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Giving "speechless" communities a voice: or machine translation versus professional communicator in public service translation

Abstract

Giving "speechless" communities a voice: or machine translation versus professional communicator in public service translation

People from war-torn countries and countries suffering economic hardships are on the move in search of a better life or of a refuge. The host countries are challenged: To ensure equal access to public services, civil and political participation of migrants and refugees means to tear down the language barrier. Only translating and interpreting can offer a realistic, time-sensitive solution to this challenge and give "speechless" communities a voice. It is the objective of the article to investigate the expectations we can have from technology in public service translation compared to the performance of professional communicators; The issue of what a machine can(not) do and to fathom, when a professional translator has to intervene, needs a bottom-up approach and will be discussed against the backdrop of public service translation as domain-specific intercultural communication.

Keywords: public service translation, machine translation, expert communicator, specialised translation

1 The challenge: Migration and communication

In the nineteenth century and the first half of the twentieth century, migration was observed mainly from Europe to other continents, including America (Tulekian Azeredo Lopez 2012). The main reasons for these movements was the economic and political situation in European countries such as Italy, Germany,

Portugal, Spain and Ireland, and the oppression of people in the Austro-Hungarian, the Ottoman and the Russian empires. After the Second World War, thanks to the political and economic recovery of Europe, the situation reversed and many European countries began to receive significant migratory flows, mainly from their former colonies. The movement of populations is a growing challenge for the world. Mainly people from war-torn countries and countries suffering economic hardships are on the move in search of a better life or refuge. Today countries, which in the past were the origin of immigrants to western Europe, are receiving refugees and immigrants from Asian and African countries. In particular Greece, Italy and Spain have been receiving tenth of thousands of people shaping new social situations.

The challenge for the host countries seems immense: How can they cope with the communicational needs of so many people from so many cultural and linguistic backgrounds?

How do the countries provide for the equal access of migrants and refugees to public services and for the exercise of their civil rights and political participation?

The situation as far as public service interpreting and translation services is anemic in many countries. Some countries are better prepared than others, but nobody can say the problem is solved. One could think about language technology to address the issue: the higher volumes of content that require translation could make stakeholders weigh the pros and cons of machine translation as a solution to these time-critical matters. Language technology has been deployed in multilingual settings like the EU institutions. What we can agree on, is that language technology, i.e. in the form it is widely available on the internet or as applications for translation purposes, is a good thing and it cannot be deployed independently of an expert if the output is to be used for a purpose other than accessing the basic information of a text.

It is the objective of the article to investigate, firstly, the expectations we can have from technology in public service translation; secondly, where the interface between the expert communicator and the software is so as to prevent personal damages caused by the deficiencies of machine translation. The issue of what a machine can(not) do and when a professional translator has to intervene, will be discussed against the backdrop of public service translation. In this paper I will address only the services of professional communicators. I will use the terms "translator", "interpreter" and "communicator" merely for trained experts able to handle domain-specific intercultural communication projects.

My approach is bottom-up: I will initially describe what machine translation systems can do and how they can integrate with the expert communicator. Analysing the process of public service translation as domain-specific intercultural communication, commenting on key aspects of the procedure and juxtaposing these with the performance of the software sheds light on how and to which

extent, digital and human resources can be integrated in an attempt to give the "speechless" migrants and refugees a voice.

2. Machine translation systems and the professional communicator

Most evidently, technology has changed the spectrum of services expert communicators can offer and the skillset they might need (Pym 2013): many professional expert communicators use technology for basic but time-consuming tasks like researching vocabulary at an initial stage of a project or getting a raw version which they post-edit at a second stage. In any case, the professional translators employ these applications to save time and increase their efficiency and income (Guerberof Arenas 2009).

Melby, a pioneer in MT, wrote a quarter of a century ago:

> Machine translation is headed in the right direction. Domain-specific approaches using controlled language should be continued and the controlled languages should be made to conform to all the assumptions of objectivism so far as possible. Dialogue-based machine translation can guide the user into writing in a controlled language. Low-quality indicative translation for information only is unarguable since many find it useful. […]. If we ever reach a breakthrough in natural language processing which allows for the handling of dynamic general language, it will not be based on any extension of current techniques in machine translation. The electric light bulb did not result from research and development on the candle (personal communication from Roger Harris). Fully-automatic high-quality machine translation of unrestricted text will be a truly surprising, unpredictable breakthrough and therefore is not expected in the foreseeable future, even though it may come at any time.

I think, we can safely agree with Melby (1994: 10) that even today the breakthrough in the processing of natural language needed to handle dynamic communication, has not been reached yet. Very interesting is the report of the MT@EC, the EU machine translation initiative, according to which the quality of the MT output may vary significantly, depending on three main factors (Koehn 2016):

1) The languages being translated from and into. The more grammatically complex the languages, particularly the output language, the less good the result.
2) The style of language. The closer the language and topic are to EU official style, the better the output. Conversational or literary language is a weak point.
3) The subject matter. If the domain and terminology are not known by the system (i.e. not included in previously translated EC documents) some terms may not be translated.

This means that:

- if the languages are grammatically simple,
- if the languages are close,
- if the texts are stylistically close to a (controlled) EU official style and
- if the domain and the terminology are known to the system,

than the output could be a useful text – at least to some degree. In other words, data-driven machine translation systems can produce some texts with some degree of communicational value, which have to be assessed by an expert as to their quality and suitability for a given purpose.

The MT@EC report tells us also that a) if the languages are not grammatically simple and/or if the languages are not close enough, b) if the texts to be translated are stylistically diverse and c) if the domain and the terminology are not known to the system (no previous samples in the system), we should expect a low quality output. As to the usefulness of the software for an unsupervised production of communication we seem to be at the same point we were thirty years ago, when Melby (1994: 9) described that the computer does not have the ability to translate as a human due to its lack of agency, in essence, due to the inability to perform intelligent choices. We seem to be even at the same spot as we were nearly forty years ago when the German translation scholar Wills (1988: 235) attributed the impotence of the machines to translate to their inability to formulate a target text.

How (un-)reliable are machine translation systems? The MT@EC, the machine translation interface of the European Union, uses the *bleu scores* to determine the quality of machine translation (EU Commission 2014). The automatic translators of the MT@EC, or MT engines as they are also known, are based on statistical machine translation technology. As this technology is data-driven, the nature and style of the language resources used to train the engines determine to large extend the content on which they perform best. The standard engines of MT@EC have been trained largely on EU official texts (Kohn 2016). The table below (table 1) reveals the low quality of output produced (*Gold, silver* and *bronze* are used to denote the best possible quality, quality that is sufficient for comprehension and the quality of the output that allows the reader to get the idea of a text, respectively).

Table 1 shows in a codified manner for which language combination the MT@EC interface cannot provide the best possible quality due to either complex and/or divergent linguistic structures and due to divergent stylistic features of particular texts in various cultures.

However, the above chart tells us, on the one hand, that in natural language processing the breakthrough from the candle to the light bulb has not yet happened and, on the other hand, I believe, it reflects the anemic performance of machine translation compared to the performance of professional translators: The chart proves how indispensable the professional communicator is by implying the need

for assessment of the output, post-editing of the silver output, at best, and the commissioning of a human translation for the source text of the bronze output. Since most immigrants and refugees move to Europe increasingly from Asian and African countries, their cultures and languages are quite distant to the major European cultures. This means higher resource scarcity, more distance between the source and target languages and different discourses for similar social events (Bushra et al. 2014). The scarcity of digitally available resources means less success than with the European languages – around which the MT@EU interface has been built.

Table 1. Quality indication by language pair

To / From	BG	CS	DA	DE	EL	EN	ES	ET	FI	FR	GA	HR	HU	IT	LT	LV	MT	NL	PL	PT	RO	SK	SL	SV
BG		B	B	B	B	G	S	B	B	S	B	B	B	B	B	B	S	B	B	S	S	B	B	B
CS	B		B	B	B	S	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
DA	B	B		B	B	G	S	B	B	B	B	B	B	B	B	B	S	B	B	B	B	B	B	B
DE	B	B	B		B	S	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
EL	S	B	B	B		G	S	B	B	B	B	B	B	B	B	B	S	B	B	B	B	B	B	B
EN	S	S	S	B	S		G	B	B	S	B	B	B	S	B	B	G	S	B	G	S	B	B	S
ES	B	B	B	B	B	G		B	B	S	B	S	B	S	B	B	S	B	B	S	S	B	B	B
ET	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
FI	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
FR	B	B	B	B	B	G	G	B	B		B	S	B	S	B	B	S	B	B	S	S	B	B	B
GA	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B	B	B	B	B	B
HR	B	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B	B	B	B	B
HU	B	B	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B	B	B	B
IT	B	B	B	B	B	G	S	B	B	S		B	B		B	B	S	B	B	S	S	B	B	B
LT	B	B	B	B	B	B	B	B	B	B		B	B	B		B	B	B	B	B	B	B	B	B
LV	B	B	B	B	B	S	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	B
MT	S	B	B	B	B	G	S	B	B	S	B	S	B	S	B	B		B	B	S	S	B	B	B
NL	B	B	B	B	B	S	B	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	B
PL	B	B	B	B	B	G	S	B	B	B	B	B	B	B	B	B	S	B		B	B	B	B	B
PT	S	B	B	B	B	G	S	B	B	B	B	S	B	S	B	B	S	B	B		S	B	B	B
RO	S	B	B	B	B	G	S	B	B	S	B	B	B	S	B	B	S	B	B	S		B	B	B
SK	B	B	B	B	B	S	S	B	B	B	B	B	B	B	B	B	S	B	B	B	B		B	B
SL	B	B	B	B	B	S	S	B	B	B	B	B	B	B	B	B	S	B	B	B	B	B		B
SV	B	B	B	B	B	G	S	B	B	B	B	B	B	B	B	B	S	B	B	B	B	B	B	

G = gold, S = silver and B = bronze

In section 4 of this article we comment on two simple experiments with a web-based statistical machine translation system; the examples throw light on the weaknesses of the machine translation systems.

The MT@EU experience allows us to see that technology may have changed the way translators work (Cronin 2007: 75–81) but it does not make them redundant[1]. Technology has changed the spectrum of services expert communicators can offer and the skillset they might need (Pym 2013): many professional expert communicators use technology for basic but time-consuming tasks like researching vocabulary at an initial stage of a project or getting a raw version which they post-edit at a second stage. The applications available can be integrated into the translation procedure and together with other applications like translation memories, access to databases, voice-recognition systems, etc, could support the professional communicator.

In a nutshell, the professional translator, as an expert communicator, cannot be replaced by technology. (S)he seems to be even more indispensable than ever – perhaps with a different, constantly adapting, skillset.

3 Public service translation as domain-specific intercultural communication. How difficult is it?

In this section we will turn to the translation of domain-specific texts to explain its nature and scrutinize why we are at the same point as Wills in 1988 and Melby in 1994 as to the handling of domain-specific communication projects by a machine. The following lines will show why the cognitive complexity of translating non-standardized items of communications cannot be matched by a machine.

Clearly, the public service translation consists of written, domain-specific intercultural communication. Niska (2002: 135) defines community translation (a synonym for public service translation) as the translation of informative texts issued by institutions and public authorities written in the language of the publishing authority and which therefore have to be translated into the language of the foreigner. For Valero-Garcés (2014: 169–171, as cited in Vyzas 2016) the texts that are translated in the community are the following: a. official and semi-official documents like school reports, information letters for parents, contracts etc., b. guides for administrative and medical services, leaflets concerning social services, c. surveys used as research tools. Vyzas (2016) considers these texts extremely culture-specific and their content to be of varying domain-specificity; thus, the translation of such material becomes a project to communicate domain-specific content interculturally.

Sandrini (2010) provides a definition of specialised translation, which seems to have been influenced by Picht (1996) – the German translation scholar and terminologist who denoted specialized translation (Picht 1996) as "intersprachliche Fachkommunikation", interlinguistic domain-specific communication, ascribing

1| https://www.cnbc.com/2017/07/07/as-the-earth-feels-ever-smaller-demand-for-translators-and-interpreters-skyrockets.html (27.12.2017).

it rather to a form of specialized communication than to translation proper. Thus Sandrini proposes the following definition for domain-specific translation:

Specialised translation is a
1. skopos-dependent
2. exteriorisation of
3. thematic knowledge-systems and cognitive processes,
4. selected from a pool of available information and weighted (interiorisation),
5. with the intention to disseminate it, in a different linguistic (interlingual) and
6. cultural (cross-cultural) area
7. against the backdrop of the global framework (interculture).

According to Sandrini (2010) each of the above points that make up the framework of specialised translation is a distinct feature of the process. At the heart of his approach lies the notion of knowledge, its exteriorisation and interiorisation by the translator and the receptor, language as the vehicle of the knowledge transfer and culture.

3.1 Knowledge and understanding in domain-specific communication

Sandrini speaks of a skopos-oriented exteriorisation of interiorised knowledge; he seems to believe that in the widest sense, any communicative act has a skopos prescribing the frame for the translator's decision. Juxtaposing his definition to Hoffman's definition of specialized communication, one could conclude that we are dealing with an intercultural transfer of domain-specific knowledge. Hoffman defines specialized communication as follows (Hoffmann 1993: 614):

> Specialised communication is the externalisation and internalisation, whether motivated or stimulated from the outside or from the inside, of knowledge systems and cognitive processes related to specialised information, which leads to change in individual experts' knowledge systems and in the knowledge systems possessed by entire communities of specialists [translated by S. V.].[2]

Hoffmann believes that communication cannot focus solely on isolated linguistic features, such as individual words, syntactic structures, etc.; he focuses on the communication as a whole, on the cognitive processes, knowledge systems, the individual interlocutor and the dynamics of meaning, providing an integrated picture of communication in domain-specific settings (Engberg 2010: 53). Hoffmann's definition of specialized communication makes us realize that knowledge and the transformation of knowledge systems are an integral part of domain-specific communication. Roelcke (2010: 24) moves our view away from the purely linguistic

2| Fachkommunikation ist die von außen oder von innen motivierte bzw. stimulierte, auf fachliche Ereignisse oder Ereignisabfolgen gerichtete Exteriorisierung und Interiorisierung von Kenntnissystemen und kognitiven Prozessen, die zur Veränderung der Kenntnissysteme beim einzelnen Fachmann und in ganzen Gemeinschaften von Fachleuten führen.

aspects; his pragmatic definition of domain-specific communication as an inherent feature of text and knowledge systems forms the bridge that leads to the scrutiny of communication and the limits of the human mind in acquiring and managing knowledge. In other words, the efficiency in communicating is intertwined with the limits of the human mind when it comes to acquiring and managing knowledge.

Cognition has to be included into the scrutiny of domain-specific communication (Baumann 1996: 384). What counts is the degree of domain-specificity of knowledge, knowledge structures, the transfer of knowledge, its linguistic representation and its deployment when communicated within a given domain, etc. According to Hoffmann's (1993) definition of specialized communication, knowledge and its interiorization are closely linked to the existing subject knowledge of the receptor.

As to the transfer of knowledge, Tsoukas and Vladimirou (2001) go further and identify three important factors: firstly, existing knowledge is the basis for the acquisition of new knowledge; secondly, knowledge is created and applied in the mind of the bearer and, thirdly, knowledge and comprehension are different procedures, where the latter, comprehension, determines the former. For Risku and Windhager (2009: 4) knowledge is relatively stable in comparison to understanding. They write:

> By "understanding", we mean the process of combining experience-based knowledge with information gathered from the present environment to form a new mental or physical action. Thus, making sense of the environment and understanding are challenges that confront us every single day.

Most importantly, knowledge can come into being solely in the mind of the bearer; comprehension needs existing knowledge on the basis of which it can grow. The successful communication of knowledge requires the successful transfer and restructuring of that knowledge by the receptor (Eppler et al. 1999).

Notwithstanding the definition by Hoffmann (1993) and by Buhlmann and Fearns (2000: 13), experts communicate beyond domain borders. The communication of knowledge from expert to non-expert is an endeavour in which language is challenged. Struggling to achieve a communicational goal and transport expert knowledge across disciplinary boundaries, both in writing and in spoken discourse, can challenge the linguistic/communicative competence of the interlocutors as to their choices[3].

3.2 The vehicle of thought patterns: Language

A change in the knowledge system of the individual and the domain is brought about, when it comes to domain-specific communication; as it happens with any

3| On the relation of cognition and LSP translation see Vlachopoulos 2017.

type of communication, language is the factor challenged when it comes to the transfer of knowledge (Welch and Welch 2008). Stolze (1992: 192) connects textuality to domain-specific thought patterns and vice versa. She maintains (Stolze 1992: 109, 143) that these domain-specific thought patterns differ from culture to culture and are mirrored in a distinct, culture-specific text structure.

What Welch and Welch (2008) call fixed domain-specific, linguistic patterns used by experts, or Stolze (1992) culture-specific text-structures are in fact discourse. Fairclough (1992: 28) writes that "'discourse' is for me more than just language in use: It is language use, whether speech or writing, seen as a type of social practice".

For Fairclough (1992) discourse is the relationship between text and social practice. He conceptualizes discourse in three dimensions: text, discursive practice and social practice. The text is the discursive event, which is connected with the linguistic aspects of the language; the discursive practice is related to the text production, distribution and use of the text and involves the analysis of the text as discourse – the interpretation of ideas which brings about the social function of a text. Most importantly, the social practice establishes the relationship between discourse and the social structure as a whole. In our case, the discourse may affect the individual and the domain, by intervening in the knowledge system.

The text, thus the actual social event, is made of linguistic items. In the case of domain-specific communication the linguistic aspects of the discourse are referred to as *Language for Specific Purposes (LSP).* According to Möhn and Pelka (1984: 24), LSPs distinguish themselves as far as choice, use and frequency of particular linguistic features of morphology, vocabulary, syntax and textual properties are concerned. Lexically, a specialized text is comprised not solely of terminology but also of other vocabulary. As to terms, in many disciplines they are used for one concept only, while in general language many words have multiple meanings. The term is a special lexical unit that denotes an exactly defined concept within a system that belongs to a domain. Arnzt and Picht (1992: 35) provide the following definition of the term:

> a specific lexical unit and the single denotation of a distinctively defined concept or object within the relevant domain, which denotes a concept defined within the system of the specialised domain [translated by S. V.].[4]

The very common lack of polysemy within one specialized domain accounts for the context independency of terms. In terminology, the polysemic nature of language is limited; terms are the result of convention, because they are formed

4| (…) spezifische lexikalische Einheit und einnamige Bezeichnung eines im betreffenden Fach exakt definierten Begriffes oder Gegenstandes, die einen definierten Begriff im System eines Fachgebietes bezeichnet.

on the basis of an agreement between specialists in a given field, and because they are motivated by the intention to facilitate communication in the domain (Sager 1990: 56–57).

In contrast to the vocabulary where terminology distinguishes the specialized texts from non-specialized ones, syntax makes use of structures that are known from the common language. For example, Littmann (1983) investigated the syntax of German specialized language and identified regularities: He (1983: 98) refers to the relationship between the surface and the deeper logico-semantic structure of language as syntactic structures (*syntaktische Strukturen*), the correlation of the deep structure (*zugrundeliegende Struktur*) and the surface structure (*Oberflächenstruktur*) of a speech act. Littmann bases his approach on the ability of most users of the language to recognise a specialised text from experience and to categorise it as a special text.

Domain-specific discourse provides common ground for communication by experts with experts from the same or another domain, but it also allows for communication with non-specialists. This means that apart from expert communication within a certain discipline, discourse is used to transfer knowledge across the boundaries of a discipline[5]. Most importantly, Buhlmann and Fearns (2000: 12–13) realized that the discourse of certain scientific disciplines results from socialization and that it reflects structures of thought:

> Therefore, LSP as a means of communication is a result of socialization within a certain scientific discipline. It is characterized as such by reflecting certain thought structures that are determined by the interest in findings and research prevailing in the respective field. LSP is important for the communication of technical contents – objects, operations, processes, procedures, theories, etc. – and, from a linguistic point of view, uses the most concise and precise form…

In other words, LSP is used to communicate patterns of thought within the discipline. These patterns of thought transfer knowledge. Buhlmann and Fearns (2000: 13) manifest that "LSP is therefore linked to the thought elements of the field within which the technical terms exist – the thought structures of the field and the customary communication structures of the discipline".

3.3 Crossing cultural borders

Every text is connected to a culture, which determines the way the meaning is produced and extracted (Koller 1992: 59). Stolze's (1992: 192) rationale connects textuality to domain-specific thought patterns and vice versa. She maintains that these domain-specific thought patterns differ from culture to culture and are

5| See Vlachopoulos (2017) for an analysis of expert to non-expert communication in translation.

mirrored in a distinct, culture-specific, text structure. Sandrini points out that the features that differentiate specialised communication from specialised translation are features 5 and 6 of his definition (see section 3.) – the intention to disseminate knowledge, in a different linguistic (interlingual) and cultural (cross-cultural) area. These two points account for the fact that translating is about the transfer of knowledge into a different language and culture and the constraints of domain-specific communication in that culture. Which are the implications of culture for specialised translation? For the anthropologist Hofstede (1980: 25), culture is the collective programming of the mind which distinguishes the members of one human group from another (Hofstede 1980:25). He writes that

> […] our cognitive development is determined by the demands of the environment in which we grew up: a person will be good at doing things that are important to him/her and that (s)he has occasion to do often. Cognitive abilities are rooted in the total patterns of a society (Hofstede 1986:305).

Hofstede believes that the collective programming is our cognitive development shaped by the challenges of life in our environment and that this differs from culture to culture. For him this means that the cognition of the people growing up in a given culture are closely related to the structure of the society in that culture. Should we try to inform people from other cultures about our, we would face a different mindset and a different organisation of their language.

The question is, is Hofstede's culture tangible and could it be turned into a dataset? Spencer-Oatey (2000: 4) provides the answer to that question by describing culture as

> a fuzzy set of attitudes, beliefs, behavioural norms, and basic assumptions and values that are shared by a group of people, and that influence each member's behaviour and his/her interpretations of the "meaning" of other people's behaviour.

With point 7 of his definition, Sandrini mirrors the influence of the domain as a global community on the communication processes including translating. The more specialised translating becomes, the more the general, national culture is pushed into the background and the cultural features of the domain gain importance.

But, the answer to the question, if a computer has a culture, is negative. Could software acquire a culture? The answer is that culture is fuzzy, not tangible and dynamic.

4 Some hands-on experience

In this section we will examine some examples of machine translation output. The analysis of the examples will be made against the backdrop of the features of machine translation systems as discussed so far: The MT@EC details we commented on in section 2 of the paper tell us also that a. if the languages are not

grammatically simple, if the languages are not close enough, b. if the texts to be translated are stylistically diverse and c. if the domain and the terminology are not known to the system (no previous samples in the system), we should expect a low quality output. Sandrini's definition of specialised translation focuses on the same aspects: On the vehicle of communication, the languages and cultures involved, on the interpretation of the discourse structure (style) and on knowledge management. A professional communicator has to be able to assess which linguistic patterns have to be used to make the knowledge successfully available to the receptor – to change the domain's and receptor's knowledge systems.

In the two examples below the identification of the changes in the linguistic inventory is expected to provide feedback on the (non-)appreciation of different knowledge structures in the involved cultures. An examination of the output focused on changes in the knowledge systems would direct attention to the translated text as a product of intercultural communication of knowledge and to the interplay between the computer's data or the translator's cognition, the translated text and the management of the available knowledge. In other words, language will be examined communicatively – or – communication will be viewed linguistically.

In the first example, I entered the German greeting *Guten Tag*, a greeting used for after morning hours, into a web-based statistical machine translation system and requested a translation into Greek. The system produces the Greek phrase *Καλή Μέρα* (*Good day*), which is used for greetings in the morning. A translator would have opted for the verb *Χαίρεται*, a greeting used in a similar social situation. Obviously, the system analysed the German phrase linguistically, but did not have any knowledge (data) on the usage of the source item to assess the communicational event accordingly.

Also in the case of a domain-specific text the machine translation system did not yield an understandable output. The following sentence was taken from a German consent form for a rent increase and fed into the system to be translated into Greek:

> Zustimmungserklärung
>
> Mit Schreiben vom 1.2.2018 wurde mir/uns eine Anhebung der Nettokaltmiete über das Mietobjekt in XYZ angekündigt.
> Die neue Miete wird ab dem 1.5.2018 insgesamt 900 Euro betragen.
> Hiermit stimme ich/stimmen wir der Mieterhöhung zu. Die neue Gesamtmiete werde ich/werden wir erstmals zum 1.5.2018 zahlen.

The output has the following Greek-language form:

> συγκατάθεση
>
> Με επιστολή με ημερομηνία 1.2.2018 ειδοποιήσαμε ότι αυξήθηκε το καθαρό ενοίκιο κτιρίου στο ακίνητο ενοικίασης στο XYZ.

Το νέο ενοίκιο θα είναι από το 1.5.2018 συνολικά 900 ευρώ.
Συμφωνώ / συμφωνώ με την αύξηση του μισθώματος. Θα πληρώσω το νέο ενοίκιο για πρώτη φορά στις 1.5.2018.

(By letter dated 1.2.2018 we notified that the net rent of the building was increased in the rental property in XYZ.
The new rent will be from the 1.5.2018 total 900 euros.
I agree / agree to the rent increase. I will pay the new total rent for the first time on 1.5.2018.)

The Greek-language output provides wrong information. The sentence:

Με επιστολή με ημερομηνία 1.2.2018 ειδοποιήσαμε ότι αυξήθηκε το καθαρό ενοίκιο κτιρίου στο ακίνητο ενοικίασης στο XYZ

(By letter dated 1.2.2018 we notified that the net rent of the building was increased in the rental property in XYZ)

conveys an entirely different meaning than the source text. The passive voice of the original German text was not recognized; the machine delivered output with an entirely different meaning. The term *Miete* of the German source text was rendered into Greek with the colloquial noun *ενοίκιο* and not with the legal term *μίσθωμα*, a Greek native speaker would expect.

Also the English-language output was far from perfect:

consent

By letter dated 1.2.2018 I / we were announced an increase in the net cold rent on the rental property in XYZ.

The German term *Kaltmiete* was rendered linearly as *cold rent* instead of *net rent* into English. The system failed to identify the domain-specific term as such, probably due to a lack of the relevant information in the system.

5 The man and the machine in public service translation

I set out to investigate the expectations we can have from technology in public service translation and to fathom where the interface between the expert communicator and the software is.

Public service translation as domain-specific intercultural communication is a very complex set of procedures and it cannot be reduced – simply and reliably – to data-driven applications that perform adequately only when the grammar is simple and the linguistic structures and the knowledge system have (fully) been fed into the machine. Translating specialized texts means more than replacing source culture terms by target culture terms: It is a complex endeavour of

communicating knowledge across cultures. The professional translator engages in an intercultural knowledge communication procedure; (s)he transfers knowledge structures across cultural borders and with the help of language as a reconfiguration agent, this knowledge is embedded in the target knowledge structure, fulfilling a communicative purpose with the transformation of the recipient's knowledge system.

Generally, language technology in the form of applications that perform linguistic transfer are definitely here to stay and the quality of their output will improve as digitally available linguistic data accumulate. Since immigrants and refugees move to Europe increasingly from Asian and African countries, their cultures and languages are quite distant to the major European cultures. This means higher resource scarcity, more distance between the source and target languages and different discourses for similar social events and therefore less success than with the European languages – around which the MT@EU interface has been built.

In an endeavour as complex as ensuring social inclusion, civil and political participation through public service translation, machine translation systems can for the time being – merely – be one tool in the service of the professional communicator, integrated into a process of producing communication across cultures. The quality of their output cannot be but a constant reminder of how sophisticated a challenge translating for empowerment is.

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