ITI Research Network e-book 2018
The Human and the Machine
Where will the humans be in 2050?  
by Sarah Bawa Mason, Chair of ITI

A report on ITI's first Research Network event and its significance for the sector.

We are currently sitting at the knee of the curve in AI and MT developments, the 'gig economy' is undermining security for freelance workers, and the landscape in our sector can be expected to change rapidly over the coming 10 years. As a responsible professional entity, ITI must prepare members and itself for a future of working conditions and practices that will undoubtedly be significantly different to those of today. Over the last two years, ITI has been trialling research partnerships through individual projects with a number of research partners (the outputs are now appearing on the ITI website - see the Professional Development tab under Research).

On 16 June we had the first event of our Research Network, pulling together some of our research partners, corporate members, corporate education members and individual members for a 'Faraday Discussion' on the two issues of: 'How evidence-based research can strengthen the visibility and professional reputation of translators and interpreters' and 'The human in the machine translation loop – what the humans can do that the machines cannot'.

The longer-term aim at ITI is the production of strong evidence-based arguments upon which to model future developments and with which to promote the highest standards in the profession. We aim to do all that we can to secure and protect the roles of the professional translator and interpreter, to defend providers of professional translation and interpreting services, and to support the trainers of future professionals for the sector. The content of this e-book provides you with a brief overview of the topics discussed, giving you links to the full articles or publications should you wish for a more in-depth read. We hope you will enjoy the first fruits of our labours!

Read the full version of this article here.

For further information on our research projects, contact the ITI Research Network research@iti.org.uk

Sarah Bawa Mason is the Chair of ITI and founder of the Institute's Research Network

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In his novel *1984* George Orwell called the fictional dystopian state apparatus that robbed citizens of their privacy ‘Big Brother’. The term has now become part of everyday language to describe any measure or technology that infringes on privacy. Though we have come to accept that mobile phone connections to masts can sometimes be used to track our movements and credit card companies record our purchasing behaviour in our private lives, few translators are comfortable with the idea of their work being analysed while it is in progress or involuntarily sharing their working speed with a third party. However, speech recognition and machine translation services are hard to assess accurately in terms of their utility to a translator and Computer Aided Translation (CAT) tool usage data may help in this regard.

There are good reasons why translators consider their working speed to be a private matter. For freelance translators most translation work is paid by word. This means translation speed is directly related to hourly earnings along with other factors such as word price and, in some cases where CAT tools are used, discounts for repetitions, fuzzy matches and so on. Some agencies could use faster speed numbers on easier texts or due to the normal process of familiarisation with a client’s material to negotiate lower word rates.

However, a translator who habitually translates too fast and makes mistakes is likely to spend more unpaid time looking for new clients than a more careful colleague. Fast sloppy translation is normally a false economy. Also, translation speed varies. A conscientiously completed translation may take more time than usual to complete for many reasons; for example, if terminology research is required or the translator needs more time to consider alternative phrasing for certain kinds of literary or marketing texts. A source language sentence might be convoluted or confusing or the translator may simply be tired. The list of reasons for words-per-hour variation is almost endless.

However, it is precisely this variation that makes it desirable to analyse words-per-hour translation speed at a supra-project level for longer periods but not on an ongoing basis. In this paper I will present arguments for making usage data to measure translator speed available under limited conditions.

Read the full paper here.

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Researcher:
John Moran, Managing Director,
Transpiral Ltd
What digital competencies and skills are needed by the translator and project managers of today and who has the responsibility to deliver these?

Translation training has changed as technologies have advanced from pen and paper, through machine assisted translation to human assisted machine translation. More recent developments such as Statistical Machine Translation (SMT) and Neural Machine Translation (NMT) have brought about a highly complex set of contexts meaning that skills training for translators has become increasingly layered, raising the question of where these new technological skills should be taught and by whom.

Language Service Providers (LSPs) agree that they deal with employees that possess different levels of expertise in the use of digital tools and they acknowledge the so-called gap between academia and the professional world.

Our recent research with LSPs identified exactly what requirements they have for their translators in terms of the provision of training on digital tools, before going on to look at the types of digital tools used by project managers and information on who should provide the training.

We found that there is an expectation that LSPs provide training for project managers as the digital tools that they use on a daily basis are tailored to the company’s needs. However, the story is very different for freelance translators who are expected to join LSPs with the necessary technological skills for the industry.

Freelance translators can seek training opportunities from universities, technology vendors or professional institutions. Some companies are naturally affected by cost and lack of time to provide digital tools training both to freelancers and in-house members of staff. However, the bigger the company, the more resources they have to provide training both to translators and project managers including internship programmes and structured in-house training.

The situation is further complicated by the varied range of tools across companies, with some LSPs relying on digital tools more than others and some companies avoiding use of MT because of the lack of training provided.

What does technology do to interpreting?

It is common for technological achievements in both translation and interpreting to be heralded for their potential to increase efficiency and reduce wasted time, but at the same time, research is increasingly showing that technological tools may fundamentally transform the way that tasks are done.

Empirical studies across a broad range of languages and covering a wide range of translation expertise led Anthony Pym to the conclusion that translators using computer assisted translation (CAT) tools tend to concentrate their processing on the smaller text segments presented by the software. He published his conclusions in a paper entitled *What Technology does to Translating* (Pym, 2011).

The good news is that, at this level of processing, the availability of external tools, including translation memories, glossaries, dictionaries and machine translation outputs offer translators a wider variety of stimuli for finding solutions to individual translation problems. It is important to ask whether new technological developments will have a similar effect on interpreters.

While telephone interpreting has long been available, only recent surges in internet speeds have allowed interpreters to work via synchronised video and audio link, a practice called, among other terms, Video Remote Interpreting (VRI from now on). VRI has found use in several jurisdictions in legal settings (in courts, detention centres, prisons, and police stations) and in medical settings. While there are various reasons for the growth in VRI, from a lack of locally-based qualified interpreters to budgetary restrictions, a common theme is that it enables communication between those who are both physically separated and use different languages. The growth in its use in a variety of settings has made it a popular subject of research, especially among researchers in sign language interpreting and those working in legal settings.

Examining the results of studies on VRI and simultaneous consecutive interpreting found that interpreters’ mental processes undergo a similar shift to those of translators using CAT tools. While new technologies such as VRI and modes such as simultaneous consecutive interpreting have led to possible improvements in interpreter availability and accuracy, they have also led to reduced interpersonal rapport between interpreters and interpreting users.

There is a need to improve the availability of interpreting and it is clear that new technologies will often find a niche in which they are useful. Research on VRI has shown, however, that new technologies can cause unforeseen difficulties and that their use must be carefully monitored and supervised. Commercialisation of technologies without a concern for interpreter welfare, user experience and its effect on interpreting quality – including interpersonal variables and the success of the event – would be to the detriment of the profession and those who use it.

Read the full research paper here.
In spite of the dramatic advances that have taken place over the past years with regard to perfecting machine translation, a known limitation is that it operates predominantly at the level of limited, matching strings of words. Although there have been some recent efforts to develop machine translation beyond the level of short phrases and sentences – through studies centred on features such as lexical cohesion, term consistency, use of connectives and pronouns – the focus of this research has been, like the rest of machine-translation research, on the development of highly-specific algorithms to perfect machine-translation output.

To fire up the launch of the ITI Research Network, I presented a couple of preliminary findings from a corpus study comparing the discourse of human and machine translation. More details will be given at the Using Corpora in Contrastive and Translation Studies (5th UCCTS) conference in September 2018.

The corpus used was a balanced and representative collection of the work of 15 professional English-language translators translating 15 different Portuguese-language fiction writers. Despite the fact that it was limited to one genre and one translation language direction, it provided rich authentic data to inspect.

The analysis focused on translation options that can transcend sentence boundaries, and which take into account the interrelationships between language and society as well as the dialogic properties of everyday communication, rather than on small lexical and grammatical glitches typical of raw machine-translation output.

Two discourse features of human translation were not handled satisfactorily by machine translation: register variation and the choice between foreignising and domesticating translation strategies. These outcomes demonstrate that professional human translators tend to take their readership and the wider context of the translation into account, in a sophisticated and nuanced decision-making process.

While this is a restricted study, I would like to invite readers to discuss the present findings and other ways in which machine translation might fail to address broader textual, social and cultural characteristics of human translations.

Read the full research paper here.
The use of machine translation in human translation workflows

Quite often in the debate on MT, technology is regarded as an inevitable predicament looming on the horizon; something that savvy translators should adapt to. The fact that many of the issues surrounding the use of MT in the human translation process concern the ways in which the technology is used, rather than the technology itself, is frequently overlooked. ‘Negotiating quality’ and ‘activity tracking’ are two such issues.

Translators’ stance on ‘negotiating quality’ is easy to relate to. In theory, it is tempting to assume that performing at one’s best means following the brief to the letter and to the best of one’s ability. In practice, however, when the brief tolerates error a conflict emerges between what translators have traditionally been trained to do and what they now might need to deliver. As the quality of MT improves with new technological paradigms and system architectures, expectations on quality and post-editing levels may well change and ‘light post-editing’ may give way to a different type of check. In any case, the fact remains that translators are not – and should not - be trained to do just ‘enough’.

Activity tracking is another controversial topic. It was reported that translators could often feel intimidated by this practice. Tracking translators’ editing processes was seen as a potential way of controlling translators by ‘watching’ what they do. As a pricing methodology, activity tracking was occasionally seen as robust, especially where editing time was tracked. However, the general feeling was that activity logs could be a misleading pricing parameter, especially where just edits or modifications in the MT output were tracked.

Activity reports showing editing time and/or number of edits can be used to calculate retrospectively how much effort the task required and the corresponding compensation. Activity tracking is also used for measuring productivity and at times for training purposes, where translators gain better awareness of their own translating/editing behaviour by accessing activity reports showing patterns in their own work. This can have knock-on effects on pricing.

Some of the other critical issues that came up frequently in the analysis of translators’ online discourse and interviews involved practices, industry guidelines and ultimately how and where MT is used. This arguably acts as extra justification for breaking from a rhetoric where MT is a looming trend to be contended with to one where translators take the lead in shaping new ways of working.

Read the full research paper here.
Technology themes in translation studies research

In a meeting such as the launch of this new Research Network, it is interesting to consider current and future research directions so that we can identify the ongoing gaps and needs for research, most of which can only be met through collaborative efforts between industry and academia. For the purpose of this overview, I am restricting my focus to the social dimensions in combination with other aspects, concentrating on socio-technical, socio-cognitive and socio-economic issues in particular.

Research with a socio-technical focus looks closely at the uses and users of technology and raises questions in relation to four main issues. Firstly, we can determine what tools are being used by various groups of users and where and how they are using them, typically employing survey methods for these insights. Then, we can examine more closely the users’ day-to-day experiences and interactions with tools, employing ethnographic methods of observation, or combining observations with other forms of data recorded in the workplace. A third area of research explores how people think about, understand and represent tools, addressed by analysing their discourses about technology, including blogs, forums and online discussions. A fourth question, leading on from the other three, asks how translation practices and technology shape and change one another over time.

The ongoing focus on the users of technology could be complemented by a focus on the designers and developers, moving the discussion towards issues of decision making and power. Here, research would delve into questions about design priorities, rationale for design decisions, and degrees of involvement of specific actors, including users, in this process.

Research with a socio-cognitive focus examines human experiences from the perspective of cognition in specific social contexts; examples of current concerns include the cognitive load or cognitive friction of specific technological systems. The impact of technology deployment on physical and mental health also is increasingly of interest to researchers, linked to ergonomic and affective factors.

Finally, bringing together many of the previous strands, a socio-economic perspective will be central to our critical understanding of current and future interactions between humans and technology, particularly in view of developments in artificial intelligence. Issues of relevance for other areas of economic activity are also pertinent for translation and translation research. We are thus prompted to address, among others, questions about the changing nature of work and workplaces, new business and productivity models, data collection and ownership, and the complementarity of AI and human expertise.

About ITI

The Institute of Translation and Interpreting is the only UK-based independent professional membership body for practising translators, interpreters and language service providers. It has over 3,000 members, based in the UK and overseas.

ITI seeks to promote the highest standards in the profession, by helping practitioners to raise their skill levels and keep up to date with the latest developments.

It also seeks to raise awareness more broadly of the importance of using an appropriately qualified practitioner and makes available a Public Register of its Qualified Members.

About the Research Network

The ITI Research Network was founded in 2017 as a collaboration between corporate member universities, corporate members and individual members allowing them to access each other to produce solid research outcomes.

The long-term aim is the production of strong evidence-based arguments upon which to model future developments and promote the highest standards in the profession.

For further information, visit us at:
www.iti.org.uk

Twitter @ITIUK
Facebook
LinkedIn

Contact us on:
01908 325250
info@iti.org.uk