

## TECHNONEUTRAL? UNIVERSITY STANCES ON CONTEMPORARY TRANSLATION TECHNOLOGY

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### ABSTRACT

*Much contemporary thought on technology in general, and translation technology in particular, is characterized by defeatism, determinism and a tendency towards universalism. The inexorable march of machine translation, we're told, will turn us all into post-editors, while crowdsourcing will erode the professional basis of translation. But such comment does not pay enough attention to local differences, or the demands of specific languages and markets, and often little attempt is made to critique the practices that accompany technologization from a legal or ethical point of view. In this paper I consider how University programmes can help student translators prepare for a profession in which translation technologies may pervade, by helping them to develop not just technical skills, but also a high-level conceptual understanding of the technologies in question, and the critical ability that they will need to sustain careers in translation. My paper reviews a number of different translation studies responses to the challenges posed by technologization and especially by the rise of statistical machine translation (SMT). It draws on experience over the past four years of integrating SMT into the translation technology syllabus at Dublin City University, Ireland. It argues for a holistic treatment of technologies like SMT, one that involves translators at all stages of the translation workflow, and that takes account of the contexts in which technologies such as SMT are developed are applied.*

**Keywords:** translation technology, translation pedagogy, science and technology studies, statistical machine translation

### INTRODUCTION

In his recent critique of internet-centrism, solutionism and general cyber-utopianism, Evgeny Morozov (2013) draws on a distinction made a quarter of a century earlier by the communications scholar Majid Tehranian (1990), namely that between 'technoneutrals' and 'technostructuralists'. In Tehranian's treatment, technoneutrals are those commentators who maintain neutral positions on the effects of technologies. They "typically tend to be the consultants, who have few theoretical pretensions and considerable interest at stake not to alienate their clients. They often assume a neutral position with respect to question effects: on the one hand this, but on the other hand that" (Tehranian, 1990, p. 5). Morozov characterizes technoneutrals as those commentators who believe "that technologies in themselves are entirely neutral, that they don't take sides, and that in the right hands they can do marvels" (2013, p. 169). They tend not to focus on the agendas of the creators of technologies, or on the contexts of use of the technologies in question. More optimistic technoneutrals may even adopt "an extreme laissez-faire attitude toward individual technologies:

since it all depends, let's just give technology a chance!" (ibid.). For all their commitment to balancing pros and cons, however, Morozov argues that technoneutrals don't undertake any "profound calculation" to weigh up the actual good and bad done with particular technologies, and they remain blind to "the many unpredictable ways" in which contexts of use could mitigate the effectiveness of the technologies in question (ibid., p. 170). Technostructuralists, on the other hand, believe that the impact of technologies "is always mediated through the institutional arrangements and social forces, of which they are an integral part" (Tehrani, ibid. p. 5). The impact of a technology is neither believed to flow from its inherent characteristics, nor to be neutral. Rather it depends on the context, and impact is studied by "analyzing how particular aspects of a given technology ... might restructure political and social relations, introducing entirely new classes of actors into the game" (Morozov, 2013, p. 170). Technostructuralists, while not necessarily pessimistic, are more likely than technoneutrals to also study the unanticipated and sometimes undesirable consequences of new technologies (ibid., 171).

In many aspects of life, neutrality is seen as a very good thing. It is associated with lack of bias, fairness and balance, all attributes that are normally welcomed in academia. But it is clear that technoneutrality as conceived by Tehrani and Morozov is not an ideal position to take. It is associated with blindness to context, inadequate understanding of social and institutional forces, and impoverished ethical reasoning. Technostructuralism, on the other hand, offers a broader way to view the impact of technology, one that is consistent with the approach adopted in much of the scholarship in the sociologically-oriented field of science and technology studies.

But what of our field, translation studies, and more specifically translation pedagogy? Do we view the technologies that pervade much of the translation profession as entirely neutral? Do we attend sufficiently to the contexts in which they are developed and applied, or to the role they play in the restructuring of relations between actors, be they human or non-human? Do we assume that technological innovation will take its own inexorable course, and that translators will have to have to adjust to that course? Are we aware of the ethical questions that arise with translation technologies? And how do all of these issues play out in the translation classroom? How do we assist students in conceptualizing contemporary, often highly technologized translation practices? Whose versions of reality do we favour in our teaching? And how do we construct curricula that are consistent with our positions on these issues? These are the kinds of question I wish to address in this paper. In so doing, I wish to build on, if only briefly, the work of a small number of translation scholars who have either begun to integrate insights from science and technology studies into their work, who have focused on the contexts of use of translation technologies, or who have reflected on the specific ramifications for translator education of the ongoing technologization of translation.

## **TRANSLATION TECHNOLOGY IN TRANSLATOR TRAINING**

In a 2013 paper on the subject, Minako O'Hagan argues that technology has yet to make 'any significant epistemic impact on translation studies' with mainstream translation theories largely ignoring technological dimensions (O'Hagan, 2013). At the same time, there has been general agreement for some time that translation technology plays an important role in translator training (see Kenny, 2007; Bowker & Marshman, 2010; Marshman & Bowker, 2012); but with technology under-theorized in translation technology, there is a danger that our engagement as teachers of translation technology could also be under-theorized. If we have 'few theoretical pretensions' and are concerned with balance, there is a risk that our teaching of technology will present the tools as stable entities, whose benefits and drawbacks weigh equally for everyone, and whose future implementations follow on directly from their intrinsic characteristics, rather than being at least

partially affected by the social and institutional contexts in which they are developed and used. Indeed it could be argued that standard textbooks on translation technology (Austermühl, 2001; Bowker, 2002; Quah, 2006) are primarily concerned with describing technologies and presenting the technical features of individual tools as if this were the full story. Although some relevant sources also contain passages that critique the technologies in question from the point of view of their impact on the social and professional status of translators, or the translation process itself, for example, such critical passages remain short. If anything has changed in pedagogically inspired writing on translation technology over the past decade, it is that such writing has begun to reflect the social constructivist ethos that has informed much scholarship on translation pedagogy in general since the publication of Kiraly's (2000) book on the subject, with sources such as Kenny (2007), Bowker & Marshman (2010) and Marshman & Bowker (2012) mining this vein. The change has happened to how we view pedagogy rather than technology however, and technostuctural approaches to translation pedagogy have yet to emerge.

There are however, in the work of translation scholars like Olohan (2011), the beginnings of an approach to translation technology that is inspired by science and technology studies. Olohan draws on Pickering's (1995) concepts of the 'mangle of practice' and the 'dance of agency' to develop a deeper understanding of how translators interact with a new version of a popular translation memory tool. The advantage of using Pickering's approach is that it allows Olohan to track how translators and software both have agency, each offering resistance to or accommodating the other at different times, in ways that cannot be predicted in advance. It also allows her to see the translators' pronouncements on their use of the tool in question as 'ontological performances' in which they draw on specific versions of reality (their 'ontological configurations') 'to articulate their different positions and to give them a basis for constructing a particular choice' (Olohan, *ibid.*, p. 347). Finally, it offers a model of how technology and society are mutually constitutive, of how the technological 'tunes into' the social, and vice versa. It thus avoids the polarized perspectives of technological and social determinism, both of which are 'detrimental to the translation community, in that they fail to account fully for the challenges and complexities of the integration of technology into the translation process' (Olohan, *ibid.*, p. 354).

The belief in technological determinism, of course, has other pitfalls, most notably that technology is perceived as taking its own inexorable course and, once we think we know what that course is, there is little incentive to even imagine other courses. Even if technological determinism is much criticized by scholars, the fact that it remains a widely held belief, and one that is promulgated frequently by so-called technology 'boosters', means that we have to take it seriously. In particular in educational environments, if we do not recognize and name technological determinism when we see it, we risk engendering the kind of defeatism that Morozov (*ibid.* 220ff.) warns of. We return to this point below. Worse still, if we subscribe to technological determinism ourselves as educators, we will surely propagate reductive views of technology: if we believe in the autonomous march of a particular technology, all we need do is make sure that students know how to use all its relevant features and thus are familiar with their own role in the destiny of the technology in question; everything else will take care of itself – there will be no need for much reflection on good or bad deployments, or on alternative ways to proceed.

Olohan's (*ibid.*) analysis of translator interaction with their translation memory tool relies on a mangle-inspired reading of translator posts to an online forum, a method that she points out suffers from the weakness that it relies on indirect accounts of such interaction, rather than direct observation. More detailed workplace-based studies could help overcome this problem. Olohan concludes that '[g]reater sensitivity to, and a deeper understanding of, socio-technical change in the

translator's workplace could, in turn, inform translator training and help translators develop a perspective on technology which is neither deterministic nor somnambulant but emergent and reflective' (ibid.). In so doing, she identifies what is probably a deficit in most translator training programs, even those that have sophisticated translation technology offerings.

Other scholars have begun to conduct the kind of workplace research Olohan advocates. LeBlanc (2013), for instance, spent nearly 300 hours at Canadian translators' workplaces in an ethnographic study that involved interviews with translators and direct observation of their tool use. Even though he does not draw on the same sociology of science background that Olohan uses, LeBlanc's analysis shines a light on the corporate and administrative practices that accompany the introduction of translation memory technology into the companies he studies, alongside the translators' own individual use of these tools, providing more insight into how the social and the technological tune into each other. What becomes clear in LeBlanc's and related studies is that the translators in question are not at all antagonistic towards translation technology. On the contrary, they welcome many technical innovations; they do, however, object on occasion to how those technologies are implemented by management to serve corporate ends. LeBlanc does not present any explicit lessons for translator trainers, but reading his account it is hard not to conclude that translation technology courses that focus only on the technologies themselves, divorced from their institutional contexts of use, are missing half the picture.

## **STATISTICAL MACHINE TRANSLATION AT DUBLIN CITY UNIVERSITY**

In the final part of this paper, I discuss how many of the issues broached above informed syllabus design and delivery for a teaching unit on statistical machine translation (SMT) introduced at Dublin City University, Ireland, in 2012. The introduction of the syllabus followed the rise to preeminence in automatic translation of statistical methods, as implemented, for example, in Google Translate and Microsoft Bing. Such was the perceived success of the technology that leading academic commentators were heralding the end of human translation as we knew it. Anthony Pym, for example, argued that 'statistical-based MT, along with its many hybrids, is destined to turn most translators into posteditors one day, perhaps soon' (Pym, 2012, p. 1). Ignacio García suggested that 'the question, in the long term, will not be whether translation will be done from the MT baseline, but simply when (and for which types of text and into which languages)' (2010, p. 18). The idea that SMT was going to determine the future of (most) translators and turn them into post-editors (seemingly of its own volition) was gaining currency, and a response was needed from academic trainers of translators. One response is, of course, to train post-editors, and happily such training can draw on a growing body of research in this area (e.g. O'Brien et al., 2014). Another response is to question the determinist thinking behind these pronouncements, and the inevitability of translators morphing into post-editors. Such questioning arises not from an antagonism towards post-editing, but from a reluctance to accept our supposed fate, without even stopping to consider alternatives. In Kenny & Doherty (2014) we outline a number of points where the skills and resources of translators can be used in the SMT workflow. These range from the selection and evaluation of data to train SMT systems, to the triage and pre-processing of texts suitable for translation using SMT, the development and deployment of glossaries to improve the system's performance, the evaluation of system outputs, and finally to the post-editing of such outputs.

There are, of course, other roles that we do not consider in Kenny & Doherty (ibid.), including sales and marketing, project-management, training and various other non-technical roles that are part and parcel of most service industries. What is important is that new technologies frequently involve new social and institutional configurations, and shifting roles for the actors involved, not all of which

can be known in advance. (See Pinch (2008), who refers to social actors whose roles change in such contexts as ‘boundary shifters’.) We also ask whether the economic rewards (as suggested by industry surveys) would merit a shift from ‘traditional’ translation to post-editing MT, at a time when the vast majority of language service providers’ income still comes from such traditional translation.

Our thinking led us to develop a new syllabus for SMT at Dublin City University (outlined in Doherty & Kenny, 2014), as well as a student assignment in which students had to work through a whole SMT workflow, assessing the suitability of different sets of data for training translation engines, as well as the suitability of the technology for different source texts and various language pairs (consistent with García’s parenthetical qualification to his above-mentioned prediction). Individual students thus had to adopt multiple roles and to view the technology not as universally applicable, but as one whose success (or not) may be contingent on several factors, many of which would emerge only in the course of the assignment. We stopped short of an authentic work-place deployment of the technology, but students worked with a local start-up company offering cloud-based SMT services as if they were real clients of that company. Given that the students were working with a start-up company in a fast-moving field, they got to experience SMT as it was evolving into a customizable service – SMT ‘in the making’ to use Latour’s (1987) phrase.

As well as designing a syllabus that opened up rather than closing down roles for human actors, we also endeavour to open the field of SMT up to scrutiny from a number of different angles, questioning the ethical and legal basis of SMT, and the agendas of those who champion the technology. The ‘ontological configurations’ of the computer scientists who develop SMT systems, although beyond the scope of this paper, are also of particular interest to translation students, who are witnessing new ways of understanding translation, ones that may have profound consequences for their status and the public perception of translation as a whole.

## CONCLUSION

In this paper I have suggested a number of ways in which translation technology can be viewed through a technostructuralist lens, using ideas from sociologically oriented studies of science and technology. I have also attempted to show how these ideas can orient the design and delivery of parts of a syllabus for translation technology. Given that science and technology studies are only beginning to impact on translator scholarship, and that translation technology pedagogy inspired by this approach is only beginning to emerge, the area is ripe for much more research.

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