their producers. On the contrary, we consider them to be a rich source that is capable of generating a variety of readings according to the different intellectual and ideological backgrounds of readers. We note in this regard that Ibn Arabi only assumed the role of the writer and that of the commentator (i.e. sender and receiver) after insistent demands were made by his supporters and admirers, including Badr al- Ḥabaši, Ismail bin Sodkin and Abu al-Tāhir al-Ṭawrī al-Ḥanafi, and after his opponents, who reject his Sufi ideas, called him: the 'denier of religion' and the 'killer of religion' (in a pun on his real name Muḥyi al-Din, i.e. the reviver of religion) (Corbin 2006, 73). Evidently, his opponents interpret his ideas and symbols as well as those of any *ʿĀrif* to imply heresy and atheism.

Perhaps Ibn Arabi moved from the position of sender (or emitter) to that of recipient so that he could assume the status of any receiver who is puzzled at overweighing one meaning over another – as if this Sufi was no longer able to remember the ultimate facts and manifestations (*taǧaliyāt* or *theophani*(es) (i.e. the visible, but not necessarily material, manifestation of a deity to a human person) that he received by inspiration. He proposes several explanations in the course of revealing the implications of some symbols. For example, he considers that the symbol of *'Al-rakā'ib'* indicates 'camels' being ridden or the 'cloud', and the symbol 'gazelle' refers sometimes to 'flirting' with the beloved, and at other times to 'touring' (*siyāḥa*) in light of the fact that the Arabic term *ġazāl*, which refers to a deer-like animal that moves quickly and gracefully, rhymes with *ġazāl*, which is flirtation, but by extension could refer to absent-mindedness just like the animal might appear as it wanders in the wilderness.

We understand the reasons why there are different interpretations of symbols through the following diagram:



It is likely, then, in light of what we have referred to before, namely the fact that symbols acquire multiple meanings according to the nature of the context in which they occur, that the multiplicity of semantic possibilities of a single symbol recorded by the Al-Sheikh al-'Akbar (*in Ḏaḥā'ir al-'Aʿmāq*) and an-Nabulsi (in *Commentary on the Poetical collection of Ibn Al-Fāriḍ*) is due to the multiplicity of contexts in which symbols occur in the two poetical collections of Ibn Arabi and Ibn al-Fāriḍ.

Hence, it becomes clear that exploring the prospects of symbols and their semantic worlds is no less important than the processes of their production (cf. Derrida), since they require resorting to *interpretation*. At the same time, we must be careful to *codify* the latter process (interpretation) in order to avoid falling into what Umberto Eco (1992) – the defender of interpreters' rights – called *over-interpretation* by the code breakers. Certainly, the concern about observing the purposes of the producers of these symbols will significantly contribute to the codifying procedure, whose pivotal role was made clear by Sheikh al-Jili (d. 826 A.H.) in his valuable book *Ġunyatu 'Arbābi Al-Samāʿ*: reduce the interpretation range to the minimum so as to exclude arbitrariness and deception.

It is likely that al-Jili and Umberto Eco's call to codify and scale (limit the scope of) the process of interpretation is, in fact, an invitation to distinguish between sound interpretations and corrupt feeble ones. Jonathan Keller (in Eco 1992, 139, 143), who is enthusiastic about excessive interpretations, does not see it that way. For him, a moderate interpretation does not require a lot of thought to satisfy the public, whereas an excessive interpretation (or over-understanding) requires a great deal of time and effort. According to Keller, the so-called excessive interpretation is but an attempt to link a text to the general mechanisms of the narrative through figurative composition and ideology (Keller in Eco 1992, 139, 143). There are those who make a connection between *over-interpretation* and *overeating*. Both states generate serious consequences (Keller in Eco 1992, 140).

We conclude, from the explanations given by the ancient scholars of Sufi terms / symbols (Ibn Arabi (d. 638 A.H.), Al-Qashāni (d. 735 A.H.), al-Sharif al-Jurjāni (d. 816 A.H.), Al-Nabulsi (d. 1143 A.H.), At-Taḥanawi (d. 1191 A.H.)) that the link between any group of symbols and what they stand for is rarely arbitrary. On the contrary, some semantic features between the symbol and the symbolized are similar. We refer in this regard to the symbols: water, rain, cloud and shade, which stand as gifts that the Supreme Donor (*al-Wāhib al-'Asmā*) bestows upon the *Reachers* (*al-Wāṣilīn*) from among the *Sālikīn*.

A comparable correlation between the symbol and the symbolized in Western heritage is that "culturally-founded symmetry between the physical habits of the pig and moral habits of the dictator Noriega or Ceausescu" on the basis "that there are similarity approach relationships" (Eco 1992, 60–61).

Existence is the common factor of the various patterns of symbols

It is clear that the symbol is a tool for discovering the self and absolute existence. Scholars' classifications of Sufi symbols are numerous. For example, Nasr (1978) classified them into symbols related to:

- women
- wine
- nature
- numbers and letters
- Christianity.

Others (e.g. Zaki Mahmoud in Maḏkūr (ed.) 1969, 87–88) classified them into symbols related to:

- animals
- birds
- natural phenomena (both deserted and barren as well as green and fertile)
- astrological phenomena
- culture
- religion
- classic literature.

Still others (e.g. Hilmi in Maḏkūr (ed.) 1969, 47–48) classified them into:

- human symbols (which derive their elements from the source of the human spirit and its needs, including symbols of love and wine), and
- universal symbols (that derive their components from the natural sources in the material and sensory world. These include symbols related to the earth and all its animals, plants, mountains, hills, sands, rivers and seas in addition to whatever shells, pearls and corals they hold in their depths) and other symbols related to the sky, orbits, planets and stars as well as numerical and literal symbols.

We can see that *existence* with its various manifestations is the whole which includes all types of these symbols: Man with his rich cultural heritage, nature in its different manifestations, the world within its geographical surroundings, and its diverse astronomical phenomena … In fact, symbols are an integral part of the history of existence (Ricœur 2005, 364).

It is certain, to the Sufis, that the various objects in existence are *Divine Words*, and just as it is difficult to enumerate the creatures of the creator of existence, it is also impossible to enumerate the unlimited Divine Words. "Say: "If the sea were ink for [writing] the words of my Lord, the sea would be exhausted before the words of

my Lord were exhausted, even if We brought the like of it as a supplement."" (Qur'an 018:109)

There is no more convincing evidence of the overlap between these symbols than Ibn Arabi's blending of the *tree* symbol, which belongs to the field of nature, with the symbol of the *universe* with its diverse phenomena. What resulted from the overlapping of these two elements, or rather from the integration of *the tree* in *the universe*, was a compound symbol that signifies creation itself: *Tree of the Universe* (*Šağaratu al-Kawn*) (Ibn Arabi 1985, 40–49).

Levels of symbolism in Sufi terminology

The Sufis have employed terms symbolically, by giving them specific meanings that are distinct from the common lexical meanings used in customary and general dictionaries. Nonetheless, the newly acquired specific meanings are related in one way or another to the literal meanings of words (by way of connotation or other).

By inspecting a set of these term–symbols, it becomes clear that the degrees and aspects of symbolism (its forms and manifestations) differ from one Sufi to another and even from one text to another by the same Sufi, depending on the *Ḥāl* (temporary state or condition of consciousness) in which the Sufi finds himself and on the *Maqām* he has reached on the Sufi quest to embrace the divine realities. For example, the term-symbol *al-Nuqṭa* (point) has acquired symbolic dimensions that are agreed upon by the majority of the Sufis who proved its centrality in Sufi thought. This term-symbol refers at the same time to a *ḥiğāb* (veil) preventing the *Divine Light* (Ibn Arabi 1998, 198) and a *al-Kašf* (discovery or unveiling) (Ibn Sabʿīn 2002, 238–239).

The term-symbol reaches the ultimate degrees of symbolism by employing geometrical shapes and tree-like drawings, as when Al-Ḥallāğ (2002, 301) expressed the concept of '*will*' by bringing in the following symbol:

This symbol exemplifies the notion that the power of symbolism is intensified by actually reducing convention and agreement. The less the level of agreement about the

signification of a Sufi term or the interpretation of a geometric figure, the more that term or figure tends to lean towards absolute symbolism.

It is likely that intensifying symbolism by employing such forms derives its foundations from *ʿilm al-ḥurūf* (science of letters, a science based on the idea that letters of the alphabet have secret and hidden meanings that affect peoples' lives), which is the outcome of a moral marriage between the pen and the tablet or paper (Adūnis 2006, 149). The idea regarding the meaning potential of letters has led some to speculate about the actual meanings expressed by the letters (Adūnis 2006, 149). Similarly, there are many meanings of numbers depending on their multiple contexts in the Sufi texts. What is, then, the relationship between the semantic diversity of the Sufi term and its context?

The contextually-dependent semantic dimensions of symbols

We can find multiple and, sometimes, different definitions of terms in Sufi dictionaries since such definitions vary from one Sufi to another and even from one dictionary to another compiled by the same person. The multiplicity of definitions attests to the fact that it is context which determines the identity of the Sufi term-symbol. All of this did not go unnoticed by Zaki Naguib Mahmoud, who denounced the Sufis' hesitation to determine the significance of symbols (Zaki Mahmoud in Maḍkūr (ed.) 1969, 71).

The peculiarity of the behavioral experience is not the only justification for the diversity of semantic dimensions of a symbol. The individual usage in a specific context can also generate a new semantic horizon. This is what we observe while browsing glossaries, dictionaries and encyclopedias that record the Sufi terminology.

To demonstrate this semantic diversity, we refer the reader to the dictionary by the Lebanese researcher Suʿād al-Hakim (1981), where she traced the implications of the terms-symbols used by Ibn Arabi in his writings. She usually enumerates these uses in her explanations of each dictionary entry.

In connection with the topic, we consider the semantic shift that affects symbols as a part and parcel of the semantic shift that affects terminology and other units of the general and specialized lexicon. This semantic shift is concerned with the evolution of the language in its phonological, syntactic and stylistic systems. From the Sufi perspective, the symbols that are capable of evolving and regenerating are worthier than fixed static symbols that carry one signification at all places and times.

Having now concluded our overview of the overlap between symbols and terminological innovation in the Sufi language, we will now examine the characteristics of the orientalists' approaches to Sufi terms through the writings of Massignon.

Orientalists' methodologies in dealing with the terminological conventions of *Ahl at-Ṭariq*

Massignon (1922) points out that, by the second half of the nineteenth century, studies of Islamic Sufi terms by orientalists proliferated and became diversified. These studies adopted three different approaches.

The first approach is characterized by a focus on analytical and critical editing. This approach gave importance to publishing dictionaries which were compiled in ancient times and which were based on famous poetical and prose selections. Fleugel initiated this approach and was followed by Nicholson. Massignon comments on this approach saying that its advantage is the direct enrichment of the documentary material, and then adds as an afterthought: if enrichment is a core feature in the general dictionary, then it becomes a secondary factor when it comes to a scientific or technical field of specialization. Indeed, what matters in scientific and technical fields is the internal consistency of ideas.

Despite its importance, this approach is not enough – in the eyes of the French Orientalist – to cover all Sufi terminological conventions. Furthermore, neither Fleugel nor Nicholson have tackled the most essential and richer works, for example: *Ḥaqā'iqu al-Tafsīr* (Facts of Interpretation) by as-Sullamy, the workbook that was re-published by al-Baqli.

The second approach is reductionist and biographical; it is interested in studying scientific terms indirectly by examining their position within the intellectual structures of the systems that they apply to. This is the approach that was implemented by Asin Palacios in his study of the ideology of Ghazali, and was applied by Carra de Vaux in his study of the *'Išrāq* (Sunshine) by al-Sahrurdi al- Ḥalabi.

According to Massignon, this approach requires first and foremost a wide philosophical knowledge. Among its disadvantages is the fact that it is based on a general classification of doctrines and beliefs in accordance with questionable taxonomies. For twenty years, the interest has increased, as demonstrated by the rise in criticism of some schools of *Al-Hadith* which are strict about the literal interpretation of a text. Furthermore, more attention has been given to works of thinkers who criticized Sufi thought like Ibn Ṣād, Ibn al-Jawzi, Ibn Taymiyah and al-Dahbi. The works of the adherents of this approach are often very appealing, but their interpretations of doctrines and the terminology they used reveal a tendency to construct irrational controversies.

The third approach is concerned with compiling dictionaries that are specialized in the terminology of specific writers, by referring to a comprehensive corpus from different sources. This is the approach established by Fischer, the German orientalist, since 1908, when he started working on an Arabic scientific dictionary based on

citations from texts which are typical in their eloquence and form homogeneous works such as *al-Muʿallaqāt, al-Mufaḍḍaliyāt*, *al-Ḥamāsatayn* and *Maqāmāt al-Ḥarīrī*.

The efficiency of this method – which was applied to poets because it facilitates isolating the inventory of classical words from their recently coined counterparts in poetical collections – appears in the study of Sufi works. The only way to determine how the Sufis formulate their terminology, according to Massignon, is by examining their works with a focus on the various stages experienced by the Sufis. This realization led Massignon to adopt this approach in his classification of the Sufi terminological system which is contained in the writings of al-Muḥāsabi, al-Ghazali, Abu-Talib al-Makki, as a whole and of al-Ḥallāǧ, in particular. He refers to al-Ḥallāǧ as a model because the latter is the most prominent Sufi who dealt both theoretically and practically with the most central problematic in the Sufi thought, which is the ecstasy[6] phenomenon as a behavioral experience: the most prominent sign of a transforming *Union* (*al-Ǧamʿal-mutaḥawwil*, signe de l'union transformante).

Massignon's terminological research methodology in compiling the dictionary of technical terms

The early works of Massignon clearly demonstrate the first features of the approach that he adopted, even though he did not refer in his lectures – which he gave at the old Egyptian university from 1913 to 1914 – to Fischer, the German Orientalist, as a model of general and specialized lexicographical activity. After a decade of those lectures, Massignon diligently observed in his early terminological works a methodology in dealing with Sufi terminology that is not different from the one he outlined in his lectures. This methodology includes the following:

1. determining the original linguistic meaning of terms,
2. determining their Greek origin [for terms that have a Greek origin],
3. defining translated terms [for terms that changed from Arabic to Latin during the Middle Ages],
4. surveying term definitions as set in the writings of Arab philosophers like al-Farabi, Ibn Sina and Ibn Rushd,
5. checking the meaning of translated words to verify translation accuracy,
6. checking synonyms.

For example, Massignon cites the equivalents of *Quwwa* (force) in Greek, namely *dynamis* and in Latin, namely *facultas* or *potentia*. He also cites the equivalent of the

6. In one of its senses, ecstasy refers to "The trance, frenzy, or rapture associated with mystic or prophetic exaltation" (*American Heritage Dictionary*, 4th Edition).

term *nafs*, which is realized as *psyche* in English or *psyché* in French, both being Greek in origin.

We conclude that, in studying Sufi terminology,[7] Massignon decided to emphasize historical evidence: linguistic origins in general dictionaries, and philosophical origins in the writings of Greek and Arab philosophers and the corpora of *'Ahl al-ʿIrfan* (Sufi Gnostics). This historical evidence demonstrates the uses of the term after its transition into Latin culture and afterwards to modern European society. Massignon must have been very acquainted with these Arab and Western sources in order to be able to interpret these philosophical Sufi terms in the context of these different cultures.

Massignon's interest in Sufi terminology

Before embarking on the exploration of Al Ḥallāǧ's world and fusing his personal experience with the fate of whom he called "the martyr of Islam", Massignon tackled some Sufi terms as part of his project to present philosophical terms to Egyptian University students. These terms include: *will*, *spirit*, *mind*, *passion*, *love*, *God* and *religion*.

The approach to these terms does not differ from his approach to the rest of the philosophical terms, except that he focuses on presenting a variety of samples and multiple viewpoints to theorists on Arabic Islamic thought, and gives less consideration to comparisons with Western thought.

Massignon resorted to a lot of traditional Arabic as well as modern and classical Western sources in defining the Sufi terms and determining their equivalents in Greek, Latin, and modern Western languages. Some of these sources are listed in the appendix.

In the following sections we will provide examples of the terms that Massignon focused on in his lectures to demonstrate his methodology:

The term 'Will'

In his study of psychological terms such as *sensation*, *thought* and *will*, Massignon (in Al-Khudairi 1983, 92) starts with an account of the *instinct*, which he considers to be "a link between the life sciences and psychology". In the ancient scholars' studies of issues of the 'psyche', Massignon discerns two approaches, which he calls:

7. In fact Massignon tackled Sufi as well as philosophical terminology.

– 'Inward Observation', which is a subjective method that is translated nowadays as *introspection*, i.e. the contemplation of one's personality traits, and
– 'Outward Observation', which is an objective method or approach.

Massignon evokes the Greek term *nous*, being the equivalent of *al-ʿaql* (mind) in Arabic, to talk about the Greek's approach to psychology. Interestingly, the Greeks take all *sensations* to be *desires* (aisthéthon) not *thoughts*. Massignon points to a number of specific terms that fall under the generic term: *sensation*, *thoughts* and *will* (volition). He asserts that the term *sensation* has produced several neologisms, each designating a specific meaning which he renders into Arabic. These terms are: sentiment (*šuʿūr*), sense (*ḥiss*), sensitive (*ḥassās*), and sensitivity (*ḥasāsiyya*). He then proceeded to enumerate the other terms associated with the field of modern psychology, including: passions (*infiʿālāt* or *'ahwā'*), inclination (*ʿawātif* or *nazaʿāt*), tendencies and penchant (*'amyāl* or *muyūl*), consciousness (*šuʿūr*), unconsciousness (*lā-šuʿūr*), attention (*'iṣġā'* or *intibāh*), hallucination (*haḍayān*), sympathy (*'ulfa* or *inʿitāf*), satisfaction (*'inširāḥ*), hypnotism (*tanwīm*), pleasure (*laḍḍa*) and pain (*'alam*).

Massignon continued by reviewing the ancient scholars' stances on the 'psyche'. Those scholars referred to three forces that contribute to producing emotions: (1) appétit sensitif (sensory force), which is the origin; (2) appétit concupiscible (sensual force) and (3) appétit irascible (irascible force).

Massignon presented the position of Aristotle, who distinguishes between *corpus* (body) and *psychē* (psyche) in human beings, the latter being divided into: *nous* (reason) and *orexis* (i.e. covetousness). In the course of presenting the meaning of terms from various human civilizations, he refers to Ibn Sabʿīn who, in turn, alludes to the view of Aristotle in this respect: "The psyche, for Aristotle, is the foremost perfection or completion (entelechy, or in French *entéléchie*) of a natural live body that is fully realized". For Aristotle, this is the primary principle that accounts for the harmony of movements.

Massignon moved on to present the views of Plato, who considers the Psyche as the irrational part of the human being or, as Aristotle sees it, the orectic part (*orexis* or desire). This is the case for the Sufis who believe that the self is the source of desire and has an inclination to Satan's temptation. In this context, Massignon includes the Brethren of Purity's statement on the subject, i.e. that the human self is one *Quwwa* (power) among those of the *An-Nafs al-Kulliyya* (the Universal Self) and the Universal Self is an emanation of the *al-ʿAql al-Kulli* (Universal Mind).

The spiritual peculiarity of the concept 'Will'

Massignon considers that the Sufis – through *ʿIlm al-Qulūb* (the science of hearts, i.e. the science of purifying the heart), which he uses as a synonym of *ʿIlm al-Taqlīb*

(the science of transformation, i.e. changes in conditions) – have presented a special view of 'will'. In his twentieth lecture: "(transforming the will), spirit and mind", which coincides with his first introduction to the Sufi Worlds through his lectures in the 1920's, he presents an overview of the emergence of Sufism in Islam and the crystallization of the *sciences of al-Ḫawāṭir* (ideas that cross the Sufi's mind, insights and reflections). Using the classification of Abu Taleb Al-Mekki in *The Nourishment of Hearts*, he separated the concept of 'will' into several branches which are considered as the first steps leading to the creation of will in humans. These branches are: *al-himma* (i.e. intention, which is considered as the emersion of *al-barqa*, i.e. astonishment), *al-ḫaṭra* (i.e. thought, which consists in preserving *al-barqa* in the imagination), *al-waswasa* (temptation, concerned with establishing thought in the imagination), and *al-niyya* (intention, which means exercising the power of the will over temptation). *Al-niyya* is considered the first degree of responsibility. The last three transitory Sufi states, *al-ʿaqd* (contract), *al-ʿazm* (resolution) and *al-qaṣd* (intent), are considered as phases which a *Sālik* has to follow so that his acts are transmitted "from his heart to his senses/organs" (Massignon in Al-Khudairi, 1983: 98).

Massignon also refers to al-Ghazali's subdivision of the concept of 'will' in *The Revival of the Religious Sciences* (Vol. 3, p. 31) into: *Ḫāṭir* (idea that crosses the Sufi's mind, insight and reflection), *mayl al-ṭabʿ* (inclination of one's character), *iʿtiqād* (belief), and *qaṣd* (intent). Massignon considers these subdivisions as authentically devised by the Moslem philosophers.

In connection with the term *al-ḫāṭir*, the lecturer refers to Al-Killani's distinction between six kinds of *al-ḫawāṭir* of the heart, which he classifies from the lowermost to the uppermost as follows: the self's *ḫāṭir* for lust, Satan's *ḫāṭir* for infidelity, the spirit's *ḫāṭir*, the *ḫāṭir* of possession, the *ḫāṭir* of reason and the *ḫāṭir* of certainty (for the saints).

Mind and spirit: Between material and spiritual tendencies

By applying the aforementioned methodology, Massignon (in Al-Khudairi 1983, 99) considers that the history of the meanings of the mind has gone through four basic eras: Greek, early Sufis, late Sufis, and Western. Before presenting these stages, Massignon started by determining the dictionary meaning of the word 'mind'. Then he quoted Al-Jurjani's definition: "*al-ʿaql* (the mind) is derived from *ʿiqāl* (the camels' hobbles), preventing it from going astray." (Al-Jurjāni 2004, 128).

Massignon finds it strange that there are more than twenty meanings of the terms 'mind' and 'spirit', given that they are among the most known terms. Furthermore, he refers to the ancient Indian proverb (from 600 years B.C.): "it is impossible

to understand the mind by using the mind" (in *The Upanishad*).[8] He compares the impossibility of understanding the mind by using the mind to the impossibility of the knife's blade cutting itself. Massignon explains the reasons behind the different meanings of the term 'mind' in the Arabic heritage by referring to the different meanings of the concept in the Greek culture.

The terminological meaning of the word 'Mind' for the Greeks and its equivalents in some Modern Western Languages

The word 'mind' is a translation equivalent of the Greek word *nous*, French *raison*, English 'reason' and German *vernunft*. Massignon presents the meanings of the term in Greek philosophy, invoking the Greek philosopher Anaxagoras' definition which states that the mind is a principle for universals and is common among all people. Furthermore, Massignon refers to Aristotle's distinction in his book *Peri psyches* (the Self) between two minds: the active and the passive. By the former, Aristotle means the self-driven mind that perceives the universals. If primary principles such as causality and teleology are lost through sensory experience, they must be present in the active mind. The passive mind or *entendement* (in French, 'understanding' in English) means that the human psyche is ready to perceive.

Being based only on logical proof, Aristotle's doctrine on the the mind was logical. When Plotinus, a renewer of Plato's doctrine, came, he mixed the question of the mind with assumptions of a divine nature. For Plotinus, the One, the Mind and the Soul are three degrees in the appearance of the divinity. The Universal Mind (*Nous*) is the first thing that came from the One. The Cosmic Soul (Psyche) comes from the First Universal Mind. This is precisely the doctrine of esoterism in the first, second and third centuries. Massignon referred to the impact of Aristotle's ideas on his students, namely Themisistius and Alexander of Aphrodisias, each of whom presented his own understanding of the Aristotelian influence.

Concerning the Muslim philosophers' conceptions of *reason*, a case in point is Avicenna's *The Book of Salvation*. For Avicenna, the active mind is the lowest in degree among the cosmic minds. Al-Farabi, who wants to bring together philosophy and Sharia, considers that the *Preserved Tablet* is the *soul* whereas the *pen* is the mind. Massignon points out that what characterizes the Sufis' perceptions of this subject most is that they despise the mind and they prefer the '*talking spirit*'. Hence, for Ibn Attae (died in 309 A.H.), the mind is but an "enslaving machine, not a tool that brings closer to divinity". For Massignon, what characterizes the late Sufis (such as Ibn Arabi) most is the combination of mind and spirit.

8. A class of Vedic treatises dealing with broad philosophic problems of a mystical nature.

Characteristics of the 'Mind' for Modern Western Theorists

According to Descartes, there is no existence of the passive mind; only an active mind exists. He concludes that an animal is only mechanical (cf. doctrine of the 'animal machine'). This is the rationalist doctrine that Gottfried Wilhelm Leibniz criticized in his pre-established harmony theory. Other well known empiricists who believe that all knowledge is derived from experience are Mill, Spencer, Loche, Hume and Condillac (Massignon in Al-Khudairi 1983, 101).

The term 'Love' in human thought

Massignon tracked the term 'love' and its cognate term 'adoration' in different intellectual spheres: Greek, Indian, Islamic and Modern Western. He distinguishes three types of love/devotion: physical love, platonic love and Sufi love (Massignon in Al-Khudairi 1983, 106).

1. Physical Love

According to Stendhal's doctrine (in his book *On Love*), physical love comes in seven stages:

1. simple admiration
2. tender admiration
3. hope
4. the pleasure to sense (see, touch, and sense with all the senses)
5. the first crystallization ("a certain fever of the imagination which translates a normally commonplace object into something unrecognizable, makes it an entity apart") (Stendhal 1842, 52)
6. doubt creeps in
7. the second crystallization "which forms diamonds out of the proofs of the idea – 'She loves me.'" (Stendhal 1842, 25)

In novels by some Indian scholars, such as those of Kālidāsa, the greatest poet and dramatist in the Sanskrit language (5th century C.E.[9]), there is precision in naming the will-related states such as adoration. However, physical adoration is a lower degree of love. Plato gave the best explanation of this matter in his philosophical text known as *The Symposium* or *The Banquet*, where he explains the soul's progression

9. C.E. is abbreviation for Common Era coinciding with the Christian era.

on the stages of love. Worthy of comparison are also Ibn Al-Rumi's famous poetical verses quoted in the *Rasā'ilu* (Epistles/Treatises) of *'Iḫwān al-Ṣafā* (Brothers of Purity) (vol. 3, pp. 64–66) about the deficiency of physical adoration and the yearning for real union:

I embrace her but my soul is still longing for her.
Is it possible to come any closer after a cuddle?
I kiss her to quench my yearning,
but it only gets stronger.
As if my heart would not be healed
except if our souls would be one.

2. Platonic Love

Here, Massignon refers to the Arabic heritage which is full of platonic love stories. He also quotes the Prophetic Hadīth that says: "Whoever falls in love, keeps it to himself, stays virtuous and has patience, then when he dies, he shall die as a martyr". Massignon compares the platonic doctrine of love to the medieval poets' doctrine known as 'courtly love'. Bernardim Ribeiro, a Portuguese poet and writer (1482–1552), revealed that the latter doctrine was adopted from Arabs back at the time of Ibn Quzman al-Qurba. One of the well-known Western poets of platonic poetry is Guido Guinizelli, who was one of Dante's teachers. This is the same Dante who echoes in his book *La Vita Nuova* (also known as *Vita Nova*) the story of Jaufre (Jaufré) Rudel, who died on his way from France to Tripoli (one of the Crusader states) to seek his beloved the Countess Hodierna of Tripoli.

3. Sufi Love

In *Al-Zahra* (Flower Book), Ibn Dawud Al-Aṣfahāni stated: "Some Sufis have claimed that Allah – may His glory be exalted – has only put people to the test of caprice to take it upon themselves to obey the one they love, to avoid his indignation, and to be happy with his approval and satisfaction. Since Allah, the Almighty, is the One and only God and the Lord of the Worlds, people have to act accordingly, showing love and obedience to their creator and sustainer who is not in need of them" (quoted in Al-Masʿudi's *Al-Murūğ* (The Meadows), vol. 8, 384). One of the Sufis Al-Aṣfahāni is referring to is Abu Hamza al-Baghdadi, who was the first one to speak openly about the necessity of divine love unlike the *Fuqahā'* (religious scholars), for whom love has the sense of glory: glorifying and worshiping God. His doctrine was controversial because it allowed people to gaze at beautiful faces, images and representations of human figures. Among his disciples were people who would prostrate before such images (*Al-Hilmāniyīn*'s doctrine). This comes as a surprise in light of the fact that

there are Hadiths (sayings attributed to the prophet Mohamed) that prohibit figurative representation (forming human figures). While condemning idolatry, the Qur'an itself (e.g.: 005:092, 021:052) does not explicitly prohibit the depiction of human figures.

One of the pioneers of *al-Hilmāniyīn*'s trend is Al-Ḥallāğ, the martyr of love and victim of yearning. In contrast to the opinions of scholars of the time, for Al-Ḥallāğ, the devotee's love to the Lord Almighty is better in deed than the simple belief in Allah (Massignon in Al-Khudairi 1983, 110, see also the *Šaṭḥiyāt* by Ruzban al-Baqli who died in 606 A.H.). His expressions of mystic love are to be found in his poems; some of which could be described as mainstream, others as daring, unconventional or even heretical. Various examples are reproduced below.

I never let my soul to be ruined by diseases
for I know that in your company there is a cure.
One glimpse from you -O my hope and my request-
is dearer to me than the whole world.
The soul of the lover is patiently enduring the pains,
it may be, the one who harmed it would one day heal it.
(Al-Shaybi 1993, 522, my translation)

In the previous translated verses, Al-Ḥallāğ is not different from any poet expressing his love to the beloved. Were it not for the fact that Al-Ḥallāğ is known as a Sufi master, such lines could easily be confused with platonic love. On other occasions, Al-Ḥallāğ does not fail to refer to his doctrine of the "oneness of creation" or "oneness of being", either implicitly as in:

Here I am! Here I am! O my secret, O my confident.
Here I am! Here I am! O my purpose, O my essence.
I call to You…no, it is You who calls me to Yourself.
So, did I call you, or did you call me? (Al-Shaybi 1993, 182, my translation)

or explicitly as in:

I am the One whom I love,
and the One whom I love is myself.
We are two souls (spirits) dwelling in one body.
If you see me, you see Him,
And if you see Him, you see us both.
(Al-Shaybi 1993, 342–343, Lewis's 2011 translation)

Unfortunately some of his poems were too daring for the time, explicitly expounding his belief in the oneness of creation as in the previous verses, or expressing his disrespect for religious symbols as in the following verses:

O You who blame me for my love for Him,
how great is your blame!
If only you knew Him of whom I sing/speak,
you would not blame me.
Other men have their pilgrimage,
but my own pilgrimage is towards the place where I am.
They offer sacrifices, but my sacrifice is my own heart and blood.
There are some men who physically circumambulate the Kaaba,
but not with their limbs;
If only they were to proceed reverently around Allah Himself,
They would not need to go round a sacred building (the sacred Kaʿba).

(Al-Shaybi 1993, 487, my translation)

Regrettably, this was considered to be blasphemous at the time. People could not understand the perspective of this mystic love. To **add fuel to the fire**, Al-Ḥallāǧ is also reported to have said: "Ana al-haqq" ("I am the Truth"– meaning I am God, *al-haqq* being one of **the 99 divine names and attributes of Allah**) (Ramli 2013, 107). This was highly blasphemous. Consequently, Al-Ḥallāǧ was found guilty of heresy, persecuted and crucified.

Massignon notes that, notwithstanding Al-Ḥallāǧ's yearning, there is no mention of the charm of young men or women in his poetry as there are in most quartets by Abu Said Ibn Abi Al-Khayr, whose poetry is absolute love, abstract and subjective. The doctrine of Imam al-Ghazali falls within the realm of Sufi love. In *the Revival of the Religious Sciences* (vol. 4, 214), there is a clear indication that he who deserves love is Allah alone. To that effect, al-Ghazali suggests four types of evidence, the fourth being that: "Love is for all beautiful things for beauty's sake not for the fortune that may result from grasping that beauty".

In the same vein, Massignon also refers to the doctrine of Al-Basri Ibn al-Fariḍ and poems such as *Naẓm al-Salwā*, whose opening line is: "In memory of the beloved we drank" (Massignon in Al-Khudairi 1983, 111). Massignon mentions two factors that may have stigmatized the *love* doctrine of the Sufis with *atheism*:

- The promiscuous trend that disrespects the Sharia. Nonetheless, as Al-Tustari said "love is embracing obedience" or as Al-Ḥallāǧ said: "The matter (of the Sufi path) is love for the Lord)".
- The unity of being or *waḥdat al-wuǧūd*, i.e. "ontological oneness of all things" (Renard, 2009, 277) and the absolute *annihilation* concept according to the doctrine of Ibn Arabi.

Renard (2009, 33) explains the absolute annihilation, when "the individual is said to lose all traces of individual personality", which is a fundamental aspect of the Sufi

experience. He explains that "If God is the only reality, and nothing else possesses authentic existence, the full realization of this ultimate truth constitutes "loss" of self in the One. So-called ecstatic utterances (shaṭḥiyāt) such as "I am the Truth" (attributed to Al-Ḥallāǧ) seem to suggest such a radical loss of self."

Massignon's methodology is based on reverting to original philosophical thought and synthesizing different philosophical cultures (Greek, pre-Islamic, Sunna, Indian and Western). To confirm this methodology, he concludes his 22nd lecture, which is devoted to the concept of love, with quotations from *The Song of Songs* in The Bible.

Conclusion

The conclusion to be drawn from these research fragments investigating the specificity of Sufi symbols and their interaction with terms is that, when developing terminology to name concepts and ideas, *'Ahl al-Ṭarīq* (i.e. people of the Sufi path) base themselves on symbols that generally indicate mystery and secrecy. This phenomenon is perplexing. There is a contradiction that stems from the inclusion of *symbols*, which only hint, within *terminology*, which is intended to denote unambiguously.

Going back to the major works by *'Arbāb al-'Aḥwāl*, we discovered that a symbol is a passageway (a bridge or means) through which the Sufi tries to overcome his inability to communicate. Indeed, through symbols, one can express the transcendent and the spiritual in the human experience. Although acting as a salvation outlet to express the absolute, the use of symbolism does affect language both semantically and structurally. The goal throughout this paper has been to emphasize the fact that through the use of symbols the Sufi seeks to erase the differences between himself and the Creator. It is likely that the imaginative use of symbols by the *'Ahl Al-'Aḥwāl* (i.e. people with knowledge of the Sufi Spiritual States) arises from the natural human desire to be creative and to avoid the constraints of tradition and mimicry.

We conclude that the discrepancy between the depth of the inner experience of the *Sālik* and the superficial lexical stock that is available to translate the uniqueness of that experience compels the *Sālik* to resort to artificial methods of expression. Symbols consitute the most effective way to overcome the difficulty of translating the *Bāṭin* and sketching sentiments and emotions. The inevitability of symbols becomes clear when we take into account the breadth of vision, on the one hand, and the limitations of expression, on the other hand. The first points to the extension of the discovery process and the strength of the facts and secrets disclosed. The second distorts the reception process and impedes communication. There is no doubt that the discrepancy between breadth and narrowness, extension and retraction, is the essence behind the Sufi's suffering both at the existential and cognitive levels. There is no way to alleviate

the intensity of this suffering without relying on symbolism and using implicit style. Symbolism, then, is a way to combine opposites.

It turns out that the field where symbols are used determines their nature. In the language of science and technology, the function of symbols is to capture the concept and determine its significance. In poetic and prose literature, which express feelings, symbols reveal their broad semantic scope: they can reveal or hide meanings depending on the nature of the receiver.

It seems that addressing symbols in the language of Sufism requires two skills: a productive ability of the sender and an interpretative ability of the receiver. This interaction becomes positive when the recipient can explore the symbol's depths and infuse it with new meanings. The interaction becomes negative when the symbol is perceived by those who are described as the people of *Rusūm* or people of the *Ġirra*, or anyone who is incapable of seizing the true meaning of the symbol in all its depth. Studying the different forms of interaction with symbols enables us to better understand the reasons behind the symbolization of the Sufis' discourse.

We have observed that the reasons for resorting to symbolization are not limited to the *al-Taqiyya* (i.e. fear of being exposed to the opponents of one's doctrine), but they also include the desire to take advantage of the reductive power of symbols, their ability to transfer many meanings in a few structures, in addition to the desire to excite the receiver and to avoid the simple approach that may lead to the loss of the deep sense. Furthermore, we should not forget the fact that, for the Sufis, symbols are a means to an end. The Sufis show their symbol-terms to those who they want, and they keep them secret from everyone else.

A consideration of the minute aspects of the Sufi language enabled us to safely state that symbols play two roles: a purely symbolic function meant for concealment in case these words were to fall in the hands of the commoners or the people of the *Rusūm*, and a purely terminological function based primarily on agreement and convention when addressing the people of the *Bāṭin* (*Fuhūm*). This dual function appears in the ability of symbols not only to represent those elements that are difficult to express but also in their ability to expose deep human feelings in very much the same way that literature and music try to translate the hidden depths of human existence. It is clear that symbolism plays a pivotal role in Sufi discourse. Since a symbol has multiple potential meanings, recipients of the symbol need to restrict this diversity given the fact that it is impossible for a symbol to convey every meaning in the same interaction. This leads the Sufi to codify the principles of interpretation and restrict the possible readings to compensate for the broad semantic capacity of symbols.

We identified aspects of the overlap between symbols and the associated concepts such as words, signals, hints and puzzles. We also considered the link between symbols and secrecy in the writings of the Sufis. We demonstrated that the deconstructive approach is useless in exploring the semantic dimensions of symbols. We have also

pointed to the central role of imagination in generating symbols that break through the inexpressiveness of fixed expressions in language. We showed that writers, poets, philosophers and rhetoricians use imagination to express their feelings and thoughts. This use of imagination compelled the Sufis to consider the faculty of interpretation as the best way to grasp the spiritual depths of symbols and signs.

In the context of deconstructing the systems of symbols employed in *Turğumān al-'Ašwāq*, we pointed out that Ibn Arabi's work *Ḏaḫā'ir al-'Aʿlāq* is in many ways a deconstructive reading of those symbols that he used in the poetical collection, a reading that moves from the inner intrinsic meanings of symbols to their apparent meanings. This, however, is not the only possible reading (not to say the only appropriate reading) because when they reach their intended recipient, the symbols are no longer the sole property of their producer. Nonetheless, we consider them a rich source that can generate a variety of readings according to the diversity of readers' cognitive backgrounds or ideologies.

We, furthermore, noted the excellent ideas of al-Jili, the Sufi thought leader, about controlling the processes of interpretation. Al-Jili emphasized the need to distinguish between the apparent and hidden meanings of a word, acknowledged the fact that a word (by which he means terms and symbols) can have many meanings, and drew attention to the necessity of taking into consideration the status of the receiver. It is likely that these ideas approximate the achievements of modern critics since Al-Jilli asserts that the multiplicity of the interpretations is primarily due to the multiplicity of the Spiritual States of every *Sālik* and the varying capacities of the people of *Samāʿ* (i.e. those people who, on their path to Sufism, listen to Sufi poetry and music) to understand the meanings according to their rank. This, of course, depends on the nature of the *Maqām* reached by every *Sālik*. We considered al-Jili and Umberto Eco's call to codify and reduce the interpreting operations an invitation to distinguish between faithful interpretations, on the one hand, and corrupt or weak ones, on the other. We made it clear that the fact that Ibn Arabi and al-Jili provide differing meanings of the same symbol shows our inability to prove that a certain interpretation is the correct one. But further still, we submit that believing that there is one and only one correct interpretation is not necessary.

The relationship between the terminological and lexical, or traditional, meanings has been established beyond doubt, albeit with varying degrees of clarity. Nonetheless, there is a conflict between the two meanings when the Sufis endeavor to oppose the lexical meanings recorded in dictionaries and glossaries of the common language by developing new meanings whose dimensions are derived from the depths of the human soul, which is full of contradictions. The multi-dimensional meaning of a symbol is due to the multiplicity of contexts and the different situations and behavioral rank of each *Sālik*.

We have made it clear that symbols can be as diverse as existence itself: the rich cultural heritage of mankind, the different manifestations of nature, the world as a

geographical environment and the diverse astronomical manifestations around us. It is certain, to the Sufis, that the various objects in existence are Divine Words and, just as it is impossible to enumerate the creatures in this world, it is also impossible to enumerate Divine Words, which are infinite.

By inspecting a set of these terms–symbols, it becomes clear that the degrees and aspects of symbolism differ from one Sufi to another and even from one text by the same Sufi to another depending on the *Ḥāl* in which the Sufi finds himself and on the *Maqām* he has reached on the Sufi journey to embrace the divine realities.

Certainly, the concern of modern investigators with respect to Sufi terminology stems from awareness among orientalists of the importance of the Sufi heritage. This awareness was reflected in their editing of Sufi texts and defining the pertinent concepts as is the case of Louis Massignon, Henry Corbin, Rene Guenon, and Frithjof Schuon in Patrick Laude's book *Pathways to an Inner Islam*. In particular, Massignon's efforts achieved a breakthrough in this area and he became a model for Arab and Western scholars alike, especially because he devoted himself to al-Ḥallāǧ's works for decades, and built a glossary of Sufi terminology that, being based on Fisher's methodology, advocated a return to conceptual roots in order to avoid pre-determined interpretations.

As stated before, symbols are open to different interpretations. The topic of symbols is particularly difficult when combined with that of Sufism. Nonetheless, symbolism opens various directions for exploration, some mystical, others enlightening. Symbolism as a means of expression reminds us that there is an inner, esoteric Islam, one that emphasizes spirituality, and one challenges reductionist or stereotyped views that Islam is fundamentally legalistic. Massignon did a great job at this.

References

Abu Zaid, Ahmed. 1985. "Al-Ramz wa al-'Usṭūra wa al-Binā' al-Iğtimā'ī." *ʿĀlam al-Fikr Journal* 16 (3).

Abu Zaid, Nasr Hamed. 1983. *Falsafat al-Ta'wīl: Dirāsa fi Ta'wīl al-Quran ʿind Ibn Arabi*. Beirut, Lebanon: Dār al-Wahda.

Adūnis. 2006. *Al- Ṣufiyya wa al-Suryāliyya*. Beirut, Lebanon: Dār al-Sāqī.

Afifi, Abu al-ʿUlā. 1969. "Ibn ʿArabi fī Dirāsātī." In the *Proceedings of the Conference on Ibn Arabi on the Occasion of his Eighth Centenary of his Birth*. Dār al-Kitāb al-ʿArabī .

Al-Buruswi, Ismail Hakki. 1330 AH. *Tafsīr Rūḥ al-Bayān*. Dār Saʿāda.

Al-Ghazali. n.d. *Rawdat al-Ṭālibīn*. Edited by *Mohammed Bakhit*. Beirut, Lebanon: Dār al-Nahḍa.

Al-Hakim, Suad. 1981. *Al-Muʿğam al-Ṣufī*. Beirut: Dandara.

Al-Jilāni, Abdul Qadir. 1997. *Sirr al-'Asrār*. Edited by Khalid Mohammed Adnanal-Zarʿi and Mohammed Ghassan Nasuh ʿAzkul. Damascus: Dār Al-Ansārī and Dār Al-Sanābel.

Al-Jili, Abdul Karim. 1997. *Al-'insān al-Kāmil fī Maʿrifat al-'Awā'il wal-'Awāḫir*. Edited by Salah bin Muhammad bin ʿAwidah. Dār al-ʿIlmiyya al-Kutub al-Ilmiyya.

Al-Jili, Abdul Karim. 2004. *Al-'Isfār ʿan Risālat al-'Anwār fīmā Yataǧallā li-'Ahl al-Ḏikr min al-'Asrār*. Edited by ʿAsim Ibrahim al-Kiali and al-Husayni al-Shaḏili al-Darqawi. Beirut: Dār al-Kutub al-ʿIlmiyya.

Al-Jili, Abdul Karim. *Ġuniyat 'Arbāb al-Samāʿ fi Kašf al-Qināʿ ʿan Wuǧūh al-'Istimāʿ*. A manuscript at the Royal Library in Rabat, No: 1747/3.

Al-Jili, Abdul Karim. *Šarḥ Muškilāt al-Futūḥāt*. A manuscript in digital format available on the link: /libback.uqu.edu.sa/ipac20.

Al-Jurjani, al-Sharīf. 2004. *Al-Taʿrifāt*. Edited by Muhammad Sadiq al-Minshawi. Cairo: Dār al-Faḍīla.

Al-Masʿudi. 1841. *Meadows of Gold and Mines of Gems*, an English translation of the *Muruj al-dhahab* by Aloys Sprenger. London: Harrisson and Co. Printers.

Al-Nabulsi, Abdulghani. 2000. *Ḫamrat Al-ḥān wa Rannat al-'Alḥān fī Šarḥ Risālat al-Shaykh 'Arsalān*. Edited by Abdul Warith Muhammad Ali. Beirut: Dār al-Kutub al-ʿIlmiyya.

Al-Nabulsi, Abdulghani. 2013. *Al-Maʿārif al- Ġaybiyya fi Šarḥ al-'Ayniyya al-Ǧīliyya*. Edited by Assem Ibrahim Kayali.

Al-Nabulsi, Abdulghani, and Hasan al-Būrīni. 2003. *Šarḥ Diwān Ibn al-Fāriḍ*. Edited by Abdelkarim al-Namri. Lebanon: Dār al-Kutub al-ʿIlmiyya.

Al-Qashāni 2005. *Kašf al-Wuǧūh al-Ġurr li-Maʿanī Naẓm al-Durr*. Edited by Ahmad Farid al-Mazīdi. Dār al-Kutub al-ʿIlmiyya.

Al-Qushayri. 1969. *'Arbaʿu Rasa'il fi al-Taṣawwuf*. Edited by Qasim al-Samarrā'i. Iraqi Academy of Sciences Press.

Al-Qushayri. 1989. *Al-Risāla al-Qušayriyya*. Edited by Abdel Halim Mahmoud Ben Mahmoudal-Sharif. Mu'assassat al-Šaʿb.

Al-Shaʿrani, Abdul Wahab. 1988. *Al-'Anwar al-Qudsiyya fī Maʿrifat Qawāʿid al-Ṣufiyya*. Edited by Abd al-Baqi Surūr and Muhammad ʿīd al-Shāfiʿi. Beirut: Maktabat al-Maʿarif.

Al-Shaʿrani, Abdul Wahab. 1999. *Kašf al-Ḥiǧāb wa al-Rānʿan Waǧh 'As'ilati al-Ǧān*. Beirut: Dār al-Kutub al-ʿilmiyyā.

Al-Shaybi, Kamil Mustafa (ed.). 1993. *Šarḥ Diwān Al-Ḥallāǧ*. Tripoli-Lebanon: Manshurat al-Jamal.

Al-Sullami, Abu Abd al-Rahman. *Ḥaqā'iqu al-Tafsīr*. Available on the link: http://www.altafsir.com.

Al-Tawḥidi, Abu Hayyān. 1982. *Al-'Išārāt al-'Ilāhiyya*. Edited by Widād al-Qādi. Beirut: Dār al-Qādi and Dār al-Ṭaqāfa.

Altizer, Thomas J. J. et al. (eds.). 1962. *Truth, Myth, and Symbol*. Prentice-Hall.

Al-Tūsi, al-Sarrāj. 1960. *Al-Lummaʿ fī al-Taṣawwuf*. Introduced and edited by Abdel Halim Mahmoud and Tah Abdel Baqi Surūr. Egypt: Dār al-Kutub al-Ḥadīṯa.

Al-Tustari. 2004. *Tafsīr al-Qur'ān al-ʿAẓīm*. Edited by Tah Abdalrra'uf Saʿd and Saʿd Hasan Muhammad Ali. Dār al-Ḥaram.

Amili, Sayyid Haydr. 1975. *Al-Muqaddimāt min Kitāb Naṣṣ al-Fuṣus fī Šarḥ Fuṣūs al-Ḥikam*. Edited by Henri Kurban and Uthman Yahya with an introduction. Tahran.

Aragon, Louis. 1970. *Traité du Style*. Paris: Gallimard.

Avicenna. c.1014–20. *Kitāb al-Naǧāt* (*The Book of Salvation*). Translated by F. Rahman as Avicenna's Psychology: An English Translation of Kitab al-Najat, Book II, Chapter VI with Historical-philosophical Notes and Textual Improvements on the Cairo Edition. Oxford: Oxford University Press, 1952.

Barthes, Roland. 1992. *Al- Ḥayāl al-Ramzī*. Translated by Isa Ali al-Akub. Beirut: Arab Development Institute.

Borini, Hassan, and Abdulghani al-Nabulsi. 2003. *Šarḥ Diwān Ibn al-Fāriḍ*. Edited by Mohammed Abdul Karim al-Nimri. Beirut: Dār al-Kutub al-ʿIlmiyya.

Corbin, Henry. 2006. *Al-Ḥayāl al-Ḥallāq fi Taṣawwuf Ibn Arabi*. Translated by Farid al-Zahi. Morocco: Manšūrāt Marsam.

Decharneux, Baudouin, and Luc Nefontaine. 2014. *Le symbole*. PUF.

Eco, Umberto. 1972. *La Structure Absente: Introduction à la Recherche Sémiotique*. Paris: Mercure de France.

Eco, Umberto. 1996. *Al-Qāri' fī al-Hikāya*. Translated by Antoine Abu Zeid. Casablanca: The Arab Cultural Center.

Eco, Umberto. 2009. *Al-Ta'wīl wa al-Ta'wīl al-Mufriṭ*. Translated by Nasser Al-Halawani. Markaz al-'Inmā' al-ʿArabi.

Eliade, Mircea,Joseph M. Kitagawa and (ed.). 1959. *The History of Religions: Essays in Methodology*. The University of Chicago Press.

Elyaboudi, Khaled. 2013. "'Asāmi al-ʿUlūm bayna al-'Irṭiyya wa al-Kasbiyya." *Muṣṭalaḥiyyāt* 4–5: 207–276.

Elyaboudi, Khaled. 2014. *Al-Tadāḫul al-Muṣṭalaḥī fī al- Ḫitāb al-Ṣufī*. Fez: Oumayma Press.

Ḥallāğ. 2002. *Complete Works*. Edited by Qāssim Mohammed Abbās. Riad al-Rais books.

Hilmi, Mohammed Mustafa. 1969. *Kunūz fī Rumūz*. In the Research Memorial Book: Muhyiddin Ibn Arabi. Dār al-Kitāb al-ʿArabī.

Ibn ʿAğība, Ahmad. 1913. *'Īqāẓ al-Himam fī Šarḥ al-Ḥikam*. Egypt: al-Matbaʿa al-Ğamāliyya.

Ibn ʿAğība, Ahmad. n.d. *Miʿrāğ al-Tašawwuf 'ilā Ḥaqā'iqi al-Taṣawwuf*, followed by *Kašf al-Niqāb ʿan Sir Lubbi al-'Albāb*. Introduced and edited by ʿabd al-Majid Khiali. Casablanca: Markaz al-Turaṯ al-Ṭaqāfī.

Ibn al-Fāriḍ. n.d. *Diwān Ibn al-Fāriḍ*. Beirut: Dār Sādir.

Ibn Arabi, Muhyi al-Din. 1966. *Ḍaḫā'ir al-'Aʿlāq Šarḥ Tarğumān al-'Ašwāq*. Edited by Mohammed Abdul Rahman Al Kurdi. Paris: Dār Bebleon.

Ibn Arabi. 1853. *Al-Futūḥāt al-Makkiya*. Egypt.

Ibn Arabi. 1985. *Šağaratu al-Kawn*. Edited by Riad al-Abdullah. Beirut: Dar al-Ilm.

Ibn Arabi. 1966. Turjumān al-Ašwāq. Beirut: Dar Sadir.

Ibn Arabi. 1992. *Al-Futūḥāt al-Makkiya*. Edited by Yahya Othman. Al-Hay'a al-Maṣriya al-ʿĀmma lil-Kitāb.

Ibn Arabi. 1966. *Turjumān al-Ašwāq*. Beirut: Dar Sadir.

Ibn Arabi. 1998. *Rasā'il Ibn Arabi*. Edited by Qassim Mohammed Abbas and Hussein Mohammed Ajil. Abu Dabi, UAE: Publications of the Cultural Foundation.

Ibn Arabi. 2002. *Rasā'il Ibn Arabi, al-Quṭb wa al-Naqbā' wa ʿUqlat al-Mustawfiz*. Introduced and edited by Saeed Abdel Fattah. Beirut: Mu'assasat al-Intišār al-ʿArabi-Arabi.

Ibn Arabi. 2002. *Rasā'il Ibn Arabi*. Edited by Samir Khaled Rajab. Dār 'Iḥyā' al-Turāt al-ʿArabī.

Ibn Khaldun. 1996. *Šifā' al-Sā'il li-Tahḏīb al-Masā'il*. Edited by Muhammad Hafiz. Beirut: Dār al-Fikr al-Muʿāṣir.

Ibn Sabʿīn. 2002. *Rasā'il ibn Sabʿīn*. Edited by the Egyptian General Organization for authoring, News and publishing. Cairo.

Iḫwān al-Ṣafā. *Rasā'ilu of Iḫwān al-Ṣafā* (*Epistles/Treatises* by Brothers of Purity). Bombay edition in four volumes.

Laude, Patrick. 2010. *Pathways to an Inner Islam*. Massignon, Corbin, Guenon, and Schuon: State University of New York Press.

Lewis, Bernard (trans.). 2011. *Music of a Distant Drum: Classical Arabic, Persian, Turkish & Hebrew Poems*. N.J.: Princeton University Press.

Maḏkūr, Ibrāhīm (ed.). 1969. *Muḥyī al-Dīn Ibn ʿArabī fī al-Ḏikrā al-Miʾawīyya al-Ṯāmina li-Mīlādihi (1165–1240)*. Egypt: Dār al-Kitāb al-ʿArabī.

Mahmoud, Zaki Naguib. 1969. "Tarīq al-Ramz ʿind Ibn Arabi." In *Al-Kitāb al-Tiḏkāri* (The memorial book: Muhyiddin Ibn Arabi, the eighth anniversary of his birth). Cairo: Dār al-Kitāb al-ʿArabī.
Massignon, Louis. 1922. *Essai sur les Origines du Lexique Technique de la Mystique Musulmane*. Paris: Paul Guethner.
Massignon, Louis. 1983. *Muḥādarāt fī Tārīḫ al-'Iṣṭilāḥāt al-Falsafiyya al-ʿArabiyya*. Edited by Zaynab al-Khudairi. Al-Maʿhad al-ʿIlmī al-Faransī.
Nasr, Jawda ʿĀti. 1978. *Al-Ramz al-Šiʿrī ʿind al-Ṣūfī*. Beirut: Dār al-'Andalus and Dār al-Kindī.
Ramli, Yusri Mohamad. 2013. "Martyrdom of al-Hallaj and Unity of the Existence: the Condemners and the Commenders." *International Journal of Islamic Thought* 3: 106–112.
Rastier, François. 1987. *Sémantique Interprétative: Formes Sémiotiques*. Paris: Presses Universitaires de France.
Renard, John. 2009. *The A to Z of Sufism*. Plymouth-UK: The Scarecrow Press.
Ricœur, Paul. 1959. « Le Symbole Donne à Penser. » *Esprit* 27 (7–8).
Ricœur, Paul. 1986. *Du texte à l'Action: Essais d'Herméneutique II*. Paris: Seuil. https://doi.org/10.14375/NP.9782020093774
Ricœur, Paul. 2005. *Ṣirāʿ al-Ta'wīlāt*. Translated by Munḏir ʿAyāchi and George Zinati. Dār al-Kitāb al-Ğadīda.
Stendhal. 1942. *De L'Amour* (*On Love*). Paris: Mongie. Translated from the French with an introduction and notes by Philip Sidney Woolf and Cecil N. Sidney Woolf. New York: Brentano's 1915.
Zayʿūr, Ali. 1979. *Al-Tafsīr al- Ṣūfī al-ʿIrfānī*. Dār al-'Andalus.
Zarrūq, Ahmed. 1976. *Qawāʿid at-taṣṣawwuf*. Egypt: Matbaʿat al-Kuliyyat al-Azhariyya.

Appendix

Some of Massignon's sources in constructing the terminological lexicon

a. Arabic sources:
   - *Rasā'ilu (Epistles/Treatises) of Iḫwān al-Ṣafā* (Brothers of Purity). Bombay edition in four volumes.
   - Al-Khawarizmi's *Mafātīḥ al-ʿUlūm* (Keys of the Sciences). Leiden edition 1895, edited by Van Vloten.
   - Al-Ghazali's *Iḥyā' ʿUlūm al-Dīn* (The Revival of the Religious Sciences). Egyptian edition.
   - Ibn Rushd's *Talḫīṣ mā baʿda al- Ṭabīʿa* (A Commentary on Aristotle's Metaphysics). Egyptian edition.
   - Al-Kalabaḏi's *Al-taʿarruf li-Maḏhab 'Ahl al-Taṣawwuf* (The Doctrine of the Sufis).
   - Al-Qushayrī's Epistle on Sufism (*Al-Risāla al-Qušayriya*, printed on the margin of *Šarḥ Al-'Ansār* by Sheikh al-ʿArūsi (4 volumes).
   - Al-Hajwiri al-Jilabi's *Kašf al-Maḥğub* (Revelation of Mystery), translated into English and edited by the orientalist scholar [a term that Massignon used in his lectures] Nicholson in the Gibb's collection.

- Ruzbihan al-Baqli's Al-*Šaṭḥiyāt* (Ecstasies), of which two copies are in Astana.
- Ibn Arabi's '*Kitāb al-'Iṣṭilāhāt al-Ṣufiyya* (Sufi Terminology), edited by Flügel on the margin Al-Jurjani's Al-Taʿrifāt (The Definitions).
- al-Taḥanawi al-Hindi's *al-Kaššāf* (A Dictionary of the Technical Terms Used in the Sciences and Arts), edited by the orientalist Sprenger in Calcutta in 1845.
- Ibn Sina's *Al-Naǧāt* (Deliverance).
- Ali Akbar ben Mahmoud al-Najafi's *Al-Furūq al-'Iṣṭilāḥiyya* (Terminological Differences). Egyptian edition.

b. Western sources and references:

- Henry Calderwood (1830–1897) and William Fleming (1791–1866), *Vocabulary of philosophy*, 1895.
- André Lalande, *Vocabulaire Technique et Critique de la Philosophie*, 1902.
- Eucken, *Geschichte der Philosophischen Terminologie*, 1879.

CHAPTER 9

Linguistic inferiority in software localization

Lahousseine Id-youss & Abied Alsulaiman

Software localization constitutes an important economic and cultural activity. It involves producing a version of a software product in a different language (the target language) than the language of the original version (the source language). The technical challenges associated with software localization seem to receive more attention from field specialists, while linguistic matters are considered secondary in importance. This article aims to highlight linguistic requirements in software localization through a study of the Arabic localized version of Skype. In particular, we will demonstrate that the linguistic approach adopted by the localizer is largely literal, and this has ramifications for product quality.

Keywords: software localization, arabized Skype, technical skills, cosmetic bugs, linguistic approach, literalism

Introduction

The software industry is considered one of the most rapidly growing economic sectors. This rapid growth can be attributed to increasing computational power and to innovative developments in programming languages. Every day new programs are being developed to perform a variety of tasks and to solve all kinds of problems. As a rule of thumb, the success of any software product depends on the number of users it attracts. The more it sells, the more successful it is.

It follows that, in order for a software product to increase its chances of success, it needs to penetrate international markets. Obviously, some of the major obstacles that block the way toward these markets include language and culture. Potential users of the software in different parts of the world speak different languages than the one in which most applications were written, and they belong to different cultures with different value systems. This fact necessitates the involvement of a third party to bridge the linguistic and cultural gap between the programmer and the international users of the software.

Translation plays the role of this third party to remedy the problem. Given the fact that rendering a piece of software from one language into another involves a great deal of extra-translational technical considerations, this form of translation has come to be

https://doi.org/10.1075/hot.2.10idy

called "software localization". The use of 'localization' entails that the target product is supposed to exhibit a perfect conformity to the local market in order to satisfy the needs of the target audience as much as possible. This form of domestication is the method that the localizer is expected to espouse in the translation process in order to attract more customers. Localization thus plays an important commercial role.

The commercial importance of software localization has been constantly increasing since the late 1980s when "the US software market began to saturate, and companies started to look abroad to tap into other sources of revenue" (Dunne 2006, p. 173). According to Dunne, in 2006, international sales accounted for approximately 50 percent of software sales. The field of software localization has come to cover "diverse industrial, commercial and scientific activities ranging from CD productions, engineering, and testing software applications, to managing complex team projects simultaneously in many countries and languages" (Gambier & Van Doorslaer 2010, p. 61).

The rapid growth of the software industry constantly generates new technological concepts, which have serious implications for potential target languages. The designations of these new concepts, which are obviously lexicalized in the language in which they originally emerged, will need – if they are meant to be localized – to have an equivalent linguistic form in the target language. Without these equivalent terminological units, the localizer's job can truly become difficult.

Technology-related conceptual evolution, which must be accompanied by linguistic evolution, constitutes one aspect of globalization. Target languages in different parts of the world have to be ready to undergo some morphological transformational changes in order to account for the newly born concepts. Unfortunately, this need does not become apparent and particularly acute until a piece of software is all of a sudden sent to a localizer to produce a target version of the software in the shortest time possible.

The haste with which work in software localization projects is carried out seems to negatively affect the quality of the target product. An important step in the phase of software testing, however, is quality assurance (QA), in which the target program is verified to make sure that it is error-free. Quality assurance is important because even if the target piece of software shows overall effectiveness, there could be negative aspects that have eluded detection during the functional testing phase.

In this article, we will shed some light on the quality of an aspect in software testing which is often viewed as minor compared to functional matters. This aspect relates to the language quality of the target product. More specifically, we mean to highlight the linguistic approach that localizers take toward completing their target versions of the software. The focus of the article is on the software product itself, rather than on other components such as Help Files, User Manuals, CD Jackets etc.

In order to pinpoint the translational approach pursued, we have undertaken a thorough linguistic analysis of the Arabic version of Skype as a case study of a

localized software product. In this analysis, we have compared the localized product against its French and English counterparts in an attempt to highlight the kind of language-related problems that are associated with this form of localization into Arabic.

The present article is divided into two parts. The first part briefly describes the technical aspects of software localization, and the second one highlights a number of linguistic matters of the field. In this second part, we outline the results of our analyses of the Arabic version of Skype. Our research indicates that the linguistic aspect of software localization needs much further attention and improvement.

1. Technical issues of software localization

For many, rendering a piece of software from one language into another is a purely technical matter. The fact that the target version of the software functionally behaves in the same way as the source version seems to be superior to any other consideration. In this section, we will shed light on this area of translation, while emphasizing some of its technical challenges.

Software localization is the technical and linguistic adaptation of computer software packages and their associated documentation, so that the localized application works effectively in another language and suits the requirements of different language markets (Kearns 2006). In other words, it is the process whereby a piece of software produced in one culture is adapted to serve the needs and outlooks of another (Keniston 1997).

Even if the emphasis in Keniston's (1997) view is placed on the notion of culture, the main objective behind localization is of economic nature. The adapted software is meant to find its way to other markets than the one it was originally written for. This creates a paradox where the seemingly contradictory notions 'localization' and 'globalization' become more or less synonyms. The shortcut leading to globalization is the adaptation of products to local markets: localization.

A few words need to be said here about an important notion that is closely associated with localization, namely 'internationalization'. Limaye (2009, p. 267) defines this notion as "the adaptation of products for potential use virtually everywhere". It is clear here that 'internationalization' is a concept that is associated with the development of the program. In other words, it can be seen as the steps that the programmer takes to make his/her software localizable into a different language and culture than the one it was made for.

Obviously, localizing a piece of software entails adapting it to the linguistic and cultural norms of the target market. Every linguistic and cultural peculiarity of the target audience is supposed to be taken into account by localizers (Id-youss, Steurs &

Alsulaiman 2014). Failing to observe the target cultural specificities can unfortunately lead to undesirable economic consequences.

This section is geared toward the technical aspects involved in adapting a software application for use in a new target language market. From a technical point of view, a piece of software is defined as "written data, such as programs, routines, and symbolic languages, essential to the operation of computers" (Sosa-Iudicissa 1997, p. 89). It can also be defined as "a set of programs that enable users to perform specific information processing activities" (Bocij, Greasley & Hickie 2008, p. 122). In the same vein, it is viewed by Gupta (2008) as a set of programs necessary to carry out operations for a specified task, where these programs consist of step-by-step instructions telling the computer how to carry out operations for a specific job.

Just like in the design phase of a piece of software, in localization, the source code is distinguished from the user interface (UI). While source code can be viewed as a set of rules created by programmers to instruct computers how to operate (Roff & Roff 2001), the user interface is what is displayed on the screen when the application is launched, and it consists of the cursors, prompts, icons, dropdown-menus, etc., which allow the user to get something done (Doyle 2001).

As Id-youss, Steurs and Alsulaiman (2014) explain, the distinction is made within source code files between translatable strings and untranslatable ones. Translatable strings are those pieces of text that appear in the software user interface. Untranslatable strings, on the other hand, are pieces of code used by the computer to execute specific actions. In general, localizers are not supposed to modify the codes, except for some very limited reasons, because that can lead to bugs in the target version of the software (Id-youss, Steurs & Alsulaiman 2014). An example of the situation where the localizer may intervene without creating a bug is the assignment of hotkeys, where the localizer changes the hotkey shortcut letter to match the hotkey term in the target language.

Oaks and Bay (1993) show that strings that should be translated can usually be found inside double quotes. However, localizers are supposed to pay close attention even to what is placed between quotes. The statement that all translatable items are inside quotes is utterly correct, but this does not mean that any text inside quotes is necessarily translatable. Common sense is an appropriate guideline there. As an example, even if the string "resource.h", is between double quotes, it should not be touched. This is partly because the string consists of the word 'resource' and the letter 'h' linked by a point, and this type of string (containing the point) is not expected to appear in a menu or a dialogue box.

Among the main sections that a piece of software contains, we can cite, for instance, menus, dialog boxes and string tables. String tables, compared to menus and dialog boxes, contain strings that appear dynamically in combination with other events. File transfer percentage when copying a file from a folder to another is a good

example of such an event, i.e., numbers from 1 through 100 are inserted dynamically and automatically depending on a number of factors such as the file size (Id-Youss, Steurs & Alsulaiman).

Inserting elements from different parts of the source code into different parts of the UI in an automatic manner so as to form a meaningful linguistic unit (a grammatical phrase or sentence) is not at all an easy endeavour. Obviously, the genetic relations between languages can play an important role there. The closer the source and target languages are, the easier the process can be. If the software, for instance, were to be rendered from English into Arabic, whose syntax requires agreement between adjectives and the nouns they modify in terms of case for instance, then the story would not go as smoothly as it would if Dutch were the target language, for instance.

In this regard, according to Paige, Evans Pim, and Templ (2008), the Arabization of software poses some of the greatest localization challenges due to two main reasons, i.e., poor software support and an acute shortage of Arabic translators. Part of the challenge behind localization into Arabic is technical in nature and relates to such areas as fonts, right-to-left text, and standards, while part of it is financial and results from a lack of interest on the part of developers.

Let us now say few words about the nature of the software programs that localizers receive from their clients. These programs are usually delivered to localizers in form of a package, which, next to the computer program itself, consists of documentation, which together with help files provide information about the various functionalities and usage of the program. The terminology in the documentation needs to be consistent with the terminology in the software itself; otherwise, the software user can become confused or have difficulties using the software.

With respect to the computer program component of the package, it sometimes comes as source code or in binary format (Edwards & Kulczycki 2009). Source code can be defined as human-readable computer language (Grossman 2009), which can be accessed via simple text editors such as Notepad. Binary files, on the other hand, are "programs or data files in machine-readable forms" (Nandhakumar 2011, p. 42), and they can be accessed using specialized localization tools. It is perhaps worth noting here that source code can also be accessed and translated using most computer-assisted translation (CAT) tools.

Software localization has been made possible and easier thanks to the development of special localization tools, which greatly help in rendering graphical user interfaces, i.e., dialog boxes, menus, and all kinds of messages that are displayed on a computer screen (Somers 2003). These tools extract translatable strings for the translator to translate, and protect untranslatable ones by making them un-editable by the translator. Moreover, they help in adequately resizing dialog boxes and menu items because they provide the WYSIWYG mode (what you see is what you get). Examples

of some interesting software localization tools include Passolo, Corel Alchemy Catalyst, and RC-WinTrans (Somers 2003).

An important aspect of software localization tools is that they offer adequate solutions to the challenges of achieving terminological consistency. The consistent use of one term designating a specific concept throughout the localized product is of utmost importance, especially as we sometimes have to deal with packages consisting of hundreds of thousands of words. The positive trait of these localization tools which ensures terminological consistency is that they behave like translation memory systems, in the sense that they store previously translated strings, which are presented to the translator whenever a similar string or terminological unit appears on the screen (Id-Youss, Steurs & Alsulaiman 2014).

The last phase of software localization is software testing, and from the quality assurance point of view, this phase can be seen as the decisive one, compared to other phases such as receiving the files and producing the target version of the software. Testing alone determines whether the target version is at least functionally acceptable and error-free. Errors, if they are detected, are known as bugs, either functional or cosmetic ones. While functional bugs, as the term reveals, are those problems which interfere with the proper functioning of the software; cosmetic ones are minor issues relating to spelling mistakes, grammar errors, text alignment, and so forth. According to Hasted (2005), cosmetic bugs are considered trivial and are easy to fix. However, even if these bugs do not jeopardize the viability and the functioning of a program, they ought to be corrected as quickly as possible.

The target version of the software is tested by evaluating three parts of the product: the software itself, help files and documentation. The documentation is usually evaluated by looking at the language used (mistranslation, accuracy, terminology, consistency…) and by looking at formatting (lay-out, typography, graphics, charts). Help files are checked for layout, navigation, index, and other aspects. Finally, the software itself is evaluated both on superficial aspects such as formatting, spelling, and so forth, and the most important element: the functionality testing (buttons, links, hotkeys, etc.). A good example of a quality control system is the LISA QA Model for software localization, where errors are categorized as minor, major or critical (Id-Youss, Steurs, and Alsulaiman).

There are two types of testing methods: systematic and ad hoc. According to Newton (1992, p. 352), systematic testing, which is comprehensive by nature, can be seen as "path coverage, which calls for exercising every control flow path in a program". Following this documented and consistent testing procedure, testers follow specific scripts which guide them into particular areas in the software. Ad hoc testing, on the other hand, is considered to be a quick testing procedure, because it "is not thorough or documented and thus is not repeatable or consistent" (Vogel 2011, p. 287). Vogel (2011) explains that this ad hoc testing method is normally performed by testers who

have a great deal of experience with the software, and they know where and how to find any latent errors.

The fruit of software testing is the production of a bug report, which can be defined as a technical document that outlines the various symptoms or failure modes that are associated with a single bug (Black 2002). According to Black, a good bug report is one that provides the project management team the information they need to decide whether to fix the bug, and when to do so. Bug report writing is an important task in the context of software localization and program debugging, which is the activity of discovering and correcting erroneous statements in the software (Wermelinger & Margaria-Steffen 2004).

To conclude this section, in software testing, technical matters take priority over linguistic matters. Translation issues are minor cosmetic bugs that do not disturb the proper functioning of the program. This attitude is the central theme of the next section.

2. Linguistic issues

There is no doubt that language is a key notion in software localization. Together with certain graphical elements such as icons, language constitutes the medium through which the target users can properly interact with the localized software. Thus, the linguistic form in which the target version of the program appears does deserve more attention on the part of the localization industry. In this section, we will shed some light on the importance of the linguistic form, by presenting the results of our linguistic analysis of the Arabic localized version of Skype.

Keniston (1997) asserts that software localization presupposes linguistic localization, but goes beyond it; and he rightfully considers that the linguistic aspect is well studied compared to the technicalities involved in this field. It is perhaps due to this kind of attitude, which indeed prevails in the localization industry, that linguistic issues within this area paradoxically become less important and "marginal". The paradox here stems from the fact that even if language is a well-studied matter in translation, the fruit of these studies does not seem to be visible in some localized programs.

We have seen in the previous section that translational problems are viewed in software testing as mere cosmetic bugs, which are obviously considered less problematic in comparison with functional bugs, which can cause the software to malfunction. It is arguably understandable that correcting a translational error can be a lot easier than correcting a problem associated with programming language; however, this should not be taken to mean that the fact that the target version of the software functionally performs the same tasks as its source counterpart is enough irrespective of the language quality.

Let us not forget that the goal behind localizing a piece of software is economic: enable the software to be purchased and used by as many people as possible. Language is undeniably a key element in that process. Thus, the target product must be written in an acceptable linguistic form in order for its users to interact with it correctly. Otherwise, it is doomed to fail.

This marginalized view of the localized "text" as opposed to "function" is also evident in localization training workshops, where reference to the translatable text comes in form of short discussions around the importance of using up-to-date style guides. The discussions unfortunately hardly touch upon the reality that some languages in the world lack equivalent terminologies for some concepts, let alone adequate style guides. These workshops focus on how to substitute some linguistic code for another, and anyone who can do that merits the title of "localizer".

Arabic is one of the languages that lacks equivalent terms for some new concepts in emerging technological domains. Localizers are frequently faced with the difficult task of coining new terms without adequate training in the field. They are furthermore ill prepared for this challenge by the obsession in the localization industry with the technical aspect of software localization. The communicative form in which the target version should appear, and the adequate approach to this form of translation, have somehow been overlooked.

It is perhaps clear that the purpose behind rendering a program from one language into another is often a commercial one. This entails that the most adequate approach would be the freest mode of translation, where the target audience is a major criterion for one's lexical choices. A natural linguistic form that would help users interact properly with the localized product would be ideal. Yet, in our research, the localizer into Arabic prefers a literal path.

As explained earlier, in order to show the translational approach that localizers into Arabic take, and in order to shed light on certain linguistic problems, we have undertaken an extensive analysis of the localized version of Skype in Arabic. To that end, we have compared the Arabic version against its English and French counterparts. Obviously, English is the source language, and Arabic is the target language. The French copy of the software has been used as a checking device to see if there are any comparable phenomena in the two localized versions.

Skype is a communication application which facilitates free voice, video and instant messaging using a WiFi or cellular connection, and it allows for file transfer to other Skype contacts (Hayes 2014). It was founded in 2003 and headquartered in Luxembourg (Ireland, Hoskisson & Hitt 2014). The focus of the overview below is mainly on the Skype menu bar, and it consists of seven dropdown lists, including Skype, Contacts, Conversation, Call, View, Tools and Help. Our analyses of the Arabic localized version of Skype was carried out on Skype Version 7.33.

Based on these analyses, we conclude that literalism is the dominant characteristic of the Arabic localized product. Some literal choices are justified – as we will see;

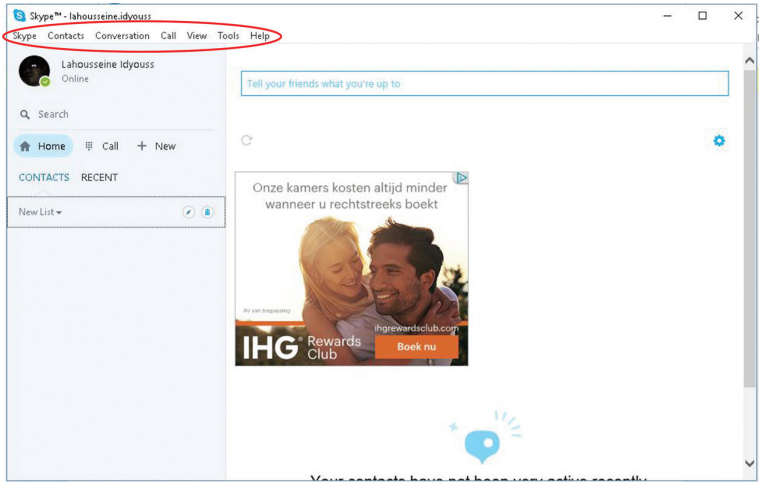


Figure 1. Screenshot of the English Skype menu bar

however, most of the literal lexical choices are problematic and need improving. This conclusion holds for all levels, including menus and dialog boxes.

Before going into the details relating to these linguistic issues, however, we highlight a few issues relating to the quality of the localized software from a technical point of view. It is worth noting that no serious technical problems were observed. Skype in Arabic functions more or less in the same way as its English counterpart does. A minor issue relates to duplicate hotkeys, where the same key in certain dropdown lists has been assigned to two menu items. For example, the hotkey "ح" is assigned to both "حالة الاتصال" (Online status) and "حسابي" (My account). The result is that instead of activating the menu item in question when you click the hotkey, the cursor simply switches between the two items. This is considered as minor; first because it does not lead to any serious functional problem and second because it is a commonly encountered matter in localized programs in other languages. The negative aspect about it, however, is that it is recurrent; it can be found in almost every dropdown list.

The reason behind these duplicate hotkeys can be attributed to the fact that the Arabic localizer always opts for the first letter of the word when creating the hotkey. Designating the first letter of the menu item as a hotkey is a commonly followed practice; however, it is not a rule especially when different menu items within the same level begin with the same letter. This is beautifully demonstrated in the French version. For instance, in the Skype dropdown list, all the menu items there begin with a different letter; therefore, it was possible for the French localizer to follow the good practice of opting for the first key. However, in the next dropdown list, Contacts, two items "Ajouter un contact" (Add Contact) and "Afficher les contacts Outlook" (Show Outlook Contacts) begin with the letter "a". In this case the localizer assigned the hotkey

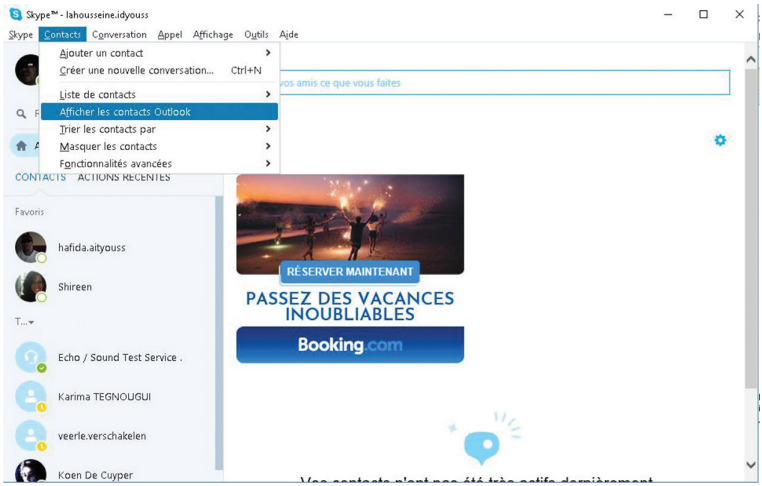


Figure 2. Screenshot of the French dropdown list

"a" for the first one and the hotkey "f" for the second – and thus avoiding duplicate hotkeys. Another example from the same level which shows that the French localizer is perfectly aware of the issue is that even though the item "fonctionalités avancées" (Advanced) begins with the letter "f", he/she opted for "o" as a hotkey, because "f" had already been assigned to "Afficher les contacts Outlook".

A serious problem with regard to the use of hotkeys in the Arabic version could perhaps be the fact that a number of them were not localized. However, a Skype user whose keyboard layout is set to Arabic cannot enter Latin letters, and therefore, cannot use unlocalized hotkeys. Examples of this problem include "إضافة جهة اتصال" (Add Contact), "إضافة مجموعة جديدة" (Create New Group) etc., both of which have retained the English hotkeys a and c respectively. As a matter of fact, we do not see any reason why they should not be localized. This inconsistent behavior has also been found with regard to shortcuts. While some have indeed been localized, others have not.

Let us turn back to the focus of this section: the results of our analyses of the Arabic version of Skype with respect to the localizer's translational approach. As has already been mentioned, literalism seems to be the overwhelmingly prevailing feature of the localizer's lexical choices.

The first instance of this literal tendency confronts us right at the top of the first dropdown list, 'Skype' menu, where the item "Online Status" is translated as "حالة الاتصال" "ḥālat al-ittiṣāl" and where the word 'Online' corresponds to 'al-ittiṣāl' and the word 'Status' to 'ḥālat'. The translator seems to treat the building blocks of such multiword terms in isolation. The French localizer, on the other hand, has rendered the item simply as "Statut". It could have perhaps been more adequate if the localizer

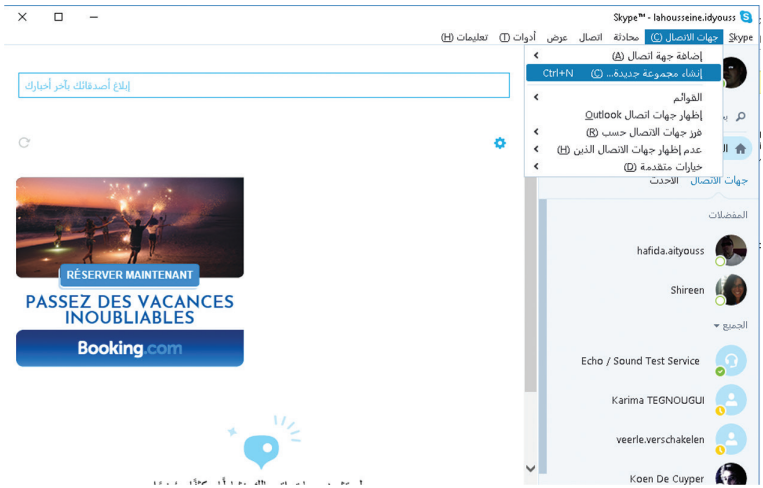


Figure 3. Screenshot of the unlocalized hotkeys in the Arabic dropdown list

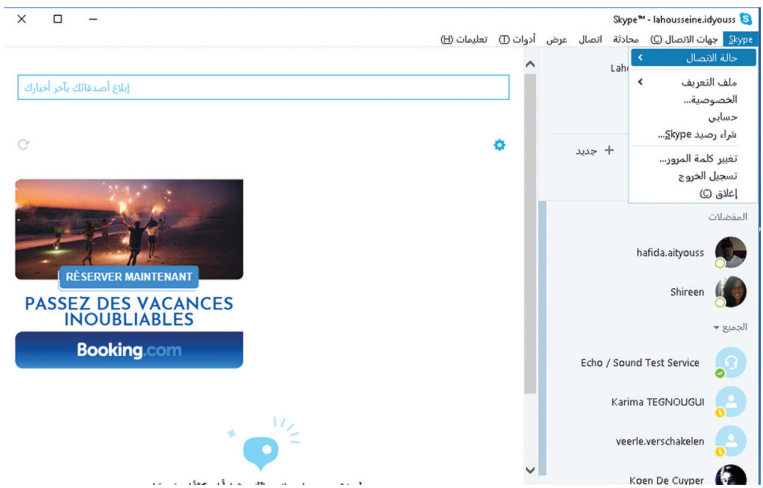


Figure 4. Literal translation of 'Online status' in the Arabic dropdown list

uses "الحالة" "al-ḥāla" without rendering the word "online", as it makes the formulation awkward due to the polysemous nature of the Arabic word "al-ittiṣāl". This is especially the case since the less technical meanings of a word tend to be stronger and more prominent than newly added technical ones.

Terminological units designate units of thought known as concepts and should be treated in translation as such. These units of thoughts, which are language independent, constitute the target of translation, and not the words representing them. The

lexical units of the source language can be viewed as helping elements in the semasiological search for what they stand for, and once the concept is known, the necessary onomasiological steps begin to locate the terminological unit designating it in the target language. Translating individual words based on their dictionary definitions outside the contexts where they occur, as the translation of "Online Status" shows, often results in awkward formulations.

A second example of such awkward literal choices is found in the same dropdown list and relates to the term "Sign out". This has been rendered into Arabic as "تسجيل الخروج" "tasǧīl al-ḫurūǧ" (Sign = tasǧīl, out = al-ḫurūǧ). The translation demonstrates the extreme in literal tendency. Even the two constituents of the phrasal verb in English are treated as individual entities, which does not make sense. However, it must be noted here that this is a common translation in other arabized applications and websites. The French localizer, who seems to be freer of the shackles of the English wording, has translated this piece as "Déconnexion".

Some instances of acceptable literal choices within the same dropdown list include "الخصوصية" al-ḫuṣūṣiyya for "Privacy", "حسابي" ḥisābī for "My Account", and "إغلاق" "iġlāq" for "Close". The morphological feature that "Privacy" and "Close" have in common is that they consist of one word. Interestingly, following the formal structure of the source text, the Arabic lexical units are also composed of one word, which is again very telling about the localizer's linguistic choices. Obviously, the divergence between "ḥisābī" (one word) and My Account" (two words) reflects the Arabic grammar, where possessive adjectives are suffixed to the word.

In the 'Contacts' dropdown list, we find the term "contact", localized as "جهة الاتصال" "ǧihat al-ittiṣāl". This lexical choice is unfortunately too ambiguous. For instance, to understand what ǧihat al-itiṣāl was about, we had to look at the English version. The reason for this particular choice of translation is unclear. The two parts of the term are unfortunately polysemous. Some of the meanings associated with "ǧihat" include direction, party etc., and examples of those associated with "al-ittiṣāl" are relation, link, connection, call etc.

Another strikingly poor literalism can be found in the menu item "Mark as Unread" in the 'Conversation' dropdown list. It is translated as "تعليم كغير مقروء" "taʿlīm ka-ġayr maqrū'". The localizer has included every element in the source text as though there were something intrinsic in its syntax. It is interesting to point out that the French localizer has also rendered this item literally "Marquer comme non lu"; however, given the shared etymology between French and English, the literal production of the source text words is not as striking. Furthermore, the word "taʿlīm" is polysemous. It refers both to the act of marking and to the act of teaching, and the second meaning is more common. Thus, it would be better to use the more transparent term "ʿalāma" instead.

Figure 5. Screenshot of "marked as unread"

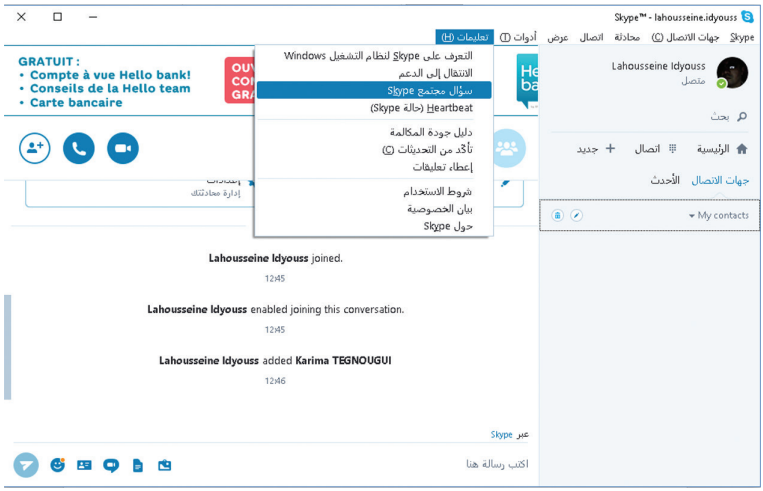


Figure 6. Screenshot of "Ask Skype Community"

The same thing holds for the 'Help' menu item "Ask the Skype Community", which is translated as "سؤال مجتمع Skype" "su'āl muğtamaʿ Skype". The Arabic word "مجتمع" "muğtamaʿ" constitutes the literal equivalent term for the English words "community" and "society", but it unfortunately does not collocate with Skype in Arabic. The combination of " muğtamaʿ" and "Skype" does not sound natural perhaps because the word muğtamaʿ is used more in sociological discussions. The word "community" could perhaps have been paraphrased as "users" "مستخدمين" "mustaḫdimīn" to avoid the alien collocation.

Next to these literalisms, a few elements throughout the program were not localized. Some of them could have at least been transliterated. Instances of these include Skype, Heartbeats, Hololens, Skype Wifi etc.

A common linguistic feature that can be found in almost any software is the imperative (Sign in, Sign out, Close, Add, Minimize, Maximize, Select, Copy, Paste…). Two modes are commonly used in similar situations in Arabic and can be viewed as equivalent: direct imperatives and verbal nouns "maṣdar". Throughout the Arabic localized version of Skype, the localizer has opted for verbal nouns. While this option can be regarded as successful in some cases, it does not always seem adequate. Some examples of acceptable use of verbal nouns include "تغيير اللغة" "taġyīr al-luġa" (Change language), "إغلاق" "iġlāq" (Close). Inappropriate uses of this mode include the following: "taʿlīm ka-ġayr maqrū"". (Mark as unread), "suʾāl muğtamaʿ Skype", (Ask the Skype Community). These two choices do not seem adequate due to the lexical and syntactic ambiguities they give rise to. From a lexical point of view, "taʿlīm" means both marking and teaching, and "suʾāl" can be translated back into English as the gerund "asking" or as the word "question". Syntactically speaking, the phrase "suʾāl muğtamaʿ Skype" has two readings: "asking the Skype community" and "the question of the Skype community". Thus, to retain the appropriate reading, it would be better to use the direct imperative instead of the ambiguous verbal noun.

There are several possible reasons why an Arabic localizer may choose a literal translation. First, most of the technological concepts in the source text are relatively new, which means that they are not yet lexicalized in the Arabic language. Thus, localizers find themselves in situations where they have to propose an equivalent linguistic form. Second, software localization is characterized by tight deadlines. Third, the localization industry gives more weight to technical competency at the expense of linguistic skills. Yet Arabic as a language has a powerful derivational morphology which can absorb any conceptual evolution idiomatically, without resorting to literal translation. For an overview of how morphologically powerful Arabic is, see McCarthy (1985).

The solution to this situation is neologisms, which are newly coined terms, or established terms that gain new meanings (Bahri 2006). Based on this definition, we can say that addressing the problem can take both forms of onomasiology and semasiology respectively. Onomasiologically, new linguistic forms can be created on the basis of the morphological or syntactic rules of the language to designate the newly born concepts. The semasiological approach, on the other hand, is the broadening of the semantic scope of an existing terminological unit by attaching the novel concept to it.

Obviously, creating neologisms in Arabic to denote new concepts is a monumental task that is not really the responsibility of software localizers. Creating new words cannot be performed by localizers alone. Specialized glossaries and terminographical

resources need to be developed by language planning institutions in collaboration with subject-field specialists, linguists and terminologists. Terminographical resources come in the form of terminology databases, where new concepts are contextually identified, defined and denoted with suitable terms.

Like them or not, some literal translations, even those that we can argue are unsuitable, do gain acceptability over time through popular usage. What we find improper today could become adequate over time. This transition from unacceptable to widely used gives credence to De Saussure's view with respect to the relation between linguistic signs and the meanings they represent. He argued that the relation between the signifier (sound/term) and the signified (content/concept) is arbitrary (Nöth 1995), i.e., no necessary connection holds between them.

Conclusion

Through examples from the Arabic version of Skype, we have demonstrated that the predominant translation approach in software localization is literal. This tendency is unfortunately more vice than virtue, as its drawbacks can be disastrous from an economic point of view.

Given the poor linguistic quality of the Arabized version of Skype, we hypothesize that most bilingual or multilingual users would prefer to use the English or French versions. If this is true, the localized version will not have served its purpose in attracting more users. As future research, we aim to study the impact that literalisms have on the Arabic Skype community.

We have pointed out that part of the reason for this literal approach can be attributed to the reality that linguistic matters in software localization testing are of secondary importance. The fact that the target version of the program functionally performs as well as its source counterpart takes precedence over any other consideration. This can clearly be seen in the classification of errors during the testing phase, where translational errors are viewed merely as cosmetic bugs because they are considered easy to fix. Software testers unfortunately overlook the fact that translation is a lot more than code replacement.

The ramifications of poor quality software localization are economic: sales of the localized version of the software will not reach targets. Therefore, software companies benefit directly by adopting sound linguistic approaches to translation and localization. To minimize the incidence of inappropriate literal translations in software products, localizers are encouraged to work with experienced linguists, translators, and terminologists (for instance, ask them to perform peer reviews), and to participate in and work with national initiatives to enrich Arabic terminology.

References

Bahri. 2006. *International Journal of Translation*. Vol. 18.

Black, Rex. 2002. "Managing the Testing Process: Practical Tools and Techniques for Managing Hardware and Software Tests."

Bocij, P, Greasley, A. & Hickie, S. 2008. *Business Information Systems: Technology, Development and Management*. Vol. 4. Pearson Education Limited.

Doyle, Stephen. 2001. *Information Systems for you*. Nelson Thornes.

Dunne, Keiran J. (ed.). 2006. *Perspectives on Localization*. Amsterdam: John Benjamins Publishing. https://doi.org/10.1075/ata.xiii

Edwards, Stephen, and Greg Kulczycki. 2009. *Proceedings of the 11th International Conference on Software Reuse: Formal Foundations of Reuse and Domain Engineering*. https://doi.org/10.1007/978-3-642-04211-9

Gambier, Yves, and Luc Van Doorslaer (eds.). 2010. *Handbook of Translation Studies*. Vol. 1. Amsterdam: John Benjamins Publishing. https://doi.org/10.1075/hts.1.tra7

Grossman, Mark. 2009. *Technology Law: What Every Business (and Business-minded Person) Needs to Know*. Scarecrow Press.

Gupta, Vikas. 2008. *Comdex 14-In-1 Computer Course Kit*. 2008 Edition (With Cd). Dreamtech Press.

Hasted, Edwars. 2005. *Software that Sells a Practical Guide to Developin*. John Wiley & Sons.

Hayes, Darren R. 2014. *A practical Guide to Computer Forensics Investigations*. Pearson Education.

Id-Youss, Houssine, Frieda Steurs, and Abied Alsulaiman. 2014. "Translation Technologies: Challenging New Tasks and Competences for Translators." *Dragoman* 2 (1).

Ireland, R. Duane, Robert E. Hoskisson, and Michael A. Hitt. 2014. *Strategic Management: Concepts and Cases: Competitiveness and Globalization*. 11th edition. Boston: South-Western College Publishing.

Kearns, John. 2006. *New Vistas in Translator and Interpreter Training*. Vol. 17, no. 1. Irish Translators' and Interpreters' Association.

Keniston, Kenneth. 1997. *Software Localization: Notes on Technology and Culture*. Program in Science, Technology, and Society, Massachusetts Institute of Technology.

Limaye, Milind G. 2009. *Software Testing*. Tata McGraw-Hill Education.

McCarthy, John J. 1985. "Formal Problems in Semitic Phonology and Morphology." *Linguistics Department Faculty Publication Series 39*.

Nandhakumar, B. 2011. *Dictionary of Computer Networking*. Excel Books India.

Newton, Joseph. 1992. *Computing Science and Statistics: Graphics and Visualization: Proceedings of the 24th Symposium on the Interface. Interface Foundation of North America*. N vol. 24.

Nöth, Winfried. 1995. *Handbook of Semiotics*. Indiana University Press.

Oaks, Dallin, and Andrew Bay. 1993. *Proceedings of the Deseret Language and Linguistics Society 1993 Symposium*. Deseret Language and Linguistics Society.

Paige, Glenn D., Joám Evans Pim, and Mu Ryang Sa Buddhist Temple. 2008. *Global Nonkilling Leadership First Forum Proceeding*.

Roff, Jason T., and Kimberly A. Roff. 2001. *Careers in E-commerce Software Development*. The Rosen Publishing Group.

Somers, Harold (ed.). 2003. *Computers and Translation: A Translator's Guide*. Vol. 35. Amsterdam: John Benjamins Publishing. https://doi.org/10.1075/btl.35

Sosa-Iudicissa, Marcelo C. (ed.). 1997. *Internet, Telematics, and Health*. Vol. 36. IOS Press.

Vogel, David A. 2011. *Medical Device Software Verification, Validation and Compliance*. Artech House.

Wermelinger, Michel, and Tiziana Margaria-Steffen (eds.). 2004. *Fundamental Approaches to Software Engineering: 7th International Conference, FASE 2004, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2004, Barcelona, Spain, March 29–April 2, 2004, Proceedings*. Vol. 2984. Springer.

CHAPTER 10

Covering linguistic variability in Arabic

A language ideological exercise in terminology

Helge Daniëls

In this article a series of Arabic terms that refer to language variability will be discussed. The basic principle of the analysis is that these terms are explicitly or implicitly informed by language ideological attitudes concerning linguistic variability in Arabic in which a diglossic division is taken for granted. Because of its common-sense and taken-for-granted nature, (language) ideology tends to be located much more in the unsaid than in what is overtly voiced. At first sight, linguistic terminology might seem straightforward and explicit. However, especially if the terms involved are commonly used, they tend to cover a set of shared attitudes toward language and language use. A study of the terminology regarding language variability, then, can be very productive in uncovering implicit assumptions concerning linguistic variability in the Arab-speaking world. We will focus on the early Islamic era and the end of the 19th century as crucial pivotal periods in the development of both language and linguistic terminology, as our basic assumption is that the semantic and ideological load of linguistic terms evolves in parallel with important social and political changes. The article will conclude with a preliminary exploration of recent terminological developments related to computer mediated communication (CMC).

Keywords: language ideology, linguistic variability, diglossia, *fuṣḥā*, *'āmmīya*

1. Introduction

In this article I will discuss a range of Arabic terms that refer to linguistic variability. The basic assumption of the analysis is that these terms are explicitly or implicitly informed by language ideological attitudes concerning linguistic variability in Arabic in which a diglossic division is taken for granted. Elsewhere I have argued that diglossia describes the ways in which linguistic variability is *interpreted* in the Arabic linguistic community rather than the ways in which it is *produced*. Nevertheless, even if actual language use defies the functional diglossic dichotomy in several ways, diglossia in its language ideological dimension is very persuasive and fits well with how most

https://doi.org/10.1075/hot.2.11dan

native speakers of Arabic perceive linguistic variability in Arabic (Daniëls 2018; see also Eid 2002, 204; Suleiman 2008, 28; Suleiman 2011a, 29–31). One of the characteristics of ideology is its shared or "common-sense" nature, meaning that ideological assumptions are most often taken for granted: "The common-sense (basic/normative) nature of ideological meaning is manifested in the fact that it is rarely questioned, in a given society or community, in discourse related to the 'reality' in question, possibly across various discourse genres" (Verschueren 2012, 12). Because of this "common-sense-ness", ideology tends to be located much more in the unsaid than in what is overtly voiced. Yet an exercise in terminology covering language variability, however explicit it may seem, can be very fertile in uncovering these unexpressed common-sense assumptions concerning linguistic variability in the Arabic-speaking world, certainly if the terms involved are commonly used:

> An analysis of labeling can offer fruitful insights into how linguistic variability is interpreted, as labeling linguistic varieties is never an exercise in terminology alone and not a matter of merely 'representing a linguistic reality'. Labeling also implies categorization, drawing boundaries, chopping up the essentially continuous reality of linguistic variation into discontinuous blocks, into 'categories of communication', such as 'language', 'dialect', 'standard' etc. (Gal & Woolard 1995, 129) Thus, labeling is not merely giving a name to 'existing varieties and languages' but rather involves the construction of linguistic varieties and languages and the ways in which they relate to each other. (Daniëls 2018, 186)

One of the basic assumptions of this article is that the semantic load of linguistic terms evolves and changes when important social and political changes occur. As far as Arabic is concerned we can point out that the early Islamic era and the 19th century are both crucial for a historical analysis of linguistic terms and the evolution of their semantic and ideological loads. A reason for focusing exclusively on Arabic terms is that many of the terms and labels that are coined in Western descriptions of diachronic and synchronic variability of Arabic are actually not meaningful for most members of the Arabic language community (see Daniëls 2018). Suleiman (2011b) formulates this as follows:

> [I]t is worth pointing out that, in the native linguistic-cum-intellectual tradition, little recognition is accorded to the taxonomies Western Arabists use to describe the diachronic variability of the language. […] Terms such as 'Proto-Arabic', 'Old Arabic', 'Classical Arabic', 'Early Middle Arabic', 'New Arabic', 'Muslim Middle Arabic', 'Christian Middle Arabic' or 'Judeo Arabic', which Western Arabists use as tools of historical categorization, are given short shrift in modern thinking about language, which prefers to highlight the diachronic continuities and synchronic overlaps in Arabic rather than to dwell on what are regarded as typologies of difference and 'fragmentation'. (Suleiman 2011b)

2. The first pivotal point: *luġa* and its cognates

2.1 Dialect

We could say that in the early Islamic period the Arabic language was in a flux due to the interrelated processes of the early Islamic conquests (*al-futūḥāt*), Islamization and Arabization, which on the linguistic level led to the standardization and codification of Arabic (see also *faṣāḥā/fuṣḥā*) and the beginning of the Arabic grammatical tradition, as well as increasing linguistic diversity in Arabic due to the growing numbers of (new) speakers of Arabic. The creation of linguistic norms and their explicit formulation and codification in grammatical works had a profound influence on linguistic terminology. From a nativist folk linguistics perspective,[1] the main urge for the grammatical tradition was protecting the pure Arabic as spoken by the Arabs in the Central and Eastern part of the Arabian Peninsula against the language mistakes made by non-Arabs. Therefore, the general tendency in this phase is that the meaning of linguistic terms evolves from being mostly general and non-evaluative to more specific and often more explicitly evaluative. This is somehow self-evident, since the establishment of a set of explicit linguistic norms, e.g. grammar, is crucial for the ways in which language use is evaluated and sharpens this evaluation. However, this does not necessarily mean that language use was never evaluated in the pre-Islamic era. The various Bedouin tribes who participated in poetry contests did so to confirm the superiority not only of their poetry but also of their tribal way of speaking (Iványi 2011).

The evolution of the terms *luġa*, *lahǧa, laḥn, naḥw*, *lisān* and *faṣīḥ/faṣāḥā* clearly illustrates the claim that the linguistic terms narrowed down from broad non-evaluative meanings to more specific and evaluative ones. In pre-Islamic times *luġa*, *naḥw, lahǧa* and even *laḥn* basically meant "a way of speaking". With the crystallization of the grammatical rules, the terms *luġa*, *lahǧa* and *laḥn* gradually obtained the meaning of "dialect", whereas the term *naḥw* evolved to cover a way of speaking which is congruent with the grammatical rules, eventually obtaining the meaning of "grammar" in a broad sense and "syntax" in a more narrow sense. The latter term became also closely intertwined with the notions of *faṣāḥa* (Ayoub 2011a) and *i'rāb* (Dévényi 2011) (see below). However, whereas the terms *lahǧa* and *laḥn* came to be associated more closely with dialect in the sense of "incorrect ways of speaking", *luġa* started to denote a tribal way of speaking on which grammatical rules are not based, i.e. non-standard, but which is still in the range of what is correct in the sense that it is recognized by reliable speakers

1. Suleiman (2013b, 266), partly quoting himself, defines folk linguistics as "the range of views and attitudes people have about their language, including its origin and the myths surrounding it that "allow us to come closer to the overt or covert orientations, assumptions, and hidden ideologies of the community and how these relate to linguistic repertoire." (Suleiman 2008, 28)."

of Arabic (Iványi 2011). We can conclude then that both *luġa* and *naḥw* refer to ways of speaking that are considered to be in the range of what is correct, but the semantic split between these two terms can be explained by the fact that due to religious and language ideological reasons in which the purity and the correctness of language was a central issue, most Arab grammarians took the correctness of the language of the Koran for granted, as well as the language used by certain tribes[2] and pre-Islamic poetry:

> As a rule, Sībawayhi uses the term *luġa* in cases where he cannot avoid mentioning variants to the forms preferred by him and his circle, because they are accepted by his informants or occur in well-known lines of poetry. (Iványi 2011)

Deviations from the newly codified grammatical rules in the Koran and the language of these tribes could therefore not be but accepted as correct and were consequently described as *luġa*, e.g. a tribal variety that is correct and acceptable but which should not be followed as a model. Hence *luġa* started to mean "dialect", i.e. non-standard, but still linguistically acceptable or correct (Iványi 2011).

On the other hand, the term *laḥn* (and also *lahğa*) seems to have rapidly evolved from its sense of "manner of speaking that deviates from the usual way" (Ayoub 2011b) in its neutral (a psalmody, a melody, an allusive way of speaking) and positive sense (outstanding eloquence) (Ayoub 2011b) to "faulty speech" (Iványi 2011; Ayoub 2011b), "grammatical mistake", "solecism" and more specifically "mistakes in flexion" (*i'rāb*). Thus, in the post-classical period the meaning of *laḥn* became overwhelmingly negative as "solecism" or "ungrammatical, incorrect idiom" and, as stated above, especially implying the language mistakes made by non-Arabs (and hence the anti-thesis of *i'rāb* in its sense of "the correct speech of the Arabs"), as well as unpleasant sounds in general (Sanni 2010, 9). However these negative connotations did not totally eclipse its positive meanings, as "intelligence and perceptiveness" and "indirect speech" or "veiled allusion as can be comprehended by the intelligent", especially in the domain of poetical rhetoric (Sanni 2010). *Laḥn* can thus be understood as "dialect" as well, but in the sense of a linguistic variety that is both non-standard and grammatically unacceptable or incorrect. The difference between *luġa* and *laḥn*, both meaning "dialect" can then be formulated as follows:

> [*Luġa*] represents legitimate linguistic variation, prior to the 'corruption of language' that according to the sources appeared in the 1st century A.H. *Laḥn*, on the other hand, is illegitimate linguistic change, "the diverging [in speech] from the correct form" (Ibn Manẓūr, *Lisān* 4013), as a result of 'corruption of language'.
>
> (Ayoub 2011b)

---

2. Namely the tribes of Central Arabia that were considered to be the most purely Arab; e.g. the tribes that did not intermingle with non-Arabs and whose speech was not influenced by other languages, nor "corrupted" by the language mistakes of non-Arabs.

Concerning all the terms discussed above the crucial step in narrowing down their meaning and their semantic specification and hence differentiation, e.g. their evolution from a general "way of speaking" to "dialect", either "legitimate" (*luġa*) or "illegitimate" (*laḥn*) on the one hand, and "grammar" (the way the Arabs speak that is to be followed) (Ayoub 2011a; 2011b) or "syntax" (*naḥw*) on the other, is the establishment of the linguistic norm:

> All these usages of *laḥn* as a synonym of *luġa* seem to come from an archaic meaning of *laḥn* prior to the setting up of a linguistic norm. The norm is what differentiates between the classical use of *laḥn* and its more archaic use as a synonym of *luġa*. With the implementation of the norm, *laḥn*, which in its pre-classical acceptation meant a detour of speech in a positive sense, came to express a negative 'deviation', a speech error. The norm is also what differentiates *laḥn* from *luġa* in classical use: *luġa* is a way of speaking which does not go against the norm. (Ayoub 2011b)

2.2 Language

In pre-Islamic and early Islamic times the term *lisān* was used in order to refer to language, hence *al-lisān al-ʿarabī* (the Arabic language), *al-lisān al-fārisī* (the Persian language) etc. In approximately the 13th and 14th centuries *lisān* started gradually to be used interchangeably with *luġa*, which apart from "dialect" or "dialectal variant" also meant "language" in the Arabic grammatical tradition[3] (Iványi 2011) and ultimately replaced *lisān* in modern language use, hence *al-luġa al-ʿarabīya* (the Arabic language or Arabic), *al-luġa al-fārisīya* (the Persian language or Persian) etc. Ayoub (2011a) relates the semantic evolution from *luġa* as "dialect" to "language" to the evolution of the concept of *faṣāḥā*. Arabic grammar was based on what was most commonly used among the majority of Arabs (*ʿāmmat al-ʿarab* or *kalām al-ʿarab al-akṯar*). However, as noted above some exceptions needed to be accepted because of their sources, the Koran, pre-Islamic poetry and the speech of "pure Arab tribes", or more specifically the ones among them who were specialized in poetry, the *fuṣaḥā' al-ʿarab*.

> Sībawayhi and the other grammarians aimed at the description of a unified Arabic language. Once they decided on the 'basic' nature of the Ḥijāzī dialects, they had to regard the others as irregular, rare, or dialectal, and not acceptable as the point of departure for analogy. (Iványi 2011)

Because of their sources, these exceptions (*luġāt*) don't just deviate from the grammatical rules, but are exceptional in the sense of "being above and beyond the rules":

---

3. Apart from these meanings, *luġa* could also mean "word in a dictionary" and "lexicography" (Iványi 2011).

> In the 8th century, through a necessary epistemological process, the grammarians brought out both the common usage on which the *ʿarabiyya* is based and its dialectal variants (*luġāt*). In this perspective, the expression *luġā fuṣḥā* is a description; it consists in indicating for a given expression the most appreciated variant (the clearest, the purest one) among all the dialectal variants available, all of which are perceived as correct. Quite soon, this most appreciated variant becomes the most common one […], then the only one. From now on, *luġa* also means language rather than a dialectal variant, since only one variant is accepted. (Ayoub 2011a)

Both *lisān* and *luġa* can be used either in a possessive construction (*iḍāfa*-construction), e.g. *lisān al-ʿarab* or *luġat al-ʿarab* (the language of the Arabs) or in a construction consisting of a substantive and an adjective *al-lisān al-ʿarabī* or *al-luġa al-ʿarabīya* (the Arabic language). It seems that the first construction (e.g. the *iḍāfa*) is more frequent in the classical period while the latter is more current in modern language use (from the 19th century on), even if both constructions are used in both eras. (See also p. 248) Moreover, the elliptic form in which the adjective is retained, e.g. *al-ʿarabīya* seems to be at the root of the use of the adjective as an independent noun (see also *ʿāmmīya* below). However, in its use in the *iḍāfa*-construction and in combination with an adjective, the term *luġa* has not completely lost its meaning of "way of speaking", hence *luġat al-ʿāmma* or *al-luġa al-ʿāmmīya* (the way the common people speak, see also below). It is interesting to note that, in contrast with *luġa*, both *naḥw* and *lisān*, because of their closer association with correctness, are never combined with *al-ʿāmma* (the common people, the plebs), which is the social group that is most often associated with linguistic incorrectness and language mistakes. Therefore collocations, such as * *naḥw al-ʿāmma* or * *lisān al-ʿāmma* never occur, whereas *luġat al-ʿāmma* or *laḥn al-ʿāmma* are frequently used.

Finally, we should also refer to the term *kalām*. In pre-Islamic and early Islamic times this term is used to refer to "language as a structure", a sense in which *lisān* is never used (Hassanein 2011), or an "utterance", hence *kalām al-ʿarab* (the speech of the Arabs).

3. The second pivotal point: The basic dichotomy: *fuṣḥā* and *ʿāmmīya*

3.1 Diglossia

The elaboration of the grammatical tradition went hand in hand with the establishment of the concept of *faṣāḥa*, a concept which became closely intertwined with *iʿrāb*. The construction of these concepts was not only a linguistic and terminological exertion, but also an exercise in identity construction (Suleiman 2013a, 51–92, Suleiman 2012).

In ways that are similar to the ways in which *luġā*, *naḥw*, *laḥğa* and *laḥn* evolved from general and non-evaluative meanings to more specific and evaluative ones

during the process of establishing Arabic grammar, *faṣāḥa* and *i'rāb* developed from broad meanings to more particular ones. During this process, the concepts took up a central place in Arabic grammar, and hence became associated with linguistic standards and correctness. *Faṣāḥa* evolved from the general notions of clearness[4] or intelligibility in pre-classical usage to become associated with the intertwined notions of linguistic correctness and purity, as well as eloquence and aesthetics in Classical Arabic. In this sense *faṣāḥā* evolved from what is clear and therefore immediately understood, and what is in this capacity related to the most common usage of the speech of the Arabs (*kalām al-'arab (al-akṯar)* or *'āmmat al-'arab*), to what is correct speech, including exceptional speech as used by the *fuṣaḥā' al-'arab* (Ayoub 2011a). This semantic shift should be considered in tandem with the ways in which *faṣuḥa/faṣāḥa's* antonym *a'ğama/i'ğām/'uğma* evolved semantically. Both Ayoub (2011a) and Suleiman (2013a) observe that the adjective *faṣīḥ* referred to the ability to speak intelligibly and applied to all human beings, Arabs and non-Arabs alike, in contrast to *a'ğam*, which applied to animals.[5] However, the category *faṣīḥ* could be further subdivided into *'ağam* (non-Arabs) and *'Arab* (Arabs), the latter category being associated with eloquence and clarity (*bayān*). The superlative *afṣaḥ* (most eloquent) then only applies to Arabs and their language, for which the feminine superlative *fuṣḥā* (most eloquent) is used (Suleiman 2013a; Ayoub 2011a). After the *futūḥāt* and the codification of Arabic grammar, the term *'ağam* came to be firmly associated with non-Arabs, (especially Persians) and their linguistic mistakes (*'uğma*).[6] A term that started to gain currency during this era is *luġat al-ḍād* (the language of the *ḍād*), which highlights the difference between Arabs and non-Arabs since this emphatic /d/ was considered to exist exclusively in Arabic and non-Arabs must have had difficulty pronouncing it.[7] In

4. The broad meaning of the term is also exemplified by the fact that the verb *afṣaḥa* (being clear or limpid) was also used to describe urine, milk, the morning light and the braying of a horse or donkey. (Ayoub 2011a)

5. The categories *a'ğam* and *faṣīḥ* being subcategories of *nāṭiq*, a quality that both humans and animals share in contrast to objects which are considered to be *ṣāmiṭ*. (Suleiman 2013a, 69)

6. Cfr. how Greeks referred to non-Greeks as "Barbaros". In this context it is worth mentioning that *'uğma* also means "barbarism" or "un-Arabic way of speaking" (Wehr 1994, 694). This is also reminiscent of the ways in which the word *ruṭāna* ("lingo", "gibberish") is used in Sudan to refer to languages other than Arabic.

7. It is not completely clear how the *ḍād* was pronounced originally. In most classical grammatical works it is described as an emphatic lateral sound (Anīs 1999, 46–58). The phoneme *ḍād* is now a pharyngalized voiced dental occlusive, also often referred to as emphatic /d/. Despite attempts by many Arab researchers to refute the idea that this sound is unique to Arabic, the term never lost currency in the Arabic speaking world. Until the present, terms like *luġat al-ḍād* (lit.: the language of the *ḍād*) for Arabic, *abnā' al-ḍād* (lit. sons of the *ḍād*) for speakers of Arabic etc. have

this capacity "the phoneme /ḍ/ [became] an authenticating emblem, a border guard and a defining symbol of group identity" (Suleiman 2003, 59). However, from this moment on, standard Arabic is referred to most commonly as *al-ʿarabīya al-fuṣḥā*, a term which clusters clearness, intelligibility, purity, linguistic correctness, aesthetic qualities and eloquence:

> The root meaning of both names [*ʿarab* and *ʿarabīya*] is semantically related to the notions of: (1) speaking clearly, plainly, distinctly or perspicuously in a way that is free of incorrectness, corruption or barbarousness; (2) making a person recoil from foul speech or obscene language; (3) knowing a horse by his neighing to be of pure Arab blood. These meanings embody an aesthetic of correctness, perspicacity, moral character, intuitiveness and purity that, in essentialist ideological paradigms – whether in their old or modern manifestations in the Arabic intellectual tradition – are used to braid a set of myths/traditions concerning the Arabic language and the character of the group whose language it is. (Suleiman 2013a, 51–2).

Moreover, the concept of *faṣāḥā* and its tight relation to *iʿrāb*,[8] in the sense of desinential inflection, is crucial for understanding the language ideological dimensions of diglossia. Both concepts are closely intertwined in several ways. Originally the verb *aʿraba*, of which *iʿrāb* is the *maṣdar* (verbal noun), meant "to express oneself (clearly)", which is still one of its meanings. As we have noted above, this was also one of the original meanings of *faṣuḥa/faṣāḥa*. Moreover, because *iʿrāb* shares its tri-radical root *ʿ-r-b* with *ʿarab* (Arab), it became associated with being a (pure) Arab.[9] For instance, basing himself on Versteegh (1993, 127–8), Dévényi (2011) refers to an early exegetical work, *Tafsīr* by Muḥammad al-Kalbī (d. 146/763), in which the term *iʿrāb* is used in the sense of "speaking Arabic correctly as a Bedouin", a notion that is, as we have seen, also closely associated with *faṣāḥa*. After the establishment of grammar, *faṣāḥā* and *al-ʿarabīya al-fuṣḥā* came to be so closely connected to *iʿrāb* that Arab grammarians were reluctant to use the term to designate flexion in languages other than Arabic, preferring the term *ʿalāma* instead (Dévényi 2011).

---

been frequently used to refer respectively to Arabic and speakers of Arabic in book titles, poems, newspaper articles etc. (See also Suleiman 2003, 59–60). This is another fine example of how persistent folk linguistic perceptions tend to be and confirms Suleiman's (2013b, 266) observation that "[m]ost Arabic speakers are oblivious of the findings of modern linguistics".

8. This strong relation is also confirmed by the fact that many native speakers of Arabic often use *iʿrāb* almost as a synonym of *naḥw* (grammar, syntax). One of the explanations given to *iʿrāb* in *al-muʿğam al-asāsī* is "to apply the grammatical/syntactical rules to [an utterance] in order to uncovers its syntactical meaning […] (*ṭabbaqa ʿalā [al-kalām] qawāʿid al-naḥw li-l-kašf ʿan al-maʿnā al-naḥwī* […])". (al-Qāsimī 2003, 830).

9. In that sense, this connection is reminiscent of the ways in which the Greek term *hellènismós* connects flexion with being Greek.

Keeping the close relation between *faṣāḥā* and *i'rāb*, and their association with clear and pure expression, linguistic correctness, as well as being purely Arab[10] in mind it is hardly surprising that much of the discussion concerning Arabic diglossia, and when it occurred, is centered, both in Western and Arabic linguistic studies, around the question of when flexion (*i'rāb*) stopped being functional in Arabic. Some argue that flexion disappeared in daily Arabic speech as early as 600 C.E. (Vollers 1906, 169 in Dévényi 2011) and that flexion only occurred in poetry and other discourses requiring an elevated register, such as the premonitions of the soothsayers (*kuhhān*) in rhymed prose (*saǧ'*) (Zwettler 1978). Others argue that flexion disappeared only after the Islamic conquests due to language contact with non-Arabs (Fück 1955; Versteegh 1984). There is also debate about whether flexion in the Koran is semantically functional or whether it is only a stylistic device. Without taking a position in this debate, I would argue that it was the codification of the grammatical rules and the crystallization of the concept of *faṣāḥā* with its focus on *i'rāb* as a marker for linguistic correctness and pureness that can be considered the crucial step in creating the basic dichotomy between the linguistic norm (e.g. *fuṣḥā* Arabic) and the varieties that deviate from this norm (e.g. non-*fuṣḥā* which were gathered under the umbrella term *'āmmīya*), long before the dichotomy between *fuṣḥā* and *'āmmīya* became terminologized as "diglossie" in French (Marçais 1930), "diglossia" in English (Ferguson 1959) or "*al-izdiwāǧīya*" in Arabic (Frayḥa 1938).[11] Therefore, it is exactly because Arabic grammar focussed on *i'rāb* that *i'rāb* became such a central issue in the discussions concerning diglossia.

3.2 The 19th century

In the remainder of the article we will see that this diglossic dichotomy, once established, informs very persistently the ways in which linguistic variability is perceived in the Arabic language community and hence the terms that are coined and used to express linguistic variability. To demonstrate this, we will turn our attention to a short, but very vivid polemical debate concerning variability in Arabic that was conducted at

---

10. These "pure Arabs" were considered to have pristine linguistic intuition (*salīqa* or *fiṭra luġawīya)*, which enabled them, among other things, to use intuitively correct desinential inflectional endings. For a discussion of the concept of natural linguistic dispositions or "pristine linguistic intuitions" (*fiṭra luġawīya* or *salīqa luġawīya*) and its ideological implications, see Suleiman (2013a, 53–4).

11. Apparently the term was first used to describe the Greek language situation in the 1880s. See Haeri (2000, 64–5, based on Mackey (1993)). It is interesting to note that the first usage of this term coincides with the early beginnings of the *fuṣḥā – 'āmmīya* debate in Al-Muqtaṭaf (1881–1882) (see below).

the end of the 19th century. This debate, which consists of eleven articles that appeared in the cultural-scientific periodical *Al-Muqtaṭaf* between 1881 and 1882, can be considered as one of the first manifestations of the larger debate that is known as the *fuṣḥā-ʿāmmīya* debate which continued to erupt during the rest of the 19th and the 20th century. Several language ideological aspects of these debates have been dealt with elsewhere (see among others Daniëls 2002, 2018; Liam 2018; Suleiman 2004) and should not concern us here. However, the Muqtaṭaf sub-debate also turns out to be an interesting locus for tracing the evolution of linguistic terminology during the 19th century, especially the terms that are used to cover non-*fuṣḥā* varieties. Social and political changes during the early Islamic era influenced how linguistic diversity in Arabic was perceived by contemporaneous and later generations in the Arabic-speaking community and shaped the terms that were used to describe and construct linguistic diversity. Likewise, social and political changes during the 19th century influenced how linguistic diversity was perceived and how it was expressed terminologically, and these changes still very much inform current perceptions and terminology. On the other hand, as we will see, despite these important changes and developments, the basic attitudes that took shape during the formative period of Arabic grammar continued to inform the basic attitudes concerning language variability:

> The attitude toward the modern dialects as 'deviations' from the norm is no doubt socio-psychologically linked to the attitude towards *laḥn* at this early stage [the Islamic conquests] in the expansion of the Arab controlled lands and the attendant spread of the language. It is therefore not surprising that the language guardians use this ideologically loaded term to describe modern 'deviations' from the *fuṣḥā*, regardless of their source of provenance. The injection of this term into modern sites of linguistic debate and conflict is another example of the drive to emphasize historical 'continuity' in conceptualizations of the *fuṣḥā* in the Arab world. (Suleiman 2011b)

The important social, political, cultural and religious changes that took place in the 19th century were strongly felt in the linguistic, and more specifically the lexical and terminological domains. With the development of the printing press, increased translation from European languages and the modernization of education in several parts of the Arabic speaking world, especially Egypt and Lebanon, the Arabic language was not only changing,[12] its modernization also became an issue of debate. In what came to be known later as the *fuṣḥā-ʿāmmīya* debate, of which the *Muqtaṭaf* sub-debate is one

12. These changes were most dramatically felt in the domains of the lexicon and terminology. The challenges posed by the development of scientific terminology in particular led in the 20th century to the establishment of the Arabic Language Academies in Damascus (1918), Cairo (1932), Iraq (1947) and Jordan (1976), (Versteegh 2001, 178) as well as the Office for the Coordination of Arabicization in Rabat, among other institutions.

of the first manifestations, the diglossic norms that were established during the process of standardization and codification discussed above and which remained hardly ever explicitly questioned,[13] were challenged under the guise of (linguistic) modernization. The proposals to change the norms of *fuṣḥā* Arabic, known in Arabic as *al-da'wa ilā al-'āmmīya* (propaganda in favor of non-*fuṣḥā*), and which were put forward by a small minority of modernizing Arab intellectuals, as well as a couple of Western participants in the debate, were most often vehemently attacked by what Suleiman (2011b) labeled as the "language guardians".

The *Muqtaṭaf* sub-debate is an interesting locus to trace how modern linguistic terms referring to language diversity evolved and how the basic diglossic dichotomy became gradually lexicalized in terms of *fuṣḥā* versus *'āmmīya*.[14] In this framework it is interesting to note that in the first article of the al-Muqtaṭaf sub-debate[15] the key terms, *fuṣḥā* and *'āmmīya*, are not used at all. These terms first appear in the initial reaction to that article. The article, written by Ḫalīl al-Yāziğī, introduces us to direct and indirect ways of establishing synonymy. The debaters have the habit of briefly summarizing the arguments that were previously mentioned, before adding their own arguments. The reformulation is done by means of direct quotes, to which very often new terms are added, or by rephrasing the previous argument(s) and using other linguistic key words that are considered to have the same meaning. In the following example both methods can be observed. Al-Yāziğī rephrases Ṣarrūf's and Nimr's solutions as follows:

> One of them is the replacement of our language with another language. The second is the replacement of the writing language with the language of speech, meaning the folk language (*istibdāl luġat al-kitāba bi-luġat al-takallum ayy luġat al-'āmma*). The third is the replacement of the folk language in speech with *al-faṣīḥa* (*istibdāl luġat al-'āmma fi al-takallum bi-al-luġa al-faṣīḥa*). (Al-Yāziğī 1881, 404)

In this quote, "the spoken language" (*luġat al-takallum*) is directly equated with the "folk language" (*luġat al-ʿamma*) by means of the particle *ayy* (meaning), whereas the "written language" (*luġat al-kitāba*) is indirectly equated with *al-faṣīḥa* by replacing "the written language" with this term in the rephrasing of Ṣarrūf's and Nimr's

---

13. Note however, that these norms were and still are often breached in actual language use, even in contexts in which the norms dictate the use of *fuṣḥā* Arabic (see Daniëls 2018).

14. I am grateful to Benjamins for giving me permission to reproduce this part of the terminological analysis, which appeared in Daniëls (2018, 208–12).

15. This article was published by Yaʿqūb Ṣarrūf and Fāris Nimr, the editors of Al-Muqtaṭaf, under the title *Al-luġa al-'arabīya wa al-naǧāḥ* (The Arabic language and success) in November 1881. The authors explicitly aimed at opening the debate concerning the norms of the written language, by which they meant *fuṣḥā* Arabic.

third solution. Because of the repetitive and unchallenged character of this process, meaning that the direct and indirect equation of key terms is repeated throughout the debate, clusters of associations and (language ideological) meanings arise.

In the Muqtaṭaf debate as a whole, "the language of writing" (*luġat al-kitāba*) is directly or indirectly equated with the "language of books" (*luġat al-kutub*), the "written language" (*al-luġa al-maktūba*), the "Arabic we write" (*al-ʿarabīya allatī naktubuhā*), *al-luġa al-faṣīḥa* or *al-luġa al-fuṣḥā*, and their elliptic forms *al-faṣīḥa* and *al-fuṣḥā*. These labels are associated or equated with the "ancient/classical language" (*al-luġa al-qadīma*), "correct (Arabic) language" (*al-luġa (al-ʿarabīya) al-ṣaḥīḥa*) or its elliptic form, "correct Arabic" (*al-ʿarabīya al-ṣaḥīḥa*), the "original/authentic language" (*al-luġa al-aṣlīya*) and the "language of the Muḍar tribe" (*luġat muḍar*). The language of writing is thus associated with eloquence (*faṣāḥā*), but also with an ancient history, correctness, originality and authenticity and the language of the tribal confederation (Muḍar) to which also the Prophet's tribe the Qurayš belonged.

In the same way, the "spoken language" (*luġat al-takallum*) or the "language they/we speak" (*al-luġa allatī yatakallamūna/natakallam bi-hā*) and the "Arabic we speak" (*al-ʿarabīya allatī natakallam bi-hā*) is equated with the "language of the common folk" (*luġat al-ʿāmma* or *al-luġa al-ʿāmmīya*), the "common language" (*al-luġa al-ʿāmma*), the "current language" (*al-luġa al-šāʾiʿa*) or the "current spoken language" (*luġat al-takallum al-šāʾiʿa*) and the "Arabic that we suckled with the mother milk" (*al-ʿarabīya allatī narḍaʿuhā maʿa al-laban*). The spoken language is thus associated with the lower (uneducated) social classes, but also with currency (in the sense of being widespread) and naturalness (in the sense of being naturally and effortlessly acquired as opposed to via formal education). As the debate intensifies, both terms (*al-fuṣḥā* and *al-ʿāmmīya*) are gradually introduced and, through the processes of being directly and indirectly equated, they are established as the basic terms to refer to the poles of the perceived linguistic dichotomy.

Another striking element is that the terms *faṣīḥa/fuṣḥā* and *ʿāmmīya* are not yet used as independent nouns, but rather as adjectives. This can be explained by the fact that in the 19th century Arabic language use itself was changing. This change can be traced in the *Muqtaṭaf* sub-debate as well and, as already mentioned, analyzing how the use of the linguistic labels evolved constitutes an interesting locus for tracing how perceptions about language and language variability also evolved with the debate itself. It is important to notice that language use in the 19th century can be positioned between Classical and Modern Arabic. An analysis of the term *ʿāmmīya* and its cognates is an interesting case that illustrates the pivotal position between classical and modern language use during this period.

The two terms that currently are most used in the debate to refer to the *al-ʿāmmīya*/non-*fuṣḥā* are *luġat al-ʿāmma* and *al-luġa al-ʿāmmīya*. Rabin (1960) mentions that the former was current in medieval times, whereas the latter, together with

al-dāriğa and *al-lahağāt*,[16] is used in modern times.[17] The observation that *ʿāmmīya* is only used as an adjective, and not as a noun, suggests that at the end of the 19th century *ʿāmmīya* was not yet considered to be a distinct linguistic concept. This is further supported by the fact that the authoritative dictionary *Muḥīṭ al-muḥīṭ*, which was published by Buṭrus al-Bustānī in 1870 and which is considered one of the first modern Arabic dictionaries, does not refer to the linguistic connotations of *ʿāmmī* and *ʿāmmīya*. Nor does *ʿāmmīya* occur as a separate lemma (Al-Bustānī 1998 (1870), 634). This is also the case for Kazimirski's translation dictionary (Arabic-French), which is contemporary to Al-Bustānī's (Kazimirski 1860, 358–9). Together with the ways in which the terms are used in the debate, this suggests that before the 20th century, the terms could only be used to refer to language and language use in combination with *luġa* (language), e.g. *luġat al-ʿāmma* (language of the common people) or *al-luġa al-ʿāmmīya* (folk language).

As the larger debate further develops, these lexical items develop, or rather are developed, into independent linguistic concepts, which are mostly used in contrast with (*al-luġa*) *al-faṣīḥa* or (*al-luġa*) *al-fuṣḥā* and therefore are defined by non-*fuṣḥā*-ness. Gradually the term *ʿāmmīya* then obtains the meaning of "colloquial", "vernacular" or "dialect". This is corroborated by a quick glance in monolingual and bilingual Arabic dictionaries. The Arabic dictionary *Al-muʿğam al-asāsī* (2003, 869) explains *ʿāmmīya* as follows: "the opposite of the official language or the literary language or *al-fuṣḥā*."[18] And *kalām ʿāmmī* and *lahğa ʿāmmīya* as "the usual speech of the people, the opposite of *al-luġa al-fuṣḥā* or the literary language."[19] It is interesting to

---

16. It is important to note that the term '*lahğa (pl. lahağāt)*' in the sense of "dialect" or "variety" is also used in the *Muqtaṭaf* debate, however only in reference to specific dialects, e.g. "the dialects of the Syrians, the Egyptians, the Iraqi's and the Maghrebians (*lahağāt al-sūrīyīn wa al-ʿirāqīyīn wa al-miṣrīyīn wa al-maġribīyīn*)" (Al-Mumkin 1882a, 494), "the dialect of which province […], city, […] village, […] neighborhood (*lahğat ayyati muqāta'a […], madīna […], qariya […], ḥāra)*" (Dāġir 1882, 557). Sometimes the term is also used in the sense of "way of speaking" or "pronunciation", which is congruent with its original pre-classical meaning.

17. Interestingly enough, Rabin (1960) uses the term *post-Islamic dialects* in reference to what I call the *ʿāmmīya* or non-*fuṣḥā* varieties. This is due to the fact that traditionally pre-Islamic and post-Islamic language variability has been perceived differently. As we have discussed above, this is related to the fact that, basically, pre-Islamic variants (*luġāt*) were considered to be within the realm of correctness, even when deviating from the norm (*naḥw)*, whereas deviations from the norm related to post-Islamic varieties were viewed as "mistakes" (*laḥn*). This can be derived from the ways in which the terms *luġa*, *naḥw* and *laḥn* diachronically evolved. This process of semantic shifts is intrinsically related to the evolution of the concept of *faṣāḥa*.

18. In Arabic: "*ḫilāf al-luġa al-rasmīya aw al-adabīya aw al-fuṣḥā*"

19. In Arabic: "*kalām al-nās al-ʿādī, ḫilāl [sic] al-luġa al-fuṣḥā aw al-luġa al-adabīya*"

note that both entries are explained by referring to their contrast with *fuṣḥā*, which is in itself related to official and literary language use (respectively *luġa rasmīya* and *luġa adabīya*). This way of explaining in itself keeps the binary between *fuṣḥā* and *ʿāmmīya* neatly intact. In the same way, the Arabic dictionary *Al-muʿǧam al-wasīṭ* (Muṣṭafā 1972, 629) explains *al-ʿāmmīya* as "*luġat al-ʿāmma*, and this is the opposite of *al-fuṣḥā*"[20] and *kalām ʿāmmī* as "what the common people (*ʿāmma*) utter, differing from the habits of Arabic speech."[21] The definition of the latter strongly solidifies the relation between the notions of *fuṣḥā* and the idea that only *fuṣḥā* is correct and "real" Arabic. These two dictionaries are very popular and widely used in the Arab world. Finally, Hans Wehr (1994, 751), who produced one of the most widely used translation dictionaries, translates *al-ʿāmmīya* as "popular language, colloquial language."

This brief exercise shows that the use of the term *ʿāmmīya* underwent some important changes, the beginnings of which already appeared in the Muqtaṭaf sub-debate. We can assume that the term *al-luġa al-ʿāmmīya* gradually became more frequently used than *luġat al-ʿāmma*, ultimately replacing it. As the use of *al-luġa al-ʿāmmīya* became more current, its elliptic form *al-ʿāmmīya* developed into an independent noun. The second step in this development (e.g. the independent use of *al-ʿāmmīya*) was already evident in the Muqtaṭaf debate, be it only in the 11th and last article by Mitrī Qandalaft.[22] However, in the same article, Qandalaft also frequently uses the premodern label *luġat al-ʿāmma*.

Finally, we must add that the shift in the use of the labels (*luġat al-ʿāmma* → *al-luġa al-ʿāmmīya* → *al-ʿāmmīya*) was accompanied by an important semantic shift from the social connotations of the label, namely *luġat al-ʿāmma*, and already to a lesser degree *al-luġa al-ʿāmmīya* (as the language spoken by the common folk), to its linguistic connotations, namely a linguistic variety that is basically defined in contrast with *al-fuṣḥā*.[23] However, even if the linguistic connotations of the label became more dominant, its social connotations never disappeared completely. Because *fuṣḥā* is associated with education, literature and official language use, and because *ʿāmmīya* is defined as its opposite, *ʿāmmīya* is, by default, implicitly associated with the lack of education.

---

20. In Arabic: "*luġat al-ʿāmma wa hiya ḫilāl al-fuṣḥā*"

21. In Arabic: "*mā naṭaqa bi-hi al-ʿāmma alā ġayr sunan al-kalām al-ʿarabī*"

22. *Naǧāḥ al-umma al-ʿarabīya fī luġatihā al-aṣlīya* (Qandalaft 1882, 107–110).

23. Only a couple of times *faṣīḥā* is defined by contrasting it with *ʿāmmīya*. Ṣarrūf and Nimr also refer to the fact that science books are written in "a language different from the language we speak" (*luġa ġayr al-luġa allatī natakallamuhā*) (Al-Muqtaṭaf 1881, 353) and al-Yāziğī refers to *faṣīḥa* and explains "in the sense that it is not part of the folk language" (*bi-maʿnā annahā laysat min luġat al-ʿāmma*) (Al-Yāziğī 1881, 305).

4. Contemporary terminology

As we have seen, linguistic terminology underwent some important changes during the 19th century, while showing continuity with classical usage. Modern and contemporary terminology is very much informed by developments during the 19th century. In the 20th and 21st centuries, the terms *ʿāmmīya* and *fuṣḥā* are still the most common terms to refer to respectively "dialect", "colloquial" or "vernacular" and "standard Arabic". In modern and contemporary usage two other terms are frequently used to refer to non-standard/non-*fuṣḥā* varieties of Arabic. The first one is *lahǧa*, which was already used in the classical era (see above) and has not changed much since. It is, however, interesting to note that *lahǧa* and *ʿāmmīya* are often used together in the collocation *al-lahǧa* (pl. *al-lahaǧāt*, noun) *al-ʿāmmīya* (adjective). The second term is *al-kalām al-dāriǧ* or *al-luġa al-dāriǧa* and their elliptic forms *dāriǧ/dāriǧa*, which has the same meaning as *ʿāmmīya* and *lahǧa*, but is more current in the Maghreb than in the Middle East. Hence, it is sometimes used to denote specifically "Maghrebian", especially Moroccan dialects.[24] As Rabin (1960) suggests, *dāriǧa* does not occur in classical usage, but in the 19th century the term was already in use since both Kazimirski (1860) and Al-Bustānī (1998 (1870)) mention the term. Kazimirski explains *dāriǧ* as follows: "vulgaire, usuel, parlé (arabe)" and interestingly enough contrasts it with *fuṣḥā*: "*al-ʿarabīya al-dāriǧa wa al-aṣlīya* [:] L'arabe literal (celui des livres) et l'arabe usuel" (Kazimirski 1860, 686). Al-Bustānī (1998 (1870), 274) explains *al-dāriǧ*: "active participle. The common people use it[25] in the sense of what is used by the general public".[26] And for *al-ʿarabīya al-dāriǧa*: "the language of the common people".[27] The explanations "usuel" and "used by the general public" and "the popular language, colloquial language" (Wehr 1994, 320) refer clearly to the fact that the term is derived from *dariǧa* "being current" or "being in wide circulation" (Wehr 1994, 319). The explanation given by *al-muʿǧam al-asāsī* clearly demonstrates that it is considered to be synonymous with *ʿāmmīya*: "*kalām dāriǧ: ʿāmmī*" (al-Qāsimī 2003, 444).

4.1 Recent developments

At this point I would like to refer to a couple of interesting recent developments that need further investigation. One of them is the use of *luġa sūqīya* to refer to the spoken

---

24. See for instance, Caubet (2018, 387), who translates *dāriǧa* as "Moroccan Arabic".

25. Al-Bustānī seems to imply here that the term *dāriǧ* itself is not standard.

26. In Arabic: "*al-dāriǧ ism fāʿil. wa al-ʿāmma tastaʿmiluhu bi-maʿnā al-mustaʿmal ʿinda al-ǧumhūr*".

27. In Arabic: "*wa al-ʿarabīya al-dāriǧa luġat al-ʿāmma*".

varieties of Arabic, which has a clear pejorative connotation. The adjective *sūqī* is derived from *sūq* (the market place) and can be translated as "plebeian, common, vulgar, low" (Wehr 1994, 517), but is also associated with being ill-mannered. It seems that this term is more frequently used in "islamist" environments to refer to non-*fuṣḥā* varieties, but this needs to be further investigated.

Another development is related to the expansion of computer-mediated communication (CMC) and the social media (blogging, Facebook posts, instant messaging, SMS, emails, posts on Internet fora etc.). CMC has profoundly influenced written communication in Arabic in two interrelated ways. First, it dramatically expanded the written use of non-*fuṣḥā* varieties. Secondly, it enhanced the use of Roman script to represent Arabic.[28] This latter development is related to the fact that originally the ASCII code did not allow for the use of scripts other than the Roman alphabet, including Arabic, which led to the use of Roman script, albeit in an adapted form, to represent Arabic in these media (Davies 2018, 70–1). On the other hand, the use of Roman script seems to have facilitated the use of non-*fuṣḥā* varieties as well as code-switching between Arabic, English, French and Spanish in CMC, a development that is also related to the directness and informality of this form of communication. This can be explained instrumentally, because the subtleties of spoken varieties are more easily represented in Roman script. The use of Roman script also facilitates code-switches between Arabic and French, English and Spanish practically and attitudinally because the use of Arabic script is felt to be more closely related to *fuṣḥā*. A diglossic awareness appears to be at the root of this (Davies 2018, 79–80)[29], but this needs to be further investigated. The diglossic explanation also serves to account for the fact that

28. Both practices are of course not new, writing in non-*fuṣḥā* varieties as well as writing Arabic in scripts other than Arabic have occurred many times in the history of Arabic. For instance, before the development of the Arabic script, Arabic was written in Aramaic and South Arabian scripts. Examples after the development of the Arabic grammar and script include Arabic texts written in Hebrew, Aramaic (*karšūnī*), Latin and other scripts. Very often these texts were labeled Middle Arabic, because they also contained in different degrees non-*fuṣḥā* and loan words from other languages. In the 19th and 20th centuries proposals to Latinize Arabic script, often combined with proposals to standardize non-*fuṣḥā* varieties, led to heated debates. Non-*fuṣḥā* varieties have been put into writing in personal correspondence, popular poetry, drama, fiction etc. The motives to write in non-*fuṣḥā* and/or in scripts other than Arabic differ heavily, as well as the ways in which these texts have been received, but cannot be discussed here. (For further reading, see among others Daniëls 2002; Suleiman 2003; 2004; 2013a.)

29. "[T]he fact of writing RA [Romanised Arabic] does not appear to blur the distinction between MA [Moroccan Arabic] and SA [Standard Arabic, e.g. *fuṣḥā* Arabic]. On the contrary, the use of the Roman alphabet for MA and the Arabic for SA allows a clear visual differentiation between the two" (Davies 2018, 79). However, Caubet (2018) quotes many examples of rappers and bloggers writing MA in both Roman and Arabic scripts.

in Morocco, in contrast with the Middle Eastern countries, when Unicode emerged, enabling the use of Arabic script in CMC, this did not lead to the complete abandonment of Roman script in this domain (Davies 2018; Caubet 2018). In Caubet's (2018, 401) words: "With the use of keyboards instead of pens, the Latin script was the only one available at the beginning, but as soon as the Arabic interface came out, it regained more space in the Middle-East than in North Africa." Terminologically, these specific forms of language use, which can be positioned somewhere in the middle between spoken and written communication, in combination with extensive code-switching, gave rise to a host of new labels: *Arabizi*, *Arancia*, Franco-Arabic, Franco (Davies 2018, 70; Caubet 2018, 389), as well as *ʻaransīya* and *e-darija* (Caubet 2018, 389). Caubet (2018, 389) remarks that *arancia*/*ʻaransīa* originally (in the 1980s) referred to the practice of *dāriğa*-French code-switching and that it was recuperated during the last decades to refer to *dāriğa* written in Roman script.

5. Conclusion

In this article I have described the ways in which Arabic linguistic terminology developed and evolved, with a special focus on linguistic diversity and how this diversity is perceived in the Arabic language community. I also demonstrated how this terminological exercise is an exercise in language ideology, by connecting the terminological and semantic evolution of the key terms to crucial political and social changes in the Arabic speaking world, changes that deeply influenced their denotations and connotations. Despite the terminological dynamics that I have tried to uncover, there are some strong undercurrents in the perception of linguistic variability which tend to remain quite stable. The *perception* of a diglossic dichotomy between *fuṣḥā* and non-*fuṣḥā* (*ʻāmmīya*), once established, appears to be, even in very recent developments, very persistent, though in ways that are not always as straightforward as they might seem. Terminology, therefore, will always evolve as language and linguistic perceptions do.

The Muqtaṭaf corpus (in order of appearance)

Ṣarrūf, Yaʿqūb and Fāris Nimr. 1881. "Al-luġa al-ʿarabiyya wa al-nağāḥ [The Arabic language and success]." *Al-Muqtaṭaf* 6 (November): 352–4.

al-Yāziğī, Halīl. 1881. "Al-luġa al-ʿarabiyya wa al-nağāḥ [The Arabic language and success)]." *Al-Muqtaṭaf* 6 (December): 404–5.

al-Mumkin. 1882a. "Mustaqbal al-luġa al-ʿarabiyya [The future of the Arabic language]." *Al-Muqtaṭaf* 6 (January): 494–6.

al-Ğamʿīya al-adabīya al-dimašqīya. 1882a. "Nağāḥ al-umma al-ʿarabiyya fī luġatihā al-aṣliyya [The success of the Arab nation in its authentic language]." *Al-Muqtaṭaf* 6 (February): 551–6.

Dāğir, Asʿad. 1882. "Istiḥālat al-Mumkin idā amkana [The impossibility of al-Mumkin if it were possible]." *Al-Muqtaṭaf* 6 (February): 556–60.
al-Mumkin. 1882b. "Mustaqbal al-luġa al-ʿarabiyya. Naǧāḥ al-umma al-ʿarabiyya fī luġatihā al-aṣliyya [The future of the Arabic language. The success of the Arab nation in its authentic language]. " Al-Muqtaṭaf 6: 618–21.
Ḥ.Ḥ. .1882. "Kašf al-ǧaṭā ʿammā fī kalām al-Mumkin min al-haṭā [Uncovering the mistakes in al-Mumkins words]." *Al-Muqtaṭaf* 6 (April): 690–4.
Qandalaft, Mitrī. 1882a. "Naǧāḥ al-'umma al-'arabiyya fī luġatihā al-'aṣliyya [The success of the Arab nation in its authentic language]." *Al-Muqtaṭaf* 6 (April): 694–6.
al-Ǧamʿīya al-adabīya al-dimašqīya. 1882b. "Naǧāḥ al-umma al-ʿarabiyya fī luġatihā al-aṣliyya [The success of the Arab nation in its authentic language]." *Al-Muqtaṭaf* 6 (April): 697.
al-Mumkin. 1882c. "Mustaqbal al-luġa al-ʿarabiyya [The future of the Arabic language]." *Al-Muqtaṭaf* 7 (June): 42–4.
Qandalaft, Mitrī. 1882b. "Naǧāḥ al-'umma al-'arabīya fī luġatihā al-'aṣliyya [The success of the Arab nation in its authentic language]." *Al-Muqtaṭaf* 7 (July): 107–10.

Other references

Al-Bustānī, Buṭrus. 1998 (1st print 1870). *Muḥīṭ al-muḥīṭ. Qāmūs muṭawwal li-al-luġa al-ʿarabīya* (*Muhit al-muhit. An Arabic-Arabic Dictionary*). Beirut: Librairie du Liban Publishers.
al-Qāsimī, ʿalī (ed.). 2003. *Al-muʿğam al-ʿarabī al-asāsī li-al-nāṭiqīn bi-al-ʿarabīya wa mutʿallimīhā* (*The elementary Arabic dictionary for native speakers and learners*). Cairo: ALECSO/Larouse.
Anīs, Ibrāhīm. 1999 (1961). *Al-aṣwāt al-'arabīya*. Caïro: Maktabat al-Anglo al-Miṣrīya.
Ayoub, Georgine. 2011a. "Faṣīḥ." In *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill, 2011. Brill Online. University of Cambridge – Cambridge University Library (UK). 01 December 2011. <http://www.brillonline.nl/subscriber/entry?entry=eall_COM-vol2-0014>
Ayoub, Georgine. 2011b. "Laḥn." *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill, 2011. Brill Online. University of Cambridge – Cambridge University Library (UK). 01 December 2011. <http://www.brillonline.nl/subscriber/entry?entry=eall_COM-vol2-0014>
Caubet, Dominique. 2018. "New elaborate written forms in *darija*. Blogging, posting and slamming in Morocco." In *The Routledge Handbook of Arabic Linguistics*, ed. by Elabbas Benmamoun and Reem Bassiouney, 387–406. London and New York: Routledge.
Daniëls, Helge. 2002. Debating variability in Arabic: Fuṣḥā versus 'āmmīya. Unpublished Ph.D. Antwerp: University of Antwerp.
Daniëls, Helge. 2018. "Diglossia: a Language Ideological Approach." *Pragmatics* 28 (2): 185–216. https://doi.org/10.1075/prag.00006.dan
Davies, Eirlys. 2018. "Colloquial Moroccan Arabic: Shifts in Usage and Attitudes in the Era of Computer-mediated Communication." In *Language, Politics and Society in the Middle East. Essays in Honour of Yasir Suleiman*, ed. by Yonatan Mendel and Abeer Alnajjar, 69–89. Edinburgh: Edinburgh University Press.
Dévényi, Kinga. 2011. "ʾIʿrāb." *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill Online. Consulted online on 20 April 2018. <http://dx.doi.org.kuleuven.ezproxy.kuleuven.be/10.1163/1570-6699_eall_EALL_SIM_vol2_0029>

Eid, Mushira. 2002. "Language is a Choice – Variations in Egyptian Women's Written Discourse." In *Language Contact and Language Conflict in Arabic – Variations on a Sociolinguistic Theme*, ed. by Aleya Rouchdy, 203–232. London: Routledge-Curzon.

Ferguson Charles A. 1959. "Diglossia." *Word* 15: 325–340. https://doi.org/10.1080/00437956.1959.11659702

Frayḥa, Anīs. 1938. "Al-ʿāmmīya wa al-fuṣḥā. ʿawd ilā al-mawḍūʿ (ʿāmmīya and fuṣḥā. Back to the subject)." *Al-muqtaṭaf* 93: 292–298.

Fück, Johann. 1955. *Arabiya: Untersuchungen zur arabischen Sprach- und Stilgeschichte*. Berlin: Akademie-Verlag.

Haeri, Niloofar. 2000. "Form and Ideology: Arabic Sociolinguistics and Beyond." *Annual Review of Anthropology* 29: 61–87. https://doi.org/10.1146/annurev.anthro.29.1.61

Hassanein, Ahmad Taher. 2011. "Lisān." In *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill, 2011. Brill Online. University of Cambridge – Cambridge University Library (UK).

Iványi, Tamás. 2011. "Luġa." In *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill, 2011. Brill Online. University of Cambridge – Cambridge University Library (UK).

Kazimirski, A. De Biberstein. 1860. *Dictionnaire Arabe – Français (2 tomes)*. Beirut: Librairie du Liban.

Liam, Chaoqun. 2018. "Metaphorical Recurrence and Language Symbolism in Arabic Metalanguage Discourse." In *Language, Politics and Society in the Middle East. Essays in Honour of Yasir Suleiman*, ed. by Yonatan Mendel and Abeer Alnajjar, 49–68. Edinburgh: Edinburgh University Press.

Marçais, William. 1930. "La diglossie arabe." *L'enseignement public* 97: 401–409.

Muṣṭafā, Ibrāhīm (ed.). 1980. *Al-muʿğam al-wasīṭ* (*The intermediary dictionary*). Istanbul: Dār al-daʿwa.

Rabin. Chaim. 1960. "ʿArabiyya, Arabic language and literature." *Encyclopdia of Islam* II: 561-7.

Sanni, Amidu. 2010. "The Discourse on *Laḥn* in Arabic Philological and Literary Traditions." *Middle Eastern Literatures*, Vol. 13 No. 1. London and New York: Routledge.

Suleiman, Yasir. 2003. *The Arabic Language and National Identity. A Study in Ideology*. Edinburgh: Edinburgh University Press.

Suleiman, Yasir. 2004. *A War of Words. Language and Conflict in the Middle East*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511819926

Suleiman, Yasir. 2008. "Egypt: From Egyptian to Pan-Arab Nationalism." In *Language and National Identity in Africa*, ed. by Andrew Simpson, 26–43. Oxford: Oxford University Press.

Suleiman, Yasir. 2011a. *Arabic, Self and Identity. A Study in Conflict and Displacement*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199747016.001.0001

Suleiman, Yasir. 2011b. "Arabiyya." In *Encyclopedia of Arabic Language and Linguistics*. Managing Editors Online Edition: Lutz Edzard; Rudolf de Jong. Brill, 2011. Brill Online. K.U. Leuven – University Library.

Suleiman, Yasir. 2012. "Ideology and the Standardization of Arabic." In *Arabic Language and Linguistics*, ed. by Reem Bassiouney and E. Graham Katz, 201–213. Washington D.C.: Georgetown University Press.

Suleiman, Yasir. 2013a. *Arabic in the Fray. Language Ideology and Cultural Politics*. Edinburgh: Edinburgh University Press. https://doi.org/10.3366/edinburgh/9780748637409.001.0001

Suleiman, Yasir. 2013b. "Arabic Folk Linguistics between Mother Tongue and Native Language." In *The Oxford Handbook of Arabic Linguistics*, ed. by Jonathan Owens, 264–280. Oxford: Oxford University Press.

Verschueren, Jef. 2012. *Ideology in Language Use. Pragmatic Guidelines for Empirical Research*. Cambridge: Cambridge University Press.

Versteegh, Kees. 1984. *Pidginization and Creolization: The case of Arabic*. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.33

Versteegh, Kees. 2001 (1997 1st print). *The Arabic Language*. Edinburgh: Edinburgh University Press.

Wehr, Hans, and J. Milton Cowan (ed.). 1994 (1979 1st print). *A dictionary of modern written Arabic: Arabic-English*. Wiesbaden: Otto Harrasowitz.

Zwettler. 1978. *The Oral Tradition of Classical Arabic Poetry*. Columbus: Ohio State University Press.

List of contributors

Dr Ali M. Al-Kasimi is an Iraqi scholar who resides in Morocco. He studied at Baghdad University, the American University of Beirut, the Arab University of Beirut, University of Oslo, Oxford, La Sorbonne and the University of Texas at Austin, where he obtained his Ph.D. in applied linguistics (lexicography) under the supervision of Archibald A. Hill and James Sledd.

In addition to his several publications on lexicography and terminology, he is a prolific author of short stories, novels, and literary criticism, and has translated several American novels and collections of short stories into Arabic.

Dr Ahmed Allaithy is associate professor of translation at the American University of Sharjah, UAE, president of Arabic Translators International (ATI) and editor of its series *ATI Publications*. At the University of Durham, UK, he taught undergraduate courses in Arabic, and at King Khaled University, Saudi Arabia, he taught in the Department of English and was one of the founding members of the Translation Department. His research areas include translation studies, Qur'an translation, interpreting, linguistics, rhetoric, intercultural communication, Arabic heritage, and Islamic studies.

Dr Abied Alsulaiman is professor of Arabic at KU Leuven. He is also a co-founder of Arabic Translators International (ATI) and is co-editor of its series *ATI Publications*. He lectures in history of Arabic culture, legal translation, business translation and interpreting. His research interests include translation studies and translation technology, legal translation and legal terminology, literary and religious translation, Arabic language and linguistics, Islamic studies and history, Semitic languages and linguistics, Hebrew studies and Judeo-Arabic literature. He has published on translation studies, Arabic linguistics, Semitic languages and Judeo-Arabic literature.

Dr. Helge Daniëls is assistant professor at the University of Leuven, where she teaches Arabic, Arabic linguistics and sociolinguistics, and Arabic literature. After graduating at the University of Ghent in Eastern languages and cultures and Arabic studies, she spent several years in Egypt and Jordan carrying out research and field work. Her research focusses mainly on Arabic (socio)linguistics, especially the relation between linguistic variability and language ideology.

Dr Hassane Darir is professor of translation and terminology and coordinator of the Masters program in Translation Technology and Specialized Translation at Cadi Ayyad University in Marrakech, Morocco. He is a co-founder of the Kit Lab (Knowledge Integration and Translation Laboratory), a Cadi Ayyad-based translation and terminology research group, which organizes international conferences on translation and

sacred texts as well as on Arabic terminology and phonology. He is also a co-editor of the *Knowledge and Translation* textbook series and assistant editor of *Bayt Al-Hikma for Translation Studies Journal*. His most recent publication is *Towards a Model for the Standardiozation of Arabic Scientific and Technical Terms: Linguistics Terms as a Case Study (2017)*. His research interests cover issues in terminology, translation, lexicography, linguistics, media and communication studies, with special reference to the Arabic language and the Arab world.

Dr Khalid Elyaboudi is a professor in the Arabic department at Mohammed V University in Rabat, Morocco. He is also an editor-in-chief of the *Terminologies* Journal. He lectures on semantics, lexicology, lexicography, terminology, and terminography at the Faculty of Letters, Mohamed V University. His fields of research cover issues in the development of specialized dictionaries, Arabic grammatical tradition, Sufism in Islam, translation, and Orientalism and Arabic research. He is also the author of several books and articles in the aforementioned fields.

Dr Hassan Hamzé is emeritus professor at University of Lyon 2, France. He founded the Center for Research in Arabic linguistics (2002), and was director of the Arabic Department and head of Arab Higher Studies (1997–2004). He has been the head of the Arab Office of Lexicology, Terminology, Lexicography and Translation in Lyon 2 University for more than twenty years. He is the deputy chair of the Academic Committee of the Doha Historical Dictionary of Arabic, head of the Program of Linguistics and Arabic Lexicography in the Doha Institute for Graduate Studies, member of the scientific committee of the Encyclopedia of Scientists and Writers of Arabs and Muslims, and a member of the scientific committee for a number of periodicals in Egypt, Morocco, Tunisia, Lebanon, and Algeria. His research focuses on linguistics, history of Arabic grammar, lexicology, lexicography and translation. He has published and translated more than eighty research papers and books in Arabic, as well as in other languages.

Dr Lahousseine Id-Youss is affiliated with KU Leuven. He lectures on translation from Arabic into Dutch of media and business documents and administrative texts. The title of his doctoral thesis is: *Legal Translation: A Comparison of Concept Systems. Arabophone Morocco versus Francophone Belgium*. He has published in the areas of translation studies, legal terminology, parallel corpora and translation technology.

Dr Kassem Sara obtained his Medical Doctor degree from Damascus University. He worked as a regional advisor for health and biomedical information at the Eastern Mediterranean office of the World Health Organization (WHO) until 2007, and for the WHO Global Arabic program from 2008 until 2014. He contributed to the Arabization of the WHO Health Sciences Network (AHSN: www.emro.who.int/ahns). He also

contributed to the Arabic edition of the WHO bulletin (www.emro.who.int/bulletin), and to the creation of the unified English-Arabic medical dictionary. He published a medical dictionary in 1999 and translated a number of books on medical and health issues.

Dr Said M. Shiyab is a professor of translation studies and director of the Masters Program in Arabic Translation at Kent State University (KSU). Prior to joining KSU, he taught translation courses at the University of Geneva, Switzerland. He also taught at various international institutions such as University of Southern Indiana (USA), King Saud University (SA), Yarmouk University, (Jordan), and UAE University, where he was also the founder and chair of the Department of Translation Studies and acting chair of the French Language Program. In 2007, he received the College Best Performance Award for Excellence in Scholarship. Dr. Shiyab is a member of numerous notable affiliations: the International Journal of Asian Philosophical Association (IJAPA), the editorial boards of *Babel* and of the *International Journal of Translation Studies in the New Millennium*, the Chartered Institute of Linguists, London (UK), and the Higher Council for Translation, Arab League. He is also a language consultant and translation test assessor for Xerox Global Knowledge and Language Services. His publications include *A Textbook of Translation: Theoretical and Practical Implications, Globalization and Aspects of Translation, Translation and the Structure of Argumentation, Business Letters Across Languages*, and *Translation: Concepts and Critical Issues*, and many refereed academic articles.

Dr Heidi Verplaetse teaches English in the fields of translation (medical/scientific, business and journalistic texts), writing (business and journalistic texts) and external communication at KU Leuven, Campus Sint-Andries in Antwerp. Her PhD in English linguistics focussed on modality. She has also worked in the field of business communication. Her current research interests include specialized (medical) translation, translation quality and the use of CAT tools, transediting of journalistic texts, and translation work and processes in students.

Dr Maria-Cornelia Wermuth is associate professor at the Faculty of Applied Language Studies and affiliated researcher at the Faculty of Arts at KU Leuven, where she lectures in German grammar, information and communications technology, terminology, and specialised (medical/pharmaceutical) translation. She completed her PhD in Language and Literature in 2005 at the Free University of Amsterdam (Netherlands). Her research areas include cognitive linguistics, construction grammar (CxG), frame semantics, terminology science, translation science and translation technology. She is also involved in governmental terminology projects. Since 2007 she has been a committee member of NL-Term, a Dutch-Flemish governmental organisation promoting the use of Dutch terminology in specialised communication.

Dr Abdelhamid Zahid is a professor of Arabic and English at the Faculty of Letters, director of the Knowledge Integration and Translation Laboratory, and vice-coordinator of the Masters in Translation Technology and Specialized Translation at Cadi Ayyad University Marrakech, Morocco. He is also editor-in-chief of *Bayt Al-Hikma Journal for Translation Studies* and of the *Arabic Phonetics* journal. His fields of research include translation studies, translation of sacred texts, phonetics, Arabic literature, linguistics and the development of dictionaries. He has also authored several books and articles in the aforementioned fields, and is a practicing translator of literary texts.

Index

The current volume represents a revival of Arabic translation and terminology studies. These disciplines have been dominated by Western scholarship in recent decades, but in truth their historical tradition as a whole owes a great debt to Arabic scholarship. The first systematic translation activity ever organized was under the Abbasids in Baghdad in the 9th Century CE, and Arabic domination continued for several centuries before the tide turned. In this collection, the importance of the ongoing translation and terminology movement in the Arab world is revealed through the works of some of the most distinguished scholars, who investigate a wide range of relevant topics from the making of the first ever Arabic monolingual dictionary to modern-day localization into Arabic. Arabic terminology standardization as well as legal, medical, Sufi and Quranic terms – issues with both cultural and economic ramifications for the Arab world – are thoroughly examined, completing the solid framework of this rich tradition that still has a lot to offer.

ISBN 978 90 272 0198 0

JOHN BENJAMINS PUBLISHING COMPANY