Traditional and Emerging Use-Cases for Machine Translation

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Abstract
Despite a few remaining naysayers, Machine Translation (MT) is being used by many people now as a productivity tool, with demonstrable success. There is already a wide variety of use-cases, but more are emerging where MT is the *only* solution. This paper presents the case for MT, describes its impact on the translator, and demonstrates a need for customisable levels of quality rather than a 'one size fits all' solution.

1. Introduction

Nowadays more and more businesses are operating in an international marketplace. With the internet breaking down national borders, organisations face competition from foreign companies in their domestic markets. And many are looking abroad, often towards emerging markets, for new opportunities.

The key question we all face in the translation industry today is how to help businesses cope with the explosion of content in the global economy, especially given the difficult prevailing economic circumstances. Not only is the internet more multilingual than ever before, but there's a growing demand for very rapid – or even instant – communication.

In the fast-moving, global economy in which we live today, claiming that there is more demand than can be coped with by the current pool of translators is uncontroversial, even for those language pairs with huge current translation requirements; when we contemplate tackling the 'long tail' of languages, a human solution to this problem is inconceivable. As we observed in Way et al. (2011:43):

> At the same time, the volume of material which is available for translation is increasing; in his keynote address at the AMTA 2010 conference in Denver, Mark Lancaster, CEO of SDL, stated that as much as 90% of what could currently be translated is not being translated. Furthermore, Common Sense Advisory have conducted research which shows that 98% of content is never translated (DePalma and Kuhns, 2006).[1] In the same document, they also note that 'of the 1000 websites from the world's biggest companies and top brands, 45% are still single language sites'.

In contrast, machine translation (MT) can be the best (or only) option in certain circumstances. It is evident that today's MT engines – especially those from the dominant statistical MT paradigm (SMT, e.g. Koehn et al., 2007) – can be rapidly customised to fit a customer's style, terminology, industry sector and other requirements, achieving impressive results in a relatively short time.

Despite downward pressures on price, the requirements to 'publish now' have increased; automation is key to squaring this circle. As localisation industry veteran Tony O'Dowd puts it,[2] "In a world where margin erosion and price compression are daily challenges, competitive advantage will be on the side of those who embrace MT early and are able to manage it effectively." These crusading early adopters ('visionaries' – in the words of Mike Dillinger in his talk at MT Summit 2011 – whose principal use-case was 'localisation for publication') are now being joined by many others (the 'pragmatists', according to Dillinger), such that as we argue in the next section, MT is

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1   www.commonsenseadvisory.com/AbstractView.aspx?ArticleID=955
2   www.gala-global.org/blog/2013/machine-translation-a-new-era/

being used here and now, and others who are more reluctant to jump on board risk being left behind, and losing market share to competitors with more foresight.

In this paper, we will examine a number of new, emerging use-cases for raw MT and post-edited MT (PEMT) – especially involving user-generated content – where different levels of human engagement are required, and different levels of quality are needed. In so doing, we will appeal to two concepts, namely:

1. Fitness for purpose of translations, and
2. Perishability of content.

In our view, the degree of human involvement required – or warranted – in a particular translation scenario will depend on the purpose, value and shelf-life of the content. More specifically, we assert that in all cases, the degree of post-editing or human input should be clearly correlated with the content lifespan.

Given the full range of use-cases that are present nowadays, it is obvious that the traditional dichotomy of 'light' versus 'heavy' (or 'full') post-editing is no longer sufficient. As a consequence, it is self-evident that those translators who argue that there is only one level of quality – namely 'flawless' human translation – are stuck in the dark ages.[3]

A big driver behind the adoption and development of translation-oriented solutions – from raw MT to fully managed translation, editing and proofreading – will be the ability to offer a range of services which are flexible enough to meet these different quality requirements. Each of the services facilitated by MT will have its own definitions of quality, dependent on the client's content and business requirements. Quality will be able to be assessed by end-users or buyers, instead of in-country reviewers. Tools will need to be developed – such as Lingo24's Coach technology (e.g. Penkale & Way (2013), the companion paper to this one) – to facilitate fully customisable, dynamic levels of quality, which can be delivered by MT and/or Translation Memory (TM) technology as required.

The remainder of this paper is organised as follows. In Section 2, despite some protestations to the contrary, we argue that the time for MT is now, but also that significant improvements will only be brought about by MT developers working closely together with translators. In Section 3, we describe various use-cases for MT, especially in light of the fact that more and more use-cases are emerging, including where MT plays a significant – and sometimes the *only* – part in producing a solution to the client's requirements. In Section 4, we briefly discuss the changing nature of the role of translators. We conclude in Section 5 with some final observations.

2. The Case for MT

MT quality is now good enough that millions of people are using it every day to satisfy their requirements. At one end of the spectrum, there are freely available web-based tools such as Google Translate[4] and Bing Translator,[5] which provide strong baseline performance especially given the need to be robust enough to cope with any input. At the other, companies such as Lingo24 provide superior quality MT engines customised to a client's specific requirements, often using their own translation assets. Using our engines helps our clients:

• Improve productivity,
• Translate content previously not feasible due to time or cost constraints,
• Reduce time to market, and
• Reduce translation costs.

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3   Many believe this to be 'perfect' quality translation, whereas there is in fact much evidence to the contrary; the very fact that most language service providers (LSPs) offer a proofreading service in addition to human translation is indicative that clients sometimes want to avail of a safety net to catch possibly erroneous translations. Somewhat ironically, MT developers are forced to (wrongly) assume human translations to be perfect when conducting automatic MT evaluation, using methods such as BLEU (Papineni et al., 2003), METEOR (Banerjee & Lavie, 2005) and the like.

4   translate.google.com/
5   www.bing.com/translator

To be a little more objective, there are a myriad of successful use-cases using a range of MT providers for different clients, including:

- Adobe & ProMT (Flournoy & Duran, 2009),
- The Church of Jesus Christ of Latter-day Saints & Microsoft Translator Hub (Richardson, 2012),
- Dell & Safaba/welocalize (Lavie et al., 2013),
- DuDu & CapitaTI (Jiang et al., 2012a),
- Ford & Systran/SAIC (Plesco & Rychtyckyj, 2012),
- Sajan & Asia Online (Wiggins & Holmes, 2011),
- text&form & LucySoft (Liebscher & Senf, 2013).

Another sign that MT is a mature, useful technology is that at the recent MT Summit in France, for the very first time the number of commercial attendees (both users and developers) exceeded those from academia. This is a trend that is likely to continue, with ever more commercial enterprises wanting to attend such events, including large multinational companies, LSPs and MT developers. Further evidence of the assertion that MT has arrived is provided by Ruopp (2013), who observes that for the first time in a TAUS survey, the largest group of respondents was the group of LSPs and translation agencies, as opposed to research institutes. Ruopp states that "this shift indicates further adoption of the Moses toolkit by the language industry, which is encouraging".

All this evidence points to the fact that 'the time for MT is now',[6] a position which has registered with a large number of users. However, there continue to be many posts on open forums where translators show how bad MT can be.[7] Sites like Translation Party[8] have been set up to demonstrate that continuous use of 'back translation' – that is, start with (say) an English sentence, translate it into (say) French, translate that output back into English, *ad nauseum* – ends up with a string that differs markedly from that which you started out with.

It doesn't always work, as you'd expect. I typed in "Machine Translation is a very useful tool.", and via Japanese ("機械翻訳は非常に便利なツールです。"), equilibrium was reached after just two cycles with the output "Machine Translation is a very useful tool.", clearly not what the developers had hoped for, and demonstrating simply that where MT critics are concerned, some people have too much time on their hands! Leaving aside for one minute that back translation itself has been demonstrated to be an untrustworthy method to use for MT evaluation (Somers, 2005), I could use any tool – that's all MT is, not some panacea for all translation problems – in the wrong way in which its designers had intended and show that it was useless. As an example, I could pour orange juice into my toaster, and mock its unsuitability as a glass. But that's not what toasters are intended to do; they're for making toast! It's easy to show MT to be useless; it's just as easy to show it to be useful, but some people don't want to. Increasingly, that's their loss.

Accordingly, in the next section, we map out the landscape where we believe MT can be of use, and will revisit some of the criticisms of MT used by translators in Section 4. At the same time, we note that it is refreshing that ever more influential translators are willing to stick their heads above the parapet and sing the praises of MT. As we conclude in Section 5, if MT is to continue to improve further, we need translators to work together with developers; it looks increasingly likely that that state of affairs will emerge in the very near future, if it's not here already.

3. Use-Cases for MT

In the next two sections, we provide a distinction between traditional and emerging use-cases for MT for three different services: raw MT, light post-editing and full post-editing.

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6   www.safaba.com/blog-machine-translation-market/from-the-diary-of-an-mt-business-development-executive
7   ourmaninmadrid.blogspot.com.es/2013/04/rage-against-machine.html. Note here that while the author, David Simon, presents some of these MT errors, he very clearly demonstrates that "translators need to learn to love MT".
8   www.translationparty.com/

3.1 Traditional Use-Cases for MT

Traditionally, there are essentially three main ways in which MT has been used:

1. Raw MT,
2. MT with light post-editing,
3. MT with full post-editing.

Clearly the first of these involves no human involvement during the translation phase, whereas scenarios (2) and (3) require a smaller or greater degree of translator involvement, respectively.

Light post-editing might comprise the following: a review and post-edit of automated translation by a native linguist to make the output an understandable reflection of the source-text content, but ignoring stylistic niceties. Essentially this is a fast service to ensure that the translation is correct and fit for purpose.

In comparison, full post-editing involves the review and post-edit of automated translation by a native linguist to produce a text that is not only understandable, but also presented in a stylistically appropriate way. This offering should produce output comparable to human translation quality. When the right MT technology is used as part of the translation workflow, it can be used to improve translator productivity, whether offered with customised or vertical (i.e. industry sector-specific) MT engines. In such scenarios, a translator's productivity will greatly exceed that which might be gained when using generic engines such as Google Translate or Bing Translator.[9]

Each of these ways in which MT can be used can cut across industrial sectors. As far as raw MT is concerned, this service is useful for at least the following tasks:

- *Internal communication* ('assimilation'): translation of emails, online chat, international communication across offices/hubs, FAQs, repetitive product descriptions such as listings,
- *Website translation*: where rapid translation of critical updates is required, as well as for gisting purposes,
- *Bids/Tenders*: translation for gisting purposes.

The utility of light post-editing has been demonstrated in the following cases, which again cut across industrial sectors:

- *Online Help*,
- *Knowledge Forums*,
- *Support Documentation*.

As far as full post-editing is concerned, this is most useful in the following generic situations:

- *External communication* ('dissemination'),
- *Sensitive documentation translation*, especially where Security and Health & Safety are to be considered,
- *Client-facing documentation translation*.

We summarize in Tables 1, 3 and 4 the use-cases across different industrial vertical sectors for raw MT, PEMT-light and PEMT-full, respectively. As we progress from Table 1 through Tables 3 and 4, the content lifespan extends from short to more permanent.

3.1.1 Raw MT Use-Cases

In Table 1, we see that the only sector where it appears difficult to use raw MT is manufacturing, owing to concerns surrounding health and safety. One of the main areas where MT is used in this sector is for the translation of manuals, especially where the operation of machinery is concerned. Clearly some human involvement is to be preferred, as the following example from the February

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9 We have seen improvements in BLEU score with our engines of up to two or three times better than for these freely available systems on numerous occasions. In internal testing, we have seen increases in translator productivity ranging from 25% to 120% when using our engines in a PEMT set-up. When using one of our in-house vertical engines, a translator recently obtained a throughput of over 1300 words/hour, about five times greater that what might be expected from a human translating from scratch.

The risks of Google in Polish

A Polish worker was seriously injured in a dumper truck accident after following safety instructions that had been translated into "gibberish" using Google.

Grzegorz Krzyzak, 32, who speaks pidgin English, was using a one-ton articulated dumper truck to remove soil at a nursery and garden centre near Thorpe-le-Soken, Essex. As he was tipping a load, the truck overturned and crushed his right leg.

Parker's Nurseries was convicted of breaching health and safety laws and fined GBP5,000 after bosses at the firm converted instructions and health and safety manuals using Google Translate, the search engine's free translation service. The Polish that resulted was gibberish, Colchester magistrates' court heard.

The Pole sustained multiple fractures to his shinbone and foot and required four operations. Doctors inserted pins to help repair the bones and gave him a skin graft but it is not known whether he will regain full use of his leg.

Geoff Parker, director of Parker's Nurseries, said the firm now had an external translator to translate health and safety documents. He added: "We are obviously very sorry that an employee was injured in our workplace".

As regards other sectors, while MT is not best suited to the translation of marketing material (such as company brochures, advertising etc.), it can be of great benefit for companies who seek to obtain information regarding sentiment analysis, and interpreting their clients' responses to surveys and questionnaires. If all the company wants to discover is whether people liked their product or not, then raw MT is probably the best solution, as post-editing the MT output would be prohibitively expensive given the limited additional benefit, especially when one considers that there may be many thousands of respondents to such company requests.

Industrial Sector	Raw MT Use-Cases
Technology	• User-generated content (online chat, tweets, blogs, etc.) • Multilingual search terms
Manufacturing	(*Limited due to health & safety concerns*)
Finance/Legal	• Real-time translation of stock reports (for gisting purposes) • Forensic investigation (gisting: identifying key terms & phrases etc.)
Marketing	• Sentiment analysis • Responses to questionnaires and surveys
E-Commerce	• Basic product information (e.g. eBay product descriptions)

Table 1: Use-cases for <u>raw MT</u> for specific industrial sectors

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10 I could no longer find this online (as of 19th September 2013), but the same story is given in the magazine *Horticultural Week*:
www.hortweek.com/Edibles/article/1170839/Need-identified-Polish-translators-horticulture/. For confirmation that this is not invented, see www.hse.gov.uk/press/2013/rnn-e-00513.htm. Surely the UK Government wouldn't (or couldn't!) make this up?!

11 For more examples of similar translation blunders, some of which caused considerable pain, so not for the squeamish, see:
www.proz.com/forum/lighter_side_of_trans_interp/243419-they_really_botched_things_up_big_time.html

In the financial sector, real-time translation of stock reports via MT for gisting purposes may be sufficient, especially given the need to rapidly interpret foreign-language material in order to gain an advantage over one's competitors. At this juncture, a word of caution may be appropriate, given the potentially huge losses that could arise from mistranslation; presumably, here, an additional human buffer would be available to quickly supervise the accuracy of this translated material, although even this may be insufficient given the numerous cases demonstrating fraudulent trading seen recently in this sector.

For our clients in the legal sector, we have demonstrated raw MT to be sufficient for the purpose of forensic investigation. In cases where the police or customs seize computers as part of an ongoing investigation, many files and emails may be located on the devices in a range of foreign languages. Raw MT is perfect here for gisting purposes, where the identification of key terms and phrases is sufficient for legal teams to continue their investigations.

In e-commerce, raw MT of basic product information – such as eBay listings – is very likely to facilitate a company's ability to perform multilingual cross-border trading (cf. Jiang et al., 2012b). An interesting contrast presents itself here – summarized in Table 2 – when one considers the different nature of companies like eBay, who basically offer a marketplace for millions of individuals to offer their own products, and (say) John Lewis, who only sell their own material on their website. If John Lewis wanted to translate their website, it is doubtful whether anyone would look in-depth at the fine print of the payment details, so raw MT might very well be sufficient for the task, as when dealing with such a large company, one implicitly trusts them to 'do the right thing' when it comes to paying for products. In contrast, as individual eBayers can set their own payment details, it is imperative that these be crystal clear to potential buyers, lest they receive an unpleasant surprise down the line. When it comes to product descriptions, however, John Lewis would compose an exact form of words in English, the inherent meaning of which they would want to appear in any foreign-language websites. By contrast, two different eBayers selling exactly the same product would probably offer quite different product titles and descriptions; given the additional photos which accompany such products, raw MT of the descriptions especially is likely to prove sufficient.

Type of translation material	eBay	John Lewis
Product Documentation	Raw MT sufficient	Perfect quality required
Payment Details	Perfect quality required	Raw MT sufficient

Table 2: Contrasting translation quality requirements

Returning to Table 1, for the technology sector we note that raw MT may be sufficient for multilingual search. In cases where users may be struggling with certain functions offered by their technical devices, solutions to their problems may be available online in languages other than their native tongue, in which case raw MT will in all likelihood be good enough to help them complete their task.

Finally, an additional use-case – which is especially poignant given recent revelations – for raw MT is for surveillance purposes, including monitoring information coming from foreign sources by security personnel.

3.1.2 PEMT-light Use-Cases

Clearly, there are many cases for which raw MT output is not good enough. For content with a somewhat longer shelf-life, some human intervention is required to improve some of the errors made by the MT system. Nonetheless, premium quality output may still be overkill in such circumstances, so a light post-edit may produce translations which are fit for purpose.

As in the previous section, a PEMT-light service can cut across different vertical sectors, as summarized in Table 3. In technology and manufacturing sectors, a light post-edit is likely to suffice for the translation of manuals, online help and product support. As we saw in Section 3.1.1, raw MT of manuals can lead to very unfortunate circumstances indeed, and it is still the case that a

full post-edit will be required. However, for manuals where security is a minor factor, and which do not compromise health and safety, a light post-edit is likely to be good enough.

Industrial Sector	PEMT-light Use-Cases
Technology	• Manuals (with little security or health & safety risks) • Online help and product support
Manufacturing	• Manuals (with little security or health & safety risks) • Online help and product support
Marketing	• Market research: for information, or basic understanding only

Table 3: Use-cases for PEMT-light for specific industrial sectors

In the marketing sector, where a basic understanding of market research-related material is required, a light post-edit will again suffice. What needs to be elicited from such material clearly goes beyond the yes/no responses facilitated by the raw MT use-case in the previous section. In addition, we are not talking about the full transcreation of marketing material from one language to another, a task which only humans can accomplish. Again, as the use-case discussed here falls in-between these other scenarios, PEMT-light should be perfectly suited to this task.

Compared to Table 1, we have omitted use-cases for PEMT-light for the finance, legal, and e-commerce sectors. Where some human intervention is required, this is likely to be full post-editing, in order to bring any MT output up to the level of human quality translation, e.g. in the legal sector, for court proceedings.

Industrial Sector	PEMT-full Use-Cases
Technology	• Manuals (security/health & safety to be considered)
Manufacturing	• Manuals (security/health & safety to be considered)
Finance/Legal	• Contracts/Patents • Reports where certification is required
Marketing	*(Limited due to creative writing – HT/copywriting services more applicable)*
E-Commerce	• Detailed product information (with Marketing spin)

Table 4: Use-cases for PEMT-full for specific industrial sectors

3.1.3 PEMT-full Use-Cases

As we stated earlier, there should be no distinction between the quality obtained via full post-editing and human translation. Of course, fully managed (human) translation, editing and proofreading may still be appropriate for some material, especially in the area of forensic translation, where full legal document translation may be required if a case goes to court. However, there are many cases where full PEMT can work well, such as for manuals where security/health and safety is an issue, translation of contracts and patents, and reports where certification is needed, detailed product information etc. We summarize these use-cases in Table 4.

About the only industrial sector where full PEMT is not appropriate is for 'pure' marketing material, where transcreation is more appropriate. Other than this, a full PEMT service can deliver

quality which is just as good as human translation, if not better, given the ability of today's MT engines to adhere rigidly to a client's glossary where this is important.

A couple of use-cases where MT output can be used 'as is' or with a certain level of post-editing are patent translation (e.g. Ceausu et al., 2011) and subtitle translation (e.g. Etchegoyhen et al., 2013). If full publishable quality is required, then only full post-editing – or even expert human translation – will suffice. However, if this is for 'information only', then raw MT may be fit for purpose.

Note again here that the use-cases outlined for this scenario relate to content with a longer life-span, or where style is a more important consideration, compared to light post-editing. In our experience, clients are more likely to ask for light post-editing for one-off, large-scale jobs, whereas full post-editing is a more typical requirement where a long-term partnership exists between the client and the LSP.

3.2 Emerging Use-Cases for MT

In the previous sections, we described a number of use-cases where MT is already very effective: from raw MT for gisting purposes, through light and full post-editing of the MT output for content with a longer shelf-life.

Most of the early adopters of MT were large software companies and media organisations, unsurprisingly so given their near monopoly on data not so long ago. As we noted in Jiang et al. (2012a:1), "with the advent of Web 2.0, individual users have been able to actively participate in the generation of online content via community forums or social media … the Web [is now] open and accessible to an ever-larger percentage of the world's population".

One of the biggest emerging opportunities for raw MT is for the translation of huge volumes of user-generated content (UGC), such as hotel or product reviews, online chat (cf. Jiang et al., 2012a), social media posts in the form of tweets, blogs, etc. This type of data is becoming more and more prevalent given the ever-broadening access to the Web to more and more users speaking a wide range of languages. Most of this data is extremely perishable, having next to no shelf-life at all; one might even say that as soon as online chat between speakers of mutually unintelligible languages has been facilitated by MT, the data has no further purpose and may immediately be deleted.

While a company might not have the budget for professional translation of such data, having such content available in a range of languages gives tremendous added value for viewers on that company's website.

At the same time, translating UGC poses its own problems when it comes to building large-scale, robust, high-quality engines; in Jiang et al. (2012a:1), we noted that:

> much of the source-language data is of 'poor' or at least 'non-standard'
> quality. This comes in many forms: (i) content produced by non-native
> speakers, (ii) content produced by native speakers containing non-deliberate
> typos, or (iii) content produced by native speakers which deliberately departs
> from spelling norms to bring about some linguistic effect.

We will not revisit here the techniques we came up with to successfully cope with these problems, but merely observe that if LSPs think that their current customers' data is dirty and requires huge amounts of pre-processing in order to prepare it for the translation phase proper, they ain't seen nothing yet! It's a reasonably safe prediction that if some LSPs and translation tools providers cannot handle UGC, then they will undoubtedly fall behind those who can.[12] Over the next five years, the industry is likely to be confronted with a sea change, where most of the data that LSPs receive for translation will be UGC, rather than the relatively clean data they currently need to process.

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12 Note also two other recent phenomena: (i) large multinational companies (such as eBay) building their own in-house MT expertise, and (ii) the rise of 'DIY' approaches to MT (e.g. Penkale &Way (2012); Richardson (2012)). In both cases, there is a lesser role for LSPs in this space, although examples do exist whereby LSPs with no in-house MT offering build engines using third-party technology and market such a service as their own.

Of course, UGC takes many forms, but it is all very disposable content; pretty much as soon as it is published, it becomes obsolete. In Jiang et al. (2012a), we used MT (translating hundreds of millions of words in the process) to enable online chat between correspondents where there was no mutually intelligible language. Other areas where the UGC is somewhat more permanent include forum translation (Banerjee et al., 2012), translation of content in online games (Penkale & Way, 2012), and translation of eBay product listings (Jiang et al., 2012b).

One other use of MT by companies is for verification of potential user demand. Websites are translated into other languages, and the hits on these new multilingual versions are counted, with precious human resources then steered in the direction of the most popular versions for content verification and, if required, post-editing. Another is for the translation of course syllabi documentation and other educational information, as tackled in the recent Bologna FP7 project.[13]

For all these use-cases – at least in the initial stages – state-of-the-art SMT engines are already capable of producing 'good enough' results, which are fit for purpose. For many (such as multilingual chat), real-time translation can *only* be facilitated by MT, and no human intervention is warranted, or even possible.

Of course, there will be many more use-cases emerging in the next few years, most of which we cannot even contemplate at this juncture, but a more than reasonable bet would be that most of them will involve handling UGC to a large extent. As we argue in Penkale & Way (2013), each of these established, new and yet-to-emerge use-cases for MT has its own level of quality; clearly, raw MT output will never be as good as human translation, so assuming that a 'one size fits all' measure of quality will suffice is simply misguided. As we show in that companion paper, we need both dynamic, configurable quality metrics (which projects such as QTLaunchPad are trying to come up with, cf. Uszkoreit, 2013),[14] as well as tools – such as Lingo24's Coach tool (Bota et al., 2013) – which allow users to set their own quality requirements. Clearly, companies that that are ahead of the posse in this regard can expect to make considerable gains over their less flexible competitors.

4. The Changing Role of the Translator

Over the last 30 years or so especially, the role of the translator has changed considerably. As we noted in Bota et al. (2013:313):

> *Given the challenges they face in their day-to-day work, most human translators today would acknowledge the critical role of technology in their workflow. However, it is fair to say that some of this technology is more highly regarded than others. For example, most translators are happy to use Translation Memory (TM) tools (Heyn, 1998), while Machine Translation (MT) has met with much less widespread acceptance to date.[15]*

Those of us with long memories will recall a fair degree of resistance when TM was first introduced. However, things have turned pretty much full circle now, so much so that for some time now I've thought that TM systems are a bit like a comfort blanket for translators. Pretty much all translators use TM, but its use as a productivity tool is very limited, certainly compared to the potential gain with MT. Let's assume that TM facilitates the translation of maybe 10—20% of a new document, leaving the rest to be translated by the translators.[16] That's not a high quality threshold by any measures – if your car helped you to go to only 20% of the places you wanted, you wouldn't say that was very useful – but translators are nonetheless happy to use TM. Why? Because they trust it, they have confidence in it, they've put investment into it, it's predictable: if you ask for all matches above a 75% fuzzy match, that's what you'll get.

We're all aware that some translators are – how can I say it kindly? – not too well-disposed to MT.[17] There is plenty of criticism out there, and I won't revisit that here, but you don't need to look too

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13 www.mt-archive.info/EAMT-2012-BOLOGNA.pdf

14 http://www.qt21.eu/launchpad/

15 As we also acknowledge in Bota et al. (2013), "the definition of what it means for a translator to be 'technically advanced' has changed dramatically over time".

16 We'll leave to one side a discussion of the observation that translators get paid very little (or nothing at all!) for exact matches, in-context matches, and high fuzzy matches emanating from the(ir) TMs …

17 Some of this is downright scaremongering. To the best of my knowledge, no MT practitioners have ever stated that MT will replace translators, as I showed in:
www.lingo24.com/blogs/company/who-says-machine-translation-will-replace-translators.html

hard.[18] As I've said before, I'm not sure that many MT protagonists take this level of criticism too seriously, which might wind up those translators who are critical of MT even more.[19] However, Bellos (2011: 329) notes that "translation commentators lead the field in throwing most of its work in the direction of the garbage dump", and soon thereafter that "it seems implausible that anyone would ever make such a statement about any other human skill or trade" (ibid.). In reviewing his book, this was a revelation to me, as I observed (Way, 2012:260—261):

> *To me, this was a moment of enlightenment in the book, although probably not one intended (and certainly not mentioned) by Bellos: at last, all translators (or at any rate, those less enlightened than Bellos) have something else to pick on, namely MT! They are so inured to this level of talking about translation, that they naturally use it against us.*

I'll come back to this briefly in the next section, but fortunately today there are plenty of translators who have seen the light, and who are happy to share their positive experiences with us all, most importantly of course with their colleagues in the profession. One such example is provided by Claudia Brauer,[20] who makes the following plea:

> *I believe we have to stop seeing technology as our enemy and rather start embracing it, working with it, influencing its development, becoming co-creators of the tools we will be using in the next decades. If we want to avoid a dire future as professional translators and interpreters, we must understand that such future death by inaction is possible and then set out to create the alternatives. We must become the new cartographers of our future purpose in the industry. We have to make sure we remain relevant. That we are seen as useful and essential. There are segments of the industry that clearly think we are replaceable. What are we doing to show them otherwise? Staying in our comfort zones will not solve the dilemma. We cannot continue hiding in the sand and think that just because we do not want it, it will not happen. Rather, we must face the scary challenge posed by progress and run to catch up for the decades we have been complacent while the rest of the industry became digital, mobile and instant.*

Other informed opinion from translators can be seen in Lagoudaki (2008), as well as from Bellos himself – who is very pro-MT in his book – from Charlotte Brasler and Jost Zetzsche,[21] and from Stephen Doherty.[22] Whatever your point of view, some welcome perspective is shed on this debate by Jay Marciano, who states:[23]

> *I always find it helpful to remind myself that my job is not to provide machine translation but to provide translation. The application of appropriate workflows and technologies to that end is simply the smart way to go about it. Smart, forward-thinking translators and translation companies will thrive in this changing industry. And because MT is not an appropriate solution for every use-case, there will also continue to be opportunities for traditional translators.*

Rather than listening to MT practitioners such as Marciano or me, though, I noted that:

> *it is good for translators to hear the positivity towards MT coming in spades from as important a source as Bellos. We in MT need to learn from the translator's experience in attempting to demonstrate to them what MT can do, and how it can be helpful, rather than it being a threat to their livelihoods. I consider [Bellos'] book as having the possibility of being an important step in this direction, perhaps even 'a giant leap' towards the two communities coming closer together, for the benefit of all.* (Way, 2012:268)

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18 www.lingo24.com/blogs/company/why-are-translators-so-aggressive-their-criticism-machine-translation.html
19 I doubt they'll be terribly enamoured with Bellos' observation (2011:266) that "[Translators] behave more like GT [Google Translate]" themselves!
20 claudiabrauer.wordpress.com/2013/06/25/machine-translation-101-translators-interpreters-talk-a-lot-good-and-bad-about-machine-translation-few-really-know-what-it-is/
21 www.atanet.org/chronicle/feature_article_february2013.php
22 www.lingo24.com/blogs/company/post-editing-and-the-changing-role-the-skilled-translator.html
23 LinkedIn discussion on Automated Language Translation group, 8 March 2013.

We close this section by noting Bellos' observation (2010:218) that "Google Translate can provide stupendous services in many domains, but it is not set up to interpret or make readable work that is not routine—and it is unfair to ask it to try." That's in accord with what I've been saying throughout this paper: that when considering whether to use MT – just like with any other tool – you have to first evaluate whether it fits the purpose of the task at hand; in many cases, it doesn't make sense to use MT, but there are an increasingly large number of situations where it is absolutely the right choice.

5. Conclusions

In this paper, we have demonstrated that MT is being used in a number of different use-cases by many users on a daily basis, so the point of questioning whether MT is useful or not is moot. Many translators find MT to be a very useful tool in their armoury on a daily basis, but that's all it is, and all it ever will be; there is no threat to translators' jobs from MT, despite the ongoing scaremongering coming from (some) translators. The fact that more and more very influential translators are willing to stick their heads above the parapet and sing the praises of MT is a very welcome development, which will hopefully come to be the main message emanating from the translator community.

Given the new use-cases that are emerging, especially due to the huge increase in content being generated by individual users, the days of 'one size fits all' when it comes to quality are gone. There is an increasing clamour for tools which facilitate customized levels of quality, and companies that are ahead of the posse in this regard can expect to make considerable gains over their less flexible competitors.

We have seen that discussions on this topic can be somewhat heated, but as we contend in Way & Hearne (2011), "failure to work together in the recent past has prevented us from making more progress, and the time is ripe for the two communities [MT developers and translators] to come together as a catalyst for further improvements in our translation systems as we go forward together."

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