

***The Negation System in Arabic:
an issue for Translation***

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Abstract

Acquired in a natural manner in the early stages of language acquisition, negation is an important syntactic feature that pervades everyday communication in all languages. To give affirmative declaratives a negative sense, Arabic includes a rich set of negating structures, while in English and French, the system is far more simple as it only needs the insertion of a few particles such as ‘not’ , ‘no’, ‘neither’ in the former, and ‘ne...pas’, ‘nul’ and ‘ni’ in the latter. On the basis of data drawn from Modern Standard Arabic, the present article highlights the issues met in the use of the various negation structures and the resulting ambiguity in their translation from and towards Arabic. The issue particularly addresses Machine Translation as it is faced with great difficulties in obtaining appropriate translations if not human-assisted. The paper will also consider a few negating forms used in Colloquial Arabic, in particular to show how the system as a whole is simplified as in the case of Algerian Arabic.

1. Introduction

Just like requesting – a language pattern that naturally develops very early in children’s eagerness to ask and to gain information or approval – negation, whether it is denial, refusal or prohibition, is also an essential tool regularly used in human

communication. But in spite of the universality of the phenomenon, negative strategies are expressed by means of various structures within and across languages. The Arabic negation system, for instance, differs in many respects from those of English, French or other languages, but also from its colloquial forms.

The problem is not in the fact that languages differ typologically in negating sentences or in whatever other syntactic structure; translators have always managed to render meaning fairly faithfully from one language to another. The issue raised here relates to the difficulty encountered by computer linguists and morphological analysers in devising machine-based translation of Arabic negative forms. Indeed, the Arabic system of negation poses one of the major challenges to machine translation (MT) due to the word order, as it is a VSO language, but also to other traits specific to the system, in particular the various ways in expressing negation, for instance. Thus, a straightforward translation from or to Arabic would lead to ambiguity and misinterpretation, and only a deep linguistic analysis of morpho-syntactic patterns can lead to appropriate handling of sentences and their translation.

The next section of this paper brings up an overview of negation as a fundamental component in human communication with historical developments in French and English as opposed to Arabic. Then, we will examine the Arabic negation system trying to contrast some of its patterns with those of English and French. The following part is

intended to relate the complexities of Arabic negation to the ambiguity that results from automated translation if the language system is not profoundly analysed, fully understood and entered in computing software in the form of accurate algorithms and patterns. In the last part we will reflect on the extent to which the negation system in Colloquial Arabic is simplified thus lending itself to less ambiguity and easier translation.

2. Negation as a universal system

Negation is a universal mental pattern used to express the non-existence or denial of something, an object, an action or feeling, and thus languages make use of various strategies of this basic structure to render negative meaning. It has long been attested that different languages make use of different negation patterns, despite some universal traits such as placing the negative marker before the verb. As a part of the negation diachronic development, what is known as Jespersen's Negation Cycle (1917), emphasis on denial has led to new negative structures in some Western languages while older structures have been – or are being – progressively abandoned. Miestamo (2005:209-10) states that “the association between negation and emphasis on the formal level iconically reflects the association between negation and emphasis on the functional level.”

An interesting instance of such development is drawn from Old French in which negation was expressed by means of the single pre-verbal marker *ne*, as in *Je ne vai*. ‘I don't go’. Then,

because of the natural tendency to emphasize negation, the noun *pas*, ‘step’, (and others like *point*, *mie*, etc.) started to be used as an emphatic reinforcement element added in post-verbal position giving *Je ne vais pas*, meaning ‘I don’t go (a) step (further)’. Such reinforcement was optional in Old French, but the nominal element *pas* lost its literal meaning and developed in early modern French into a negative marker. Its ‘grammaticalisation’ became so strong that today *pas* means ‘not’ and is thought to be a homonym of ‘pas’ meaning ‘step’! A further development is reflected in the on-going drop of the original pre-verbal marker *ne* resulting in *Je vais pas*, often used today in spoken French.

This phenomenon occurs in many Western languages with double negation, as noted by Zeijlstra (2007:276) who says that “[...] in most languages exhibiting two negative markers, one of them disappears in the course of time”. Here is the French negation cycle as described by Jespersen (1917):

ne+verb >> *ne+verb+pas* (optional) >> *ne+verb+pas* (obligatory)
>> *verb+pas* (optional) >> ???

Similarly, Old English negation started with pre-verbal *ne*, then the verb was followed by ‘not’, then ‘ne’ was dropped; next, ‘not’ is moved before the verb which is itself preceded by the auxiliary ‘do’ in present and past simple tenses, a phenomenon explained by Jespersen’s in terms of *Do support* as the tendency for negation in English to be emphasized by some mechanism.

‘*ic ne segce*’ >> ‘*I ne seye not*’ >> ‘*I say not*’ >> ‘*I do not say*’ >> ???

Though in Arabic the negation system distinguishes itself from other systems in many respects, the ‘negative concord’ phenomenon used in French and English with the aim of intensifying negation may be paralleled with the negating pattern *ma---š* used in most Arabic dialects today, as we shall see below. But let us first take a look at some aspects of the negation system in the standard form of Arabic, MSA.

3. Various patterns of Negation in MSA

3.1 *laa* لا

- *laa* appears to be the most frequently occurring particle in Arabic, its ‘classical’ form as well as MSA. As an indication, *laa* occurs 812 times (without a clitic) in the *Qur’ān*. It occurs in isolation as a negative answer meaning ‘No!’ in English, ‘Non!’ in French. As a sentential negator, *laa* occurs before a noun but apparently much more often before a verb (685 times out of the 812 mentioned above).

- Pre-nominal *laa*, placed before an indefinite noun and used for categorical negation, is to be associated with verb-less sentences such as لا مال له vs. له مالٌ كثير meaning ‘He has no money’ vs. ‘He has a lot of money’. An automated translator with no strict customization and specifically designed software based on morpho-syntactic analysis will only produce unsatisfactory sentences such as ‘No money to him’. Two common expressions illustrate pre-nominal use of *laa*: لا بُدَّ and لا شك , whose equivalents in English must carry a modal or

an auxiliary ‘(You) must...’ and ‘There’s no doubt’, respectively, and in French ‘Il faut...’ and ‘Il n’y a pas de doute’.

- Pre-verbal *laa* , used with the imperfective (المضارع), would be more complex to handle for a basic translator performing simple word-for-word substitution for the reason that this particle has two distinct functions:

- as a *negating* particle identified in Standard Arabic as لا النافية , as in لا تتكلم الإسبانية > *hiya laa tatakallamu l’isbaaniya(h)* = ‘She doesn’t speak Spanish.’

- as a *forbidding* particle, لا الناهية , as in لا تكذب! > *laa takdib* = ‘Don’t lie!’ This pattern is only used with the imperative form, الأمر, giving an order not to do something.

- Another special but much less common use of *laa* occurs when followed by a perfective, as in the ‘praying’ expression لا قدر الله *laa qaddarallaah*, used to pray God that some bad event would not occur;

- or in the verse¹ فلا صدق ولا صلى *falaa şaddaqa wa laa şallaa*, ‘He neither believes nor prays’, the two verbs being in the perfect but the outcome in the present or the future. The difficulty here lies in the fact that the translation of these two uses of *laa* with the perfect cause a challenge to MT if again

¹. Qur’an, Surat 75, Verse 31.

not all *laa* patterns and occurrences are taken into account by an adequate translation programme.

3.2 *maa* ما

The particle *maa* has been regarded as a marginal negator in MSA but, as we shall see below, it is virtually the only particle that has been preserved in most Arabic dialects. Like other negation particles, *maa* is often found in pre-verbal position, though in CA it is also used with nouns, particularly when associated with *إلا* ‘except’, as in *ما الملك إلا بشر* ‘The king is (not) but a human’.

The negator *maa* is used with both the perfective and the imperfective, as in for instance, *ما جاء أحد* ‘Nobody came’ and *ما يقول الحق* ‘He doesn’t tell the truth’. It is worth noting that the negating particle *maa* is not to be confused with its homonyms, the relative ‘*maa*’, as in *فعلتُ ما قلتَ لي* ‘I did **what** you told me’, and ‘*maa*’ used in what- or which-questions, as in *ما اسمك؟* ‘**What**’s your name?’ or *ما هو؟* ‘**Which** one?’ It is clear that such homonymy will add to the complexity of handling Arabic text in MT, particularly in non-contextualized sentences, and leads to ambiguity and erroneous translation, unless accurate algorithms are entered in the machine and used properly. Otherwise, *فعلتُ ما قلتَ لي* would be wrongly translated as ‘I did you didn’t tell me..!’ confusing the relative pronoun with the negating particle.

3.3 *laysa* ليس

According to Arabic traditional grammarians (Al-Qutaybii, Al-Farraa', etc...), the origin of *laysa* is a combination of the form *la*+*'aysa* = لا + أيس , meaning 'no' + 'existing'. To ask for something at all costs, from anywhere, the Arabs used to say *اتنتي به من حيث أيس وليس* 'Bring it to me from anywhere!' The blend *أيس* was then used as a negating verbal 'item' on its own and is only found in a perfective form.

The negator *laysa* has thus become a verbal form of the 'modal' type (classified as belonging to *kaana* and its 'sisters'²) as it precedes the *mubtada'* (subject) and the *khabar* (predicate)³ to negate a verbless sentence such as *ليس البحرُ آمناً* 'The sea is not safe'. But *laysa* can also precede a verb having then the same function as *laa* and *maa* as in *ليس يعلمُ الغيبَ إلا اللهُ* meaning 'No-one knows the unseen but God'.

3.4 lam لم and lan لن

Ambiguity is a central problem in the analysis of Arabic morpho-syntactic patterns, and thus translating programmes are often challenged by such ambiguity. Negating the verb, for instance, is associated with tense in Arabic. To the affirmative utterance *كتب له kataba lahu* 'He wrote to him' correspond two

². A set of 'defective' verbs (called 'incomplete' in traditional Arabic grammar as they require a predicate)

³. The *mubtada'* and the *khabar* are the two components of the Arabic verbless (nominal) sentence which may be introduced by *'inna* and its sisters for emphasis, while *kaana* and its sisters including *laysa* turn the sentence into a verbal one.

negative forms, one with the perfective, ما كتبَ له and the other with the imperfective لم يكتبَ له, the former being a categorical negation ‘He didn’t write to him’, while the latter is used to mean ‘He hasn’t written to him (yet)’ with the possibility that he will do it in the future. On the other hand, while both *lam* and *lan* are only used with the imperfective to negate a sentence, لن يكتبَ له suggests an absolute negation with no possibility of future realisation; that is, *lan* suggests permanent negation while *lam* refers to achievable action or state.

Two automatic translators, *Google Translate* and *WorldLingo*, have been ‘subjected’ to the rendering of a usual double negative pattern in Arabic that includes the two negators *lam* and *lan*, لم ينجحْ و لن ينجحْ *lam yandžah wa lan yandžaha* to convey the assertion that something has not occurred and will definitely never occur. The former, *Google* translator, using state-of-the-art technology, seems to provide the correct tense of the two verbs, though the pronoun subject is missing, ‘Did not succeed and will not work’, but there is a mis-interpretation in the second part of the expression.

The other translator gives the following aberration, ‘Does not succeed and does not succeed’, which does not capture the semantic distinction made by *lam* and *lan* in spite of their use with the imperfect. The point is raised by Bahloul (2008:138) when he says that “...while the verbal form remains unchanged, it is rather the morphological shape of the negative particles which undergo changes according to the temporal context”, “each particle is morphologically complex, and

expresses therefore both negation and temporality.” Bahloul (ibid.) goes on explaining:

In negative contexts, the Imperfect becomes entirely blind to temporality, and can be used in contexts with present, past, and future reference. [Rather,] temporality is associated with the particles.

The issue raised here is: How could an automated translator avoid falling into mistranslation and render unambiguous conversions of *maa*, *lam* and *lan* negations without the intervention of a human-based software? Thus, one important issue for MT in translating Arabic negation lies in temporality which is not associated with tense forms, but with the negating particles themselves. We have seen how *laa*, *lam* and *lan* are used to convey actions or states in the present, past and future respectively while the verb remains in the imperfective.

3.5 *lammaa*, 'in and *laata* لَمَّا، إن ، لات

The three negators *lammaa*, 'in and *laata* will certainly cause no challenge to MT for the simple reason that they have practically disappeared in the modern form of Arabic. Such scarcity, however, even in Qur'anic text, does not mean that they are to be left out from the corpus used for translating purposes.

Suffice here to mention here how much complexity the three particles add to the Arabic negation system. While *lammaa* is regarded as a combination of *lam* and *maa* but

conveys the idea that something is not yet done, 'in is used with the exception preposition *illaa* which is itself a combination of 'in and *laa*. As for the less often used negator *laata*, it is only associated with time as in the verse **ولات حين** 'and no longer time for being saved'.

Here's a table that recapitulates the Arabic negation particles with equivalent meanings:

Human translation	Transcript	Arabic Negators
We don't know where he went	<i>maa nadrii 'ayna ðahab</i>	ما ندري أين ذهب
Don't do (it / that)!	<i>laa taf 'al ðaalik</i>	لا تفعل ذلك
He doesn't know everything	<i>laa ya 'lamu kulla šay'</i>	لا يعلم كل شيء
He wasn't there.	<i>lam yakun hunaak</i>	لم يكن هناك
The house is not for sale.	<i>laysaal-baytu lilbay'</i>	ليس البيت للبيع
He will not accept (that)!	<i>lan jaqbala biðaalik</i>	لن يقبل بذلك
The judgment is only to God	<i>'inil-ḥukmu 'illaa lillææh</i>	إن الحكم إلا لله
Faith has not yet entered your heart	<i>wa lammaa yadXuli l'iimaanufii quluubikum</i>	ولمّا يدخل الإيمان في قلوبكم
There was no longer time for being saved	<i>Wa laata hiina manaaş</i>	ولات حين مناص

Colloquial Arabic two-pattern negation

Apart from the common use of *laa* (pronounced [əlla] in some Arabic dialects and [laʔ] in others) to mean 'No !', only *maa* subsists as a negating particle in Colloquial Arabic as in **ما**

بعرف meaning ‘I don’t know’ in some Levantine varieties. But the most attention-grabbing pattern that is generalized in a great number of Arabic dialects in the Maghreb countries, but also in the Mashreq consists of a combination of *maa-* and a post-verbal particle *-š*.

4. The negating complex *maa---š*

The two-pattern negator *maa---š* is practically the only device used in today’s Colloquial Arabic to negate both declaratives and interrogatives, as in ما كتبش ‘He didn’t write’ and ما كتبش؟ ‘Didn’t he write?’, which can only be distinguished through intonation.

What is interesting to mention at this point is that the particle *-š*, which yields a discontinuous complex when combined with *maa*, seems to have followed a similar course of grammaticalisation as that of the French noun ‘pas’ added in post-verbal position for emphasis and then lost its nominal function.

5. Grammaticalisation of *šay? > šey > ši > š*

Consider the example from Algerian Arabic *ma⁴ klaaš* ‘He didn’t eat’. It is clearly a reduced form of CA ما أكل شيئا, literally ‘He didn’t eat a thing’: the noun شيء has gone through a phonological reduction:

⁴ The long vowel in the negator ما is shortened in most Arabic colloquial varieties, yielding the form *ma*.

شُ > شِ > شِي > شَيْءٍ / [šay? > šey > ši > š].

In fact, two other less often used variants, *ma klašay* and *ma klaši*, can be considered as precursors of the shorter pattern in *ma klaaš*. So, just as the word ‘pas’ in French, the noun *šay?* ‘thing’, has finally gained a grammatical function, and generalised to all types of verbal negations, as in *ma mšaaš* ‘He didn’t go’, *ma taqraaš* ‘Don’t read!’, in prepositional negations as in *ma ʔandiiš*, ‘I haven’t got (any...’), etc. The discontinuous complex may also be found in a continuous form as in *maši huwa*, ‘It’s not him’, *maši hna*, ‘not here’. In addition, the particle *š(i)* is used with question words like *?laaš* ‘Why?’, *kifaaš* ‘How?’ and *waas* ‘What?’, as well as with the frequent expression *kullši* or *kulləš* meaning ‘everything’, in which *š(i)* seems to ‘maintain’ its nominal function.

Negation in Colloquial Arabic appears to be much easier to handle, but the homonymy in the dialectal use of {-š}, i.e., negating particle vs. nominal pattern, will only add to the ambiguity of the element in an automatic translation of colloquial varieties of Arabic; again only a human-based translation service can yield appropriate equivalent meanings.

Conclusion

This paper is an attempt at bringing forth the issue facing MT in coping with the complex Arabic negation system. Indeed, too many negating particles are in use in its standard form while less numerous and more simple patterns are found in other languages. The different types of negators in Arabic

perform different meanings in relation to verbal and nominal patterns on the one hand, and temporality, on the other.

The resulting complex statements can only be rendered with the few negative markers in English or in French, and hence the issue for translation and the challenge for computer specialists with the collaboration of linguists to find ways of overcoming these complexities. For the time being, adequate translation of negation can only be reached on the basis of human-aided MT.

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