
Challenges of Semantic Shift in Translating Classical Arabic Texts into English, extracts from Yaakubi's book "AL-BULDAN" as a case study

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Abstract:

This study aims to examine semantic shift in classical Arabic texts and the challenges it poses for translators; it also tests the ability of machine translation to detect and render semantic shift from Arabic to English. The study employs Yaakobi's book "Al-Buldan" as source text to spot semantic shift in professions and names of geographical places in the part related to Mid-Maghreb or present day Algeria. Not only does semantic shift pose challenges for machine translation and translators in general, but it might also undermine research and reduce opportunities of establishing facts for historians and linguists, hence the need to establish laboratories where linguists, translators, historians, stakeholders and researchers collaborate to study and translate ancient Arabic texts.

Keywords: Semantic Shift; Classical Arabic Texts; Translation; Challenges; English.

1- Introduction

Languages change over time as classical languages differ from modern ones: classical Arabic and modern Arabic are completely different and so is the old and modern English. Therefore, translating classical texts seems to be challenging for translators due to semantic shift. The present work tries to assess machine translation performance in detecting and rendering semantic shift, hence, most used machine translation is used as a reference. The work seeks to identify the risks of ignoring semantic shift and suggest some solutions to overcome its challenges while translating

classical Arabic texts into English by studying some cases of semantic shift in Yaakubi's book "Al-Buldan". The study claims that the meaning of many words in classical Arabic has changed, which requires special awareness and collaboration for their translation. It also claims that studying semantic shift in Arabic can benefit linguists, translators and historians and can facilitate creating Arabic etymological dictionaries. Yet nevertheless, as more emphasis in the literature is put on explaining and classifying semantic shift in different languages, this study seeks to explore ancient Arabic texts to uncover semantic shift and the challenges it poses for translators and historians by studying specific vocabulary and expressions related to professions and geographical spaces.

2- Semantic shift

In the present work, it is important to determine what is meant by semantic shift in a short definition before delving into its reasons and types.

2.1 Semantic shift: definition and reasons

Semantic shift, also called semantic change, semantic progression, and lexical change, refers to the changes in meaning of the signifier over the course of time: the Arabic word "sayyara" سيارة, which nowadays means a car, meant a caravan of travelers in classical Arabic. Semantic shift occurs whenever a new name is connected to a meaning and/or a new meaning is connected to an existing name (Ullmann, 1951, p. 159). Certainly, "generations before and after ours speak differently, preferring forms and rules different from those we prefer and even having some different ones. Whenever a language at some point in time is compared with its descendent language even a few hundred years later, the change is obvious" (Hudson, 2000, p. 392). This is noticeable in Arabic, as the language used before Islam is different from the Arabic used in the first centuries of Islam, and the latter is totally different from the modern Arabic. According to Hudson, semantic change happens owing to the fluctuating human experiences which are strongly linked to concepts, when experiences change, concepts change; and words expressing concepts change accordingly. Taking the example of the Arabic word أثافي « Athafi » which referred to the stones that were put,

while cooking, around the fire to support dishes, the word was mentioned in ancient Arabic poetry, but since the cooking experience has changed with recent appliances and stoves, most Arabs do not use the word and don't even know its meaning. It was also argued that "alteration of meaning occurs because words are constantly used and what is intended by speakers is not exactly the same in specific time and place (Kadhim, 2012, p. 7); linguists also explain that signifiers have dynamic meanings and connotations: words can gain, lose or alter senses. According to Bartsch, "semantic change is possible because the specific linguistic norms, including semantic norms, are hypothetical norms, subordinated to the highest norms of communication" (Bartsch, 1984, p. 24). The causes of semantic shift may be grouped under two main headings, linguistic and extra linguistic ones. The first, linguistic causes, deals with changes due to the constant interdependence of vocabulary units in language and speech, such as differentiation between synonyms, changes taking place in connection with ellipsis and with fixed contexts, changes resulting from ambiguity in certain contexts, and some other cases. The second, extra linguistic causes, is due to the social nature of the language: they are observed in changes of meaning resulting from the development of the expressed concept and the word naming it; and to the appearance of new concepts. In other words, the extra linguistic factor of semantic shift deals with the development of the human mind as it molds reality to conform it to its needs. Therefore, sociolinguistics affirms that social, political, economic, cultural and technical changes affect languages to such an extent that they can influence even structural features of linguistic units, terms of science, for instance, have a number of specific features as compared to words used in other spheres of human activity: the Arabic scientific word الكحول (alcohol) which was used purely for scientific purposes, was borrowed to mean the same in most European languages, but nowadays it means also spiritual drinks in the borrowing languages and the borrower language, Arabic. Yet nevertheless, it is worth mentioning that the French linguist Antoine Meillet stated three causes to semantic shift: linguistic, historical and social (Meillet, 1982, pp. 240-245), but Stephen Ullmann affirmed that although the aforementioned causes can explain many cases of semantic progression, yet

nevertheless, they are not inclusive since semantic shift can also have other motives such as psychological, creative and rhetorical causes (Heinz Werner and Edith Kaplan, 1952)

2.2 Types of semantic shift

Three aspects of semantic shift are pointed out in the literature: shift of denotation, when the meaning is expanded or restricted, shift of connotation, when the meaning gets ameliorated or pejorated, and change in the stylistic meaning of words.

Shift in the denotation of words occurs because humans naturally tend to generalize, and this affects the meaning of words. This linguistic phenomenon is known as semantic broadening (also termed generalization, extension and widening,) when the signifier (word) is used to mean beyond its usual original concept to refer to more generalized concept: the word “Africa” provides a good example of semantic broadening, as “Ifrikhia” أفريقية referred only to the coastal area stretching from present day Tunisia to Chlef river وادي الشلف in Algeria, now it is a name of a whole continent. Another clear example of semantic broadening is found in the word magazine coming originally from the plural form of the Arabic word مخازن which means storehouses, and as some specific books were put in storehouses in the 17th century, magazine referred, also, to all the books inside the storehouse, belonging to a specific subject and providing useful information to particular groups of people stocked: such as astronomy magazine and military magazine. In the 18th century, the word magazine meant also the periodical publications that dealt with the same subject, and in the 19th century, radio and television producers called their periodical programs “magazine”, too (Oxford English Dictionary, 2006). Shift in denotation also happens when the meaning of a word is narrowed from general to specific like the Arabic word Salat صلاة « prayer » meant, in classical Arabic, any kind of supplication, but Islam narrowed its meaning to the prayer that Muslims nowadays perform (أنيس، 1979، صفحة 122). The word “girl” denoted, in classical English, a child or young person of both sex; and mete “meat” meant any kind of food: fruit, vegetable, bread, dairy

and meat, but now it means just the last (Oxford English Dictionary, 2006). It is worth pointing out that this linguistic phenomenon is termed specification, restriction, narrowing, and reduction.

Shift in denotation occurs through amelioration when the signifier gains a positive meaning like the Arabic word “Arrasool” (the messenger) which meant anyone who carried a message, but now it refers to the Prophet Mohammad. The Algerian word “Mahbool” (fool) had only a negative meaning, but now it is used by the young to mean very nice. Likewise, the English adjective “nice” meant Middle English stupid and crazy (Oxford English Dictionary, 2006). In contrast, denotation can change from positive to negative; linguists refer to this frequent phenomenon using terms like Pejoration, degradation, and deterioration. The English word “bint” provides a good example of pejoration as it was used, in the 19th century, as a loanword from Arabic بنت to mean a virgin girl, but now its denotation has been degraded as it is utilized to refer offensively to a woman (Oxford English Dictionary, 2006). Linguists, like (Bréal, 1897, p. 100) and (Stern, 1921, p. 411) interestingly point out that pejoration is more frequent than amelioration owing to “the natural human tendency to worsen things” (Oklah, 2014).

Shift in the stylistic meaning of words happens through the use of metaphor and metonymy which are, according to cognitive semantics, fundamental processes universally employed by human beings to comprehend the various phenomena of reality (George Lakoff, 1980, pp. 3-4). They are also two basic linguistic mechanisms of change of meaning (Győri, 2002). As metaphors are formed on the perception of similarities, they become frequent in languages whenever the analogy is obvious, like using parts of the human body in various languages: an example of this is referring to the top of the mountain in Arabic using the word head, رأس الجبل (Ras Al-Jabel); and this is also common in English expressions such as the foot of the hill, legs of the table. Semantic shift generally occurs through ellipsis, when the main word is not said, therefore; رأس is used instead of قمة الجبل, and the “foot” replaces the bottom of the hill. Metonymy, known also as contiguity of meanings leads to semantic shift, as it links one word to two

different concepts, one of which makes part of the other or is closely connected with it. The Arabic, English, and French words لسان, tongue, and langue all mean both the human organ of speech and the language. Another frequent example of metonymy in languages is the use of names of places to refer to their people, like the famous example from the Quran: اسأل القرية (ask the village) referring to the inhabitants of Egypt. In the same way in football, players are often called using the name of the country they represent; thus, we usually hear “Algeria is playing”. Metonymy causes semantic shift as names of places can also mean famous goods or services produced there, like Fleet Street in central London where many British newspaper offices are located, hence Fleet Street means British journalism. Similarly the Italian town Genoa, where a special kind of fabric was first produced, after undergoing some phonetic changes, it become Genes from which the word jeans can be traced back.

3- Methods

The present study is based on a content analysis; it employs as a source text Yakoobi’s book “ Al-Buldan” which was written between 260-270 when the writer, Yaakoubi, was traveling from the East to the Maghreb. The text is written in classical Arabic of the Abbasid period, which serves the purpose of the study since it analyzes the part talking about geographical spaces of present day Algeria that stretches over eight pages from page 108-116. This part includes information about cities, roads, marinas, tribes and their social and economical life. This study seeks to explore the challenges of translating Arabic classical texts to English by:

- studying semantic shift overtime by referring to Arabic dictionaries and books of history and geography,
- analyzing the meanings of words related to professions and proper nouns designating geographical spaces,
- testing machine translation ability to detect and render the meaning contained in the ST,
- suggesting a translation that considers semantic shift and comparing

it, when possible, with the machine translation in order to uncover some of the challenges of understanding and translating classical Arabic texts.

Contrasting the translation that renders semantic shift with the faulty one can identify the consequences of ignoring semantic shift in the translation of classical Arabic texts; this might also serve as problem shooting not only for translators, but also for all the consumers of translation and the different users of classical Arabic texts.

4- Analysis

4.1. Analyzing semantic shift in words expressing professions

In his book, Al-Yaakoubi investigated and wrote about the social life of some nations and tribes he visited and asked about; he mentioned many administrative occupations and other professions that have evolved through the dynamics of time. Although many words expressing professions are still in use modern Arabic, they do not mean what is intended in the ST, which can confuse the reader as demonstrated in the following table:

Table 1. Studying semantic shift in words expressing professions

Professions in the ST	Semantic shift and machine translation	Translation considering SS
فالمدينة العظمى يقال لها توزور ينزلها العمال	عمال refers to governors nominated by Walis; now it used for all types of workers (broadening), generally of inferior rank (pej) MT: The great city is called Tozeur, which is housed by workers	The big city where governors stay is called Tozeur
ومدينة الزاب العظمى طينة وهي التي ينزلها الولاة	ولايةplural of wali, now refers to a governor of a smaller surface. (narrowing) MT: and the great city of Zab, Tabna, which is the place where	And the big city in the Zeb region called Tabna where walis stay.

	the rulers descend.	
بها قوم من الجند	Soldiers means the same now. MT: It has a people of soldiers.	There stay some soldiers
قوم يقال لهم بني برزال، وهم فخذ من بني دمر، وهم شراة كلهم.	شراة means traders. As trade involves sellers and buyers, the meaning has shrunk. (nar) MT: a people called Banu Barzal, and they are a group of Banu Dumr, and they are all buyers.	The people of Bani Berzal, descendants of Bani Dummar, are all traders.
وفي جميع المراحل حصون متقاربة ينزلها العباد والمرابطون	المرابطون meant at that time fighters for Islam. Almoravids did not exist until the 5 th century. In the 19 th century colonialism gave it a pejorative meaning. MT: In all stages, fortresses descended by the servants and the Almoravids.	There are close fortresses where worshipers and fighters for Islam stay.
أهلها قوم من بني تميم وموالي لبني تميم.	موالي means servants; now it means lords. (amelioration) MT: its people are people from Bani Tamim and loyal to Bani Tamim.	It is populated by people from Bani Tamim and their servants.
هم أصحاب عمارة وزرع وضرع	أصحاب عمارة means in the text city dwellers, أصحاب زرع means farmers, ضرع means livestock breeders. (Archaic) MT: They are the owners of architecture, planting and udder	They are city dwellers and farmers.
وليس أهله بشراة لكنهم جماعية	جماعية means in the text people who live together bartering goods. (dropped from use) MT: His family is not human, but they are collective	its people are not traders, but they lead a collective bartering life.

Source: (اليقوي، 1918، الصفحات 108-116)

Table (1) studied semantic shift of 10 words and expressions related to professions; 9 had such a significant semantic shift that Google translation was misleading, this suggests that Google translation of classical Arabic texts needs investigation as it failed here to render the meaning contained in the ST.

4.2. Analyzing semantic shift in geographical names

Table 2. Semantic shift of names of Marinas in the Mid-Magreb

Marinas in the ST	Semantic shift and translation challenges
Marina of مرسى جيجل Jijel "ولها مرسى يقال له جيجل"	In the text, Jijel refers to a merely marina in the city of Mila. Broadening of the meaning occurred as it refers now to a Wilaya (Marinas) Translators need to show that Jijel at that time was a name of a marina, not a city. We suggest the following translation: "The city of Mila has a marina called Jijel."
Marina of مرسى إسكيدة Iskida ومرسى يقال له إسكيدة"	In the ST, Iskida refers to a marina in the city of Mila; broadening occurred, as it is now a Wilaya (Skikda). Translators need to point out that today's Skikda, was a name of a marina. Our suggested translation is: "and another marina called Iskida"
The مرسى فروخ Marinas of والحصن، Farroukh الذي على ساحل البحر ترسو به مراكب تاهرت يسمى مرسى فروخ"	There is a Narrowed meaning here as the name no longer exists. This is our translation to the Arabic sentence: "the citadel by the seaside, where Tahert's ships dock, is called the Marinas of Farroukh." Translator need to show its approximate location and point out that it was part of Tahert.

Source: (اليقوبي، 1918، الصفحات 108-109)

Table (2) examined three names of Marinas mentioned in the ST, two of which developed to be important cities: Jijel and Skikda, but one, Farroukh, dropped completely from use.

Table 3. Semantic shift of eastern cities of the Zeb province

Cities in the ST	Semantic shift and translation challenges
Tabna طنبنة (بريكة بباتنة) "ومدينة الزاب العظمى طنبنة، وهي التي ينزلها الولاة ..."	The meaning of the city has been narrowed, as it was a capital city then, but a small town nowadays. Hence, it is difficult for translators to render the importance, the exact location, and surface of Tabna as described in the source text. Therefore, explanatory translation techniques are required, such as a map, to show the expansion of Zeb and the approximate surface of the city. To translate its importance, we suggest: "Tabna, the capital city of the Zeb province where governors stay ..."
باغاية Baghaia (خنشلة) "والزاب بلد واسع فمنه مدينة قديمة يقال لها باغاية بها بقايا من الجند وعجم من أهل خرسان، وعجم من عجم البلد من بقايا الروم، حولها قوم من البربر من هواره بجبل جليل يقال له أوراس".	The semantic shift spotted here is narrowing, as Baghaia now refers to the existing ruins. Translators of the ST need some explanatory techniques to show the scope and importance of the city then such as a map or gloss translation. We suggest, however, the following: "Zeb is a large region that includes the city of Baghaia. Its population includes remaining foreign soldiers, foreigners from Khurasan and Europe, and Berbers who live on a huge mount called Aures."
تيجس Tiges ومدينة يقال لها تيجس من عمل باغاية حولها قوم بربر عجم.	Tidjis is described as a subordinate city to Baghaia, ruins of the old city are located in present day Ain El-Bordj, in the Wilaya of Om-el-Bouaki. The meaning has shrunk over time (narrowing). We suggest the following translation for the Arabic sentence: "Tiges is another city that belongs to the administration of Baghaia; it is surrounded by Berbers who can't speak Arabic."

ميلة Mila "ومدينة عظيمة جليلة يقال لها ميلة، عامرة محصنة، لم يلها وال قط، ولها حصن دون حصن... وسواحل البحر تقرب من هذه المدينة، ولها مرسى يقال له جيجل، ومرسى سكيكدة... وهذا البلد كله عامر كثير الأشجار والثمار" (اليقوبي، 1918)	Mila is described as a large well-protected coastal city with many citadels and marinas including Jijel and Skikda. Now, Mila is smaller and less important (narrowing). Translators need to point out that old Mila is different from today's one as it included other cities like Jijel and Skikda to show its importance and surface. The translation that we suggest is the following: "A large well-protected coastal city called Mila; it has many mountains, trees, fruits and marinas such as Jijel and Iskida; no governor has been able to rule so far."
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Source: (اليقوبي، 1918، الصفحات 109-108)

As the four cities had their surface and importance narrowed comparing with Annaba and Constantine today, the reasons behind need to be investigated by different researchers. Hence, translators need to point out the significant role these cities played in the past since they served as main roads for travelers and traders.

Table (3) semantic shift in cities of the Midzeb region

Cities in the ST	Semantic shift and translation challenges
سطيف Setif ومدينة يقال لها سطيف بها قوم من بني أسد بن خزيمة عمال من قبل ابن الأغلب. (اليقوبي، 1918)	Broadening of the meaning occurred in the course of time; Setif has become larger now. Translators of the ST should mention that the old city was not as big as it now. This is our translation: "A city called Setif inhabited by some people from the tribe of Beni Asd who work for Ibn Aghleb."

بلزمة Belezma "ومدينة يقال لها بلزمة أهلها قوم من بني تميم وموالي لبني تميم وقد خالفوا عن ابن الأغلب في هذا الوقت." (اليقوبي، 1918)	Narrowing of the meaning is spotted: Belzma, after being an important city, is a small town called Castle of Belazma, 7Km from Batna. Translators, therefore, need to show its importance as an old big city. We suggest: "Another city called Belzma, its inhabitants belong to Bani Tamim and their servants who have revolted against Ibn Ghalib recently."
Ngaous نقاوس "ومدينة يقال لها نقاوس، كثيرة العمارة والشجر والثمر، بها قوم من الجند، وحواليها البربر من مكنانة." (اليقوبي، 1918)	Narrowing of the meaning has occurred as Ngaous refers now to a town in the wilaya of Batna Translators need to emphasize its importance and scope in the ST. This is our translation: "a city full of buildings, trees, and fruits, called Ngaous, inhabited by some soldiers and surrounded by Berber tribes from Meknana."

Source: (اليقوبي، 1918، الصفحات 109-110)

In contrast with the previous table, this one shows that the three cities had a remarkable importance as they served as roads for travelers from and to other cities in the Megreb. Setif gained more importance and surface, but Belezma and Ngaous have lost some of their surface and importance, as coastal cities nowadays are more populated and commercially more dynamic.

Table 4. Semantic shift of names of cities in the west of Zeb

Cities and Marinas in the ST	Semantic shift and translation challenges
مقرة Magrat "ومدينة يقال لها مقرة لها حصون كثيرة، والمدينة العظمى مقرة أهلها قوم من بني ضبة، وبها قوم من العجم، وحولها قوم من البربر." (اليقوبي، 1918)	Narrowing of the meaning is spotted as Magra is not now as important as it was then. It kept its old name, and it is 55 km east of Msila. Translators should point out its large surface and describe its citadels. This is our translation: "a large city, called Magra, with many citadels inhabited by Arabs from Bani Dhabba tribe, and a mixture of non-Arabs and Berbers."

آحة Aha "ومدينة آحة وهي على الجبل" (اليعقوبي، 1918)	Narrowed meaning is to signal, as the city was just mentioned in history books. Translators of the ST should cite that the location of the city is still unknown. We suggest the following as a translation: “on the top of the mountain, there is the city of Aha”.
أربة Ourba "ومدينة أربة هي آخر مدن الزاب مما يلي المغرب في آخر عمل بني الأغلب، ولم يجوزها المسودة." (اليعقوبي، 1918)	As the name is only found in history books, Ourba, which was both a name of a city and a tribe, has a narrower use and importance now. Translators of the ST need to include a map showing the location of the tribe and the city. We translate the sentence as follows: “Ourba, the last city of the Zeb region, belongs to Ibn Aghleb, and it is the furthest city reached by the Abassids in the West.”

Source: (اليعقوبي، 1918، الصفحات 109-110)

Comparing with table (3), the three cities of the above table had their meaning and importance narrowed suggesting that they were transit cities in the past thanks to their landforms, but at present, more importance is given to coastal cities.

Table 5. Semantic shift of names of cities in Ifrikia province

Cities in the ST	Semantic shift and translation challenges
افريقية Ifrikia "وقد ذكرنا فتح افريقية وأخبارها في كتاب أفردناه" (اليعقوبي، 1918)	The meaning has been broadened since Africa or Ifrikia was described as region that stretches from present day Tunisia, in the east, to the valley of Chlef in the west. It did not include the Zeb region nor the Sahara in the south. Translators should identify and limit Ifrikia in old Arabic texts, and they need to distinguish between the old Ifrikia and Africa now. Our translation would be “ We had detailed, in a separate book, the Muslims’ conquest to Ifrikia”

أدنة Adna "وبينها وبين عمل أدنة مسيرة ثلاثة أيام" (اليقوبي، 1918)	A narrowed meaning and importance of the name is to signal here, as the name is no longer in use, despite the fact that Adna was both a name of a province and capital city, since it is described as عمل (a governorate) where governors live and rule different cities. We translate the sentence as follows: "the governate of Adna is a three-day walk from the next city Haz."
هاز Haz (شلالة الغداورة) "وأول المدن التي في يده مدينة يقال لها هاز، سكانها من البربر القدم، وبعدها مدن سكانها يعرفون بالبرانس، وإلى هاز ينسب البلد" (اليقوبي، 1918)	Narrowing of the meaning as the name refers to an ancient province and city that does not exist now; it is located in present day Chellalet Al-Adouera. Translators, therefore, should use illustrative techniques to determine the location of the city and the approximate limits of the province of Haz. Our translation would be: "the first city, under Solimane's rule, is called Haz, inhabited by old Berber tribe. It is surrounded by other cities, but they all belong to the province of Haz"

Source: (اليقوبي، 1918، الصفحات 109-110)

In the table, Ifrikia which is nowadays Africa, had its meaning broadened to be the name of the whole continent, the two other cities: Adna and Haz dropped completely from use and got other different names in the course of history.

Table 6. Semantic shift of names of cities in Metdja province

Cities in the ST	Semantic shift and translation challenges
متيجة Mitidja "ثم يصير إلى بلد يقال له متيجة، تغلب فيه رجال من ولد الحسن بن علي، وهو بلد واسع فيه عدة مدن وحصون" (اليقوبي، 1918)	The meaning of Mitidja has been narrowed as it surface has shrunk over time. In the ST, it is described as a province holding many cities and citadels, although Metidja is still a province now with many cities, too, its surface seems to be inferior to the one described in the book. Our translation for the passage about Mitidja is as follows: "After that the traveler would reach the large province of Mitidja which includes many cities and citadels, ruled by the offspring of Al-Hassen Ben Ali."

مدكرة Medakra "ثم مدينة مدكرة فيها ولد محمد بن سليمان بن عبد الله من ولد الحسن بن علي" (اليقوبي، 1918)	A narrowed meaning is here comparing to what existed at the time of writing the ST; the name Medakra exists only in ancient books. This is our translation to the Arabic sentence: "After, we find the city of Medakra where lives Mohamed Bin Sulayman, from the offspring of AL-Hassen Ben Ali"
الخضراء Al-khadra "مدينة الخضراء يتصل بها مدن كثيرة وقرى ومزارع" (اليقوبي، 1918)	This is another example of a broadened meaning: Al-Khadra is an old name to the present day Ain Defla. Certainly it is now larger as it is a wilaya that includes other cities mentioned in the ST but with a modified name. We suggest the following translation to the Arabic sentence: "Khadra city is surrounded by many other cities, villages, and fields"
سوق ابراهيم Souk Ibrahim (العطاف) "وأخر المدن التي في أيديهم المدينة التي تقرب من ساحل البحر، يقال لها سوق ابراهيم (اليقوبي، 1918)	Broadening: the city was named Al-Attaf which was basically the name of an Arab tribe. It was described in the ST as a city near the sea; it is now the city of Attaf. This is the translation we suggest to the Arabic sentence: "Souk Ibrahim, the last city that they rule, is close to the seaside". Translators should point out its location and importance in the past.

Source: (اليقوبي، 1918، صفحة 110)

In the above table, Mitidja is referred to as a large province that covers many wilayas : Boumerdes, Algiers, Blida, Medea, Tipaza and Ain Defla. It is for sure larger than Mitidja nowadays. The course of history changed two names: Al-Khadra which became Ain Defla under the French rule, and Souk Ibrahim which became Al-Attaf. Thus, two names had their meaning narrowed: Mitidja and Medakra, and two cities broadened: Ain Defla and Al-Attaf.

Table 7. Semantic shift of cities of the province of Tahert

Cities in the ST	Semantic shift and translation challenges
تاهرت Tahert " والمدينة العظيمة تاهرت جليلة المقدار عظمة الأمر، يسكنها أخلاط من الناس، تغلب عليها قوم من الفرس، ويتصل بمدينة تاهرت بلد عظيم ينسب إلى تاهرت، والحصن الذي على ساحل البحر ترسو به سفن تاهرت يسمى مرسى فروخ." (اليقوبي، 1918)	Narrowed meaning is to point out, as Tiaret today has limited surface comparing with old Tahert described as a huge, valuable and important city and region that stretches up to the Mediterranean sea. We suggest the following translation to the Arabic passage: "Tahert, the large important city, is inhabited by a hybrid population, dominated and ruled by the Persians. It stretches over a large land all called Tahert, and it has a citadel where its ships dock called the Marina of Farroukh." Translators should emphasize Tahert's importance, location and surface that expands in the North up to the Mediterranean sea.
مرسى فروخ The Marinas of Farroukh، "والحصن الذي على ساحل البحر ترسو به مراكب تاهرت يسمى مرسى فروخ" (اليقوبي، 1918)	There is a Narrowed meaning here as the name no longer exists. This is our translation to the Arabic sentence: "the citadel by the seaside, where Tahert's ships dock, is called the Marinas of Farroukh." Translator need to show its approximate location and point out that it was part of Tahert.
تنس Tnes "موضع يقال له تنس بينه وبين تاهرت مسيرة أربعة أيام (اليقوبي، 1918)	Tnes is now bigger compared to the one in the ST (broadening). We suggest the following translation to the Arabic sentence: " there is a place called Tnes about four-day walk from Tahert.
الجبـل (Mountain) Djebel "ومدينته التي يسكنها يقال لها الجبل" (اليقوبي، 1918)	As the name is not known now, we can say the name use has disappeared through time (narrowing). Because it was said to be a city between Tahert and Yellel, translators should point out that it is located in the wilaya of Ghalizane. We suggest the following translation: "his hometown is called Djebel"

Source: (اليقوبي، 1918، الصفحات 109-110)

In the above table, just one name of a place had a broadened use: Tnes. In contrast, Tahert has smaller surface now. Two other names disappeared through the course of time: the marina of Ferroukh, and Djebel city.

Table 8. Semantic shift of cities in The west of Tahert.

Cities in the ST	Semantic shift and translation challenges
Yellel يلل "مدينة يقال لها يلل تقرب من البحر المالح مسيرة نصف يوم" (اليقوبي، 1918)	Yellel is bigger now than the one described in the ST, the meaning has therefore been broadened. Translators should mention that the Salty Sea here refers to the Mediterranean Sea, and calculate the distance between Yellel and the seaside in Km. We suggest: “ Yellel city is half-day- walk from the sea (50km)”
Tamatlas تمطلاس "ومسكنهم في المدينة العظمى التي يقال لها تمطلاس" (اليقوبي، 1918)	Narrowing: the name refers only to the ruins of the old city of Sid Ahmed in Saida. Translators should underline its importance as big city and show its location on the map in present day Saida in the town called now Sidi Ahmed. We suggest the following translation: “their big home city is called Tamatlas”
Ayzerdj أيزرج "ولهم في مملكتهم مدينة عظيمة يقال لها إيزرج" (اليقوبي، 1918)	Narrowing as it is only used to refer to the old city. Translators should point out that its location is still unknown. We translate the Arabic sentence as follows: “Iyzerdj is one of the biggest cities in their kingdom”.

تلمسان Tlemcen المدينة العظمى المشهورة بالغرب التي يقال لها تلمسان لها سور من الحجارة وبها خلق عظيم وقصور ومنازل مشيدة" (اليقوبي، 1918)	Broadening: The city still bears its old name; it witnessed different civilizations and gained more importance and surface. Now it refers to a large wilaya, too. Translators should show the historical dimension of the city. We suggest the following translation to the Arabic sentence: "the Great famous city in the west, called Tlemcen, is surrounded by a wall of stone, and has a crowded population with many castles and beautiful houses"
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Source: (اليقوبي، 1918، صفحة 113)

The above table contains 4 names of cities in the west of present day Algeria; two of which gained importance and surface: Tlemcen and Yellel, while the two other cities lost their importance and hence their use, too: Tamatlas and Ayzerdj.

4- Discussion of results

In table (1) from ten professions nine words and expression had a so significant semantic shift that Google translation was misleading; this questions machine translation ability to render classical Arabic texts. The following table shows that Google translation failed in detecting and translating semantic shift of the following Arabic professions:

Professions in the ST	Google translation	Translation considering semantic shift
العمال	workers	governors
الولاية	rulers	Walis
شراة	buyers	traders
العباد	the servants	Worshippers
المرابطون	the Almoravids	Fighters for Islam
موالي	loyal	servants
أصحاب عمارة	owners of architecture,	City dwellers,

وزرع	planting	farmers
وضرع	and udder	and livestock breeders
ليسوا بشراة ولكن جماعية	They aren't human, but they are collective	They're not traders, but they lead a collective life

Not only have these professions shifted in meaning, but also the techniques, the administrative proceedings, the tools involved have changed. Therefore, translators of ancient Arabic texts need to report necessary details as semantic shift might uncover many aspects of life in the past for historians, linguists, and researchers. Ignoring semantic shift of the above professions can lead to an unclear confusing translation, hide facts about ancient life styles, and reduce opportunities of research.

Tables (2-8) studied semantic shift in names of provinces, cities, marinas and the Mediterranean sea (called in the ST the Salty Sea). The places that were subject to our study can be classified into two categories: names whose meaning narrowed and the names that had their meaning broadened as shown in the following table:

Narrowing	Broadening
Tabna, Baghaia, Tiges, Mila, Belezma, Ngaous, Magrat, Aha, Ourba, Adna, Haz, Mitidja, Medakra, Tahert, Farroukh, Djebel, Tamatlas, Ayzerdj	Jijel, Skikda, Setif, Africa (Ifrikia), Al-khadra (Ain Defla), Souk Ibrahim (Al-Attaf), Tnes, Yellel, Tlemcen.

Out of 27 names of places, 9 names gained more significance and hence their meaning and surface broadened, although most of these cities are coastal, they did not have as importance as they do now; this explains that the importance of the Algerian coastal cities raised in the 19th century due to colonialism and trade with Europe. In contrast, 18 names lost importance and surface and thus their meaning narrowed; these are non-coastal cities but served as trade hubs and roads for travelers for the Maghreb at the Yakoubi's time. Investigating the reasons behind can

uncover many facts for different researchers. Ignoring semantic shift when translating old cities can mislead:

- readers who don't generally know the limits, surface and importance of the city,
- historians who might be confused to locate many battles and historical events in case of narrowing or broadening,
- linguists who won't be able to trace back the phenomenon of linguistic change

5- Conclusion

The study shows that classical Arabic is different from the Arabic we use today as many words and expressions have appeared, disappeared and shifted in meaning. All the types of semantic shift discussed in the literature were spotted in the study, however; some words drop completely from use suggesting adding another type of semantic shift for words and expressions that are no long in use. Semantic shift poses many challenges of understanding and translating classical Arabic texts, and requires collaboration of historians, linguists, and translators. Machine translation, when put in the test of rendering classical Arabic, failed to detect and translate semantic shift; yet, more investigation is still needed to assess the performance of MT when dealing with other classical Arabic texts. Not only does ignoring semantic shift confuse readers of classical Arabic texts, but also hides many aspects of life in the past for historians and deprives them from practical clues to locate historical events. Thus, our study recommends establishing laboratories where linguists, translators, historians, stakeholders and researchers collaborate to study and translate ancient Arabic texts. These laboratories permit to uncover many linguistic facts about Arabic language evaluation, and can yield academic products such as etymological dictionaries, specialized historical glossaries, and linguistic books describing the history of Arabic language. Moreover, audio-visual products can thrive, like documentaries, historical films, and history TV shows, when their producers are furnished with these outstanding facts.

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