

This is an Accepted Manuscript of an article published by De Gruyter in *International Journal of the Sociology of Language* on 2021, available at <https://doi.org/10.1515/ijsl-2020-0015>.

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Please cite as: Pym, Anthony, and Ester Torres-Simón. "Is automation changing the translation profession?." *International Journal of the Sociology of Language* 2021.270 (2021): 39-57.

Is Automation Changing the Translation Profession?*

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Abstract: As a language-intensive profession, translation is of frontline interest in the era of language automation. In particular, the development of neural machine translation systems since 2016 has brought with it fears that soon there will be no more human translators. When considered in terms of the history of automation, however, any such direct effect is far from obvious: the translation industry is still growing and machine translation is only one instance of automation. At the same time, data on remuneration indicate structural wage dispersion in professional translation services, with some signs that this dispersion may increase in certain market segments as automated workflows and translation technologies are adopted more by large language-service providers more than by smaller companies and individual freelancers. An analysis of recent changes in discourses on and in the translation profession further indicates conceptual adjustments in the profession that may be attributed to growing automation, particularly with respect to expanding skills set associated with translation, the tendency to combine translation with other forms of communication, and the use of interactive communication skills to authorize and humanize the results of automation.

Keywords: automation; translation; language industry; machine translation; wage dispersion

1 A New scenario for translation?

Translators do many things when they communicate between cultures; they adapt messages to new purposes and make the foreign accessible to various degrees. Yet despite the many variants and subfields involved, the material translators work on is at base language; the material they process and produce is language; translators are thus likely to be affected by the

* Paper written as part of the project Language Competence and Work (RecerCaixa 2016ACUP00020), 2017–2019. A preliminary Spanish version of the first parts of this text has been published in a collective report on that project.

various ways in which language tasks are automated. Assessing the effects of automation is not a straightforward task, however. The considerable variation within the industry makes it difficult to discern clear trends, and certain discourses about total technological disruption cloud the issue even further, claiming that neural machine translation, in particular, has brought in a completely new scenario where translators' days are numbered.

Here we seek to assess the relationship between automation and translation in several steps. First, we contextualize advances in machine translation as just one instance of a more general process of automation, tempering some of the more extreme claims that have been made with respect to neural machine translation as disruption. Second, we look for insights from the sociology of automation in general, focusing on wage dispersion as one of the more predictable effects of increasing automation. Third, we then look at quantitative data on the translation industry to see whether there is any evidence of wage dispersion that can be attributed to automation: such evidence might be a tangible general effect of automation. And fourth, we consider the changing discourses on the translation profession itself, to see whether the qualitative trends concord with what we can infer from the quantitative data. Through these various steps, we hope to show that the general scenario facing translators is indeed passably new, but that not all the predictions of disruptive doom and gloom are well-founded. Automation is changing the *nature* of the translation profession, not its size, and the changes are both for those who work with new technologies and for those who focus on what the technologies cannot yet do.

2 Is neural machine translation the main threat?

The progress of neural machine translation systems from 2016 has grabbed headlines and may now be the main cause of public anxiety within the translation profession (Kenny 2018, Nunes Vieira 2020). Here we nevertheless adopt the initial methodological position that machine translation should be seen as just one instance of the more general progress of automation, which has a much longer and perhaps less frightening history. Past trends can be indications to present processes, at least until there is evidence to the contrary.

Of the many yardsticks for measuring the evolution of machine translation (Doherty 2020, Pym 2020), those with the most public impact are claims of parity with human

translation (quality) and the numbers of words being processed by free online machine translation systems (quantity).

The strongest claim to qualitative parity was made by Microsoft in March 2018 for Chinese to English news translation: “We find that our latest neural machine translation (NMT) system has reached a new state-of-the-art, and that the translation quality is at human parity when compared to professional human translations” (Hassan *et al.* 2018: 1). Note that this means the NMT translations are indistinguishable from human translations, not that they are perfect. The finding comes from bilingual sentence pairs being evaluated by “bilingual crowd workers”, who were asked whether the candidate translation conveyed “the semantics of the source text” (2018: 3). The testing thus involved context-free sentence pairs being assessed in terms of content, not form, and with no reference to context. The comparison would be quite different if it involved *documents* rather than isolated sentences (Läubli, Sennrich and Volk 2018) and if it assessed all the formal qualities by which a piece of language is judged in specific situations of use. Translators know this: they now regularly take NMT output and correct (“post-edit”) it to ensure that the translation will be communicatively successful in context. If the human can thus work efficiently with the machine, the very restricted claim of parity (sentences, content, without context) need not in itself spell the end of any profession. But it can change the *way* translators work.

As for quantity, Google Translate is said to process 143 billion words a day (Wood 2018), which suggests that its quality is good enough for many everyday purposes. If there are the equivalent of some 333,000 full-time professional translators and interpreters in the world (to take the estimate from Pym *et al.* [2021:137]), and if we very generously suppose that each of them renders some 3,000 words a day, then all those human mediators are producing just under 1 billion words a day – a mere 0.68% of what Google Translate is reported as processing. So does this mean that machine translation has already replaced translators in almost all fields, or will do so, especially when the machine appears to be free and professionals usually are not? Once again, the headlines can be misleading. First, one cannot assume that all the words processed by machine translation are actually *read* by anyone (a webpage might be rendered in order to locate just a few items of actionable information). True, not all the fully-human-translated words are ever read either, but when the production cost is very low, the non-read proportions are likely to be very high. And second, few of

those machine-translated words would ever have gone to a professional translator in the days before neural machine translation. On this view, machine translation has opened essentially new uses of translation, making cross-lingual information available to many sectors of society who previously had no control over what was or was not translated and who are reported as being happy enough with machine-translation output.

The impressive numbers thus do not in themselves constitute an immediate threat to a profession. Instead of assuming disruption, we do better to contextualize the current uncertainties in terms of the wider historical processes of automation. After all, technology has been automating human skills for a long time.

3 Studies of the effects of automation on occupations

The sociology of work has been dealing with automation for more than fifty years or so, mostly with reference to the industrial revolutions and the labor market disruptions caused by the first and second world wars. Some of the more recent studies nevertheless discuss the degree to which jobs will be replaced by automation in the coming 20 years (cf. Nunes Vieira 2020). Frey and Osborne (2013) use data from the Occupational Information Network to estimate that 74% of the occupations in the United States risk being automated. Drawing on OECD data, later revisions of that estimate identify only 14% of occupations as being at risk of actual replacement, while 32% have the potential to be automatized by more than 50% (Arntz, Gregory and Zierarch 2016) – which might be less alarming but is still far from comforting. Segal (2018) presents a review of recent studies of the issue and concludes that the probabilities of automation depend very much on different national contexts. And none of the predictions, no matter how dire, clearly states with precision *when* jobs will be automatized (Frey and Osborne 2018).

Looking at some of the more negative predictions, David Autor (2015) provocatively asks “Why are there still so many jobs?” (since so many are supposed to have disappeared), just as we might legitimately ask why there are still so many translators (see data below). Autor then identifies some of the logics by which automation need not entirely destroy jobs. One of these arguments is the O-ring phenomenon, named after the faulty gasket that caused Apollo 13 to explode (Kremer 1993). You are only as reliable as your weakest link:

[...] failure of any one step in the chain of production leads the entire production process to fail. Conversely, improvements in the reliability of any given link increase the value of improvements in all of the others. Intuitively, if $n-1$ links in the chain are reasonably likely to fail, the fact that link n is somewhat unreliable is of little consequence. If the other $n-1$ links are made reliable, then the value of making link n more reliable as well rises. Analogously, when automation or computerization makes some steps in a work process more reliable, cheaper, or faster, this increases the value of the remaining human links in the production chain. (Autor 2015: 6)

According to this logic, automation may reduce the number of jobs at the same time as it increases the value of the jobs that remain (Deming 2017; Deming and Kahn 2018). As Nedelkoska and Quintini (2018: 94) observe, “computers do substitute labour, but not the labour of those who use them directly”. Further, an increase in automation usually brings about greater production capacity and thus a higher demand for the jobs that cannot be automated. When the textile industry was almost completely automated in the 19th century, products were cheaper, demand for them rose, and the number of jobs in the sector increased in some places (Bessen 2015, 2016).

These general studies point to two related phenomena: a change in the nature of work, and a bifurcation in the labor market between those that benefit from automation and those who are replaced. This bifurcation can be seen in significant wage dispersion:

Computer use is also associated with greater inequality of wages within occupations. Greater wage dispersion can arise if new skills are costly or difficult to acquire, so that only some workers acquire the skills. This association appears to contribute to wage inequality, accounting for 45% of the growth in the wage gap between the 90th and 50th percentiles of the entire workforce since 1990; it can account for 38% of the increase in the 50/10 wage gap. (Bessen 2016: 2)

This is of extreme interest because a degree of wage dispersion in language-intensive occupations is reported by Ubalde and Alarcón (2020).

From these various surveys, we formulate three questions. First, if wage dispersion is one consequence of automation, are there signs of it in the labor market for translators? Second, if there are signs of wage dispersion, can they really be related to automation? And third, if that relation is not strong or convincing, can we identify other ways in which automation may be affecting the skill sets of translators?

4 Is there wage dispersion in the market for translators?

In keeping with the economists' arguments against automation as doom, there are indications that the global market for translators may be relatively healthy despite automation.¹ Indeed, there is evidence that the profession as a whole has been expanding.² The United States *Occupational Outlook Handbook* (Bureau of Labor Statistics 2020) predicts a 19% growth in translation and interpreting from 2018 to 2028 ("much faster than average"); the *China language service industry development report* (China Academy 2018) claims 10% year-on-year growth; the Slator Language Industry Market Report 2019 predicts a global market growth of 21% from 2019 to 2022. The figures vary considerably (the US forecast is actually is more or less in line with predicted economic growth) but none of them predict a shrinking profession. Yet this alone does not indicate any change in the nature of the work or the distribution of remuneration.³

¹ The numbers are supported by more general economic analyses. Frey and Osborne (2013, 2017) gave translation and interpreting a probability of 0.38 of being automatized, where 1.00 represents the least automatable occupation: translating and interpreting occupy position 265 in a ranking of 702 occupations. Frey and Osborne do nevertheless mention translation as a "routine" job whose probabilities of automation should increase with better combinations of algorithms with big data (2017: 6-7).

² The available data almost always concern "translation and interpreting" ("interpretation" in the United States) as a unified occupation, where "translation" is for written work and "interpreting" is for spoken work. Sociologically there is a huge overlap between those two modalities: the number of interpreters who also work as written translators could lie between 68% (Brown 2001) and 72.9% (Kelly et al. 2010, 20).

³ There are several ways of explaining the growth. Most simply, one might suppose that the interlingual transfers resulting from globalization are increasing so fast that, even if 99% of all translations are done with machine translation alone, the remaining 1% has been growing steadily. Employers still report they need more high-level language skills than they can find (Ubalde and Alarcón 2020).

Why would the market for translators expand at the same time as language automation is being used massively (and, for that matter, there is massive learning of English as a lingua franca)? That is, why are there still so many translators? The reason has been found in studies on automation: “the increased supply of (computer-performed) routine tasks increased the demand for non-routine tasks, driving the wages and employment of non-routine jobs up” (Nedelkoska and Quintini 2017: 34-35). This would explain why “many of the occupations that FO categorize as being at a high risk of automation– translators and interpreters, marketing specialists, technical writers, medical and clinical laboratory technologists and others – will grow significantly faster than the average employment growth between 2014 and 2024” (Bureau of Labor Statistics 2016; cit. Nedelkoska and Quintini 2017: 37).

In very practical terms, this means that automation boosts the number of cross-cultural exchanges to the point where more human translators are needed for their small share of that communication: the increase is so massive that the small share continues to grow. As much as this explanation may appear to keep all translators happy and employed, it does not account for a possible bifurcation in the labor market. So what are the signs of wage dispersion? And how might they be related to automation?

Wage dispersion is particularly pronounced with respect to interpreting. Conference work is prestigious and well-paid, while work in healthcare and the courts is more poorly paid. A North American survey by Kelly et al. (2010 35: 43) presents data on salary distributions that show two clear humps, suggesting at least three income groups: regular conference interpreters, regular legal/healthcare interpreters, and a long tail of part-timers. In sociological terms, it is difficult to see how those groups are working in terms of the same social system: there is no evidence that a change in healthcare interpreting, for example, would bring about a change in conference interpreting (as would happen in a structurally dependent system). Something similar appears in rather dated data on the salaries of translators in the United Kingdom (CIOL/ITI 2011), France (SFT 2010) and association

members in Europe (FIT Europe 2010), all of which show “two humped” patterns.⁴ The clearest of these is a report by the Fédération Internationale des Traducteurs (FIT Europe) referring to data collected from national associations in 2008, where most translators in Europe earn between 0.07 and 0.16 eurocents per word (rates of pay differ according to the languages and the country) but there is a clearly separate group that averages 0.50 eurocents per word, which is where we see a kind of dispersion that is not dependent on the language or country. Unfortunately, none of these surveys has been repeated with sufficient control to indicate clear historical tendencies.⁵ Although the signs of wage dispersion are fairly clear, the dates of the surveys suggest that it existed prior to the qualitative leap of machine translation.

There are several possible reasons for the indications of wage dispersion. The authors of one of the surveys (CIOL/ITI 2011: 8) suggest that the high earners combine translation work with management and sub-contracting, which may indeed be the case. Others who see themselves at the top of the industry talk more freely about their own “premium” segment (e.g. Durban and Seidel 2010; Hendzel 2014) where language services are simply done more seriously than in a general “bulk” segment. That is, professionals at the top are instinctively vaunting what happens at the top. There could nevertheless be a simpler logic at work at both extremes. In complex economies, translation only weakly forms a separate field of competition or an independent “system” of communication (see Pym 2022). This has been argued explicitly in translation studies (Simeoni 1998; Wolf 2006): literary translation is a subset of the literary field or system, legal translation feeds off the legal field or system, conference interpreting is part of a system of international communication between high-level

⁴ That said, a survey that includes the reported salaries of 2,600 translation graduates from prestigious CIUTI across 19 countries (Schmitt et al. 2016) does not show a clear second hump but does indicate that 3% of the graduates have pre-tax incomes of above 100,000 euros a year. The lack of a clear second hump may be because most of the graduates were near the beginning of their professional career and relatively few CIUTI graduates are likely to seek permanent employment in the lower-paid segments of the market.

⁵ SFT (2015) does compare translators’ rates of pay in 2008 and 2015. They record slight increases at the bottom and top ends of the range, but the numbers of respondents are too low for the differences to be significant. In CIOL/ITI (2011: 8) 1,431 respondents indicated that their salaries were higher (42%), the same (38%) or lower (10%) than five years previously. These results do not refute the hypothesis of growing wage dispersion.

delegates, and so on. If rewards for language services are distributed unequally, it is first and foremost because the capitals circulating in these various wider systems are unequal, not especially because the services themselves are profoundly different. Indeed, the original references tend to be not to an occupational segment but to “premium” *clients* (Durban and Seidel 2010: 71, 91, 160): Durban’s company prepares financial reports for large clients in Paris; Hendzel (2020) touts specialized services like “mission-critical language support on all major US-Russia nuclear weapons disarmament programs”. These are niches where communication is high-risk and confidentiality is paramount; they are not areas where anyone has any strong reason to trust machine translation. This suggests that the translation market is divided by the nature of the clients first, and only then by the nature of the language services provided.

That is, a certain wage dispersion is structural, embedded in the very nature of a service occupation, rather than a product of automation.

5 Can wage dispersion be related to automation?

This point is important because it speaks to the few surveys that use reasonably reliable diachronic comparison to indicate recent market trends. Eurostat data on language-service providers from 2010 to 2016 (reported in Nimdzi 2019) show a massive 86% growth in revenue for companies with 250 employees or more, yet actually indicate *negative* growth for companies with under 50 employees. Something similar is found in the 2019 report of the European Language Industry Association (ELIA 2019: 14), which shows sales increasing healthily in companies whereas “the situation is quite different for the independent language professionals, which reports significantly lower growth in sales/revenues”. This suggests that the overall growth in translation could be hiding a widening gap within: success among large

companies could be statistically hiding relative uncertainty among the smaller ones and the long tail of freelancers.⁶

The dates of these surveys and the nature of the companies suggest that these divergent tendencies might indeed have something to do with increasing automation. A language service provider with more than 250 employees is not serving the kind of niche market that the small “premium” theorists showcase. They are processing large numbers of words for large companies and institutions, and they are using technologies to help them do it. The ELIA report (2019: 21, 24) indicates that companies with annual turnovers of more than 250,000 euros invest far more in automation than do the smaller companies and are more likely to have translation-memory ownership and user rights: “Machine translation and to an even stronger degree automated workflow are clear priorities for the larger companies, while the smaller segment is still more focusing on CAT technology, with machine translation taking a strong second position” (2019: 21). Not by chance, among the largest translation companies in the world are RWS (more 10,000 employees, having taken over SDL in 2020) and Lionbridge (about 6,000 employees), and both have invested heavily in language automation, specifically in automated workflow and translation-memory software with integrated in-house machine translation feeds. The larger companies are able to invest in in-house automation and adapt to its consequences, while failure to do so would be leaving smaller companies behind. Note that this investment concerns project management as well as hands-on translating, so any threat to employment concerns project managers just as much as it does translators (see Jetzsche 2019, which surveys 17 translation-technology companies). Further, there are indications that large companies are able to employ translators as post-editors (reviewing machine-translation output) or database checkers (especially in China) at

⁶ Further speculation on market turmoil at the lower end can be found in an article in *The Economist* (2017), where not all the causes can be brought back to machine translation. The reality of online work, for instance, means that clients can seek out translators in low-paying countries, driving down global prices. Pym et al. (2016) further attribute market disorder to the ability to copy or forge signals of translator status, which is only indirectly related to machine translation (scammers can steal a translator’s identity and use it to sell machine translations as fully human translations).

lower rates of pay than in pre-automation tasks. In keeping with this, translators are reported to be fearing not so much automation as such, but what large companies do with it.⁷

The connection between automation and wage dispersion seems clearest with respect to large language-service providers: with large investments in technology, some language workers earn more and others earn less. The relation is not so clear with respect to smaller companies and freelancers, who may be missing out on the effects of automation, both positive and negative.

A simplistic finding might be that the large companies who use technology most are making profits from increased productivity, and the smaller players and freelancers who use it least are making fewer profits. That kind of conclusion not only describes wage dispersion but also interestingly contradicts what we find in some of the discourses circulating in and around the translation profession itself, to which we now turn.

6 Discourses on automation within the translation profession

Hard data on remuneration patterns are one possible indication of future trends: as in classical Marxism, the relations of production determine the distribution of wealth and the nature of work, in the last instance (Althusser 1965). Prior to that final determinism, however, what people think and say about technological trends can influence how they respond to them, bringing about changes that cannot be attributed to any direct economic or technological causation.

If we now turn to what translators and translator trainers *say* about automation, we find a range of positions being taken by different players in different segments. Here we select examples merely to illustrate that range, without regard for the different quantitative distributions involved.

⁷ A survey of professional translators' opinions on machine translation from 2010 to 2017 found that they were primarily concerned about "MT's current limitations and some of the business practices that surround its use" (Nunes Vieira 2020: 16).

6.1 “Public warning” from established translators

Those who reach the top of a profession may seek to maintain their position by denigrating the technologies used by younger generations. Something of this is to be found in the older translator associations. In particular, the *Ordre des traducteurs, terminologues et interprètes agréés du Québec (OTTIAQ)*, founded in 1940, sees one of its functions as being to protect the public from bad translations. It thus issued a general warning about machine translation in 2009, urging the public to “call on a certified translator for all your translation needs” (cit. Pym 2011: 4). By 2020, that warning had been replaced with a recognition of advances in neural machine translation that nevertheless concludes: “it still takes a qualified translator to determine whether a machine translation is accurate and reliable” (OTTIAQ 2020). The Quebec association might be associated with a generation of translators that became well established in the 1970s and 1980s on the coattails of an aggressive bilingual policy in an affluent post-industrial society. They overtly seek to protect not just the general public, but also their acquired status, adapting to neural machine translation by according themselves an additional social function: the approval of machine translation output, in the same way as a notary certifies a document.

6.2 Business as usual for “premium clients”

As noted, there is a self-labelled “premium” market segment that works on high-stakes texts for high-paying clients. The champions of this segment (e.g. Durban and Seidel 2010; Hendzel 2014) distance themselves from automation in general. In Durban’s 2011 brochure for translators, post-editing of machine translation is recognized as an option but is marginalized, while the recommended work process is that of an artisanal cottage industry. That general position has not been recanted since. There is a very good reason why it should not be: “premium” clients generally require that the confidentiality of their documents be maintained, and the integration of shared translation memories or public machine-translation systems puts that confidentiality at risk. In-house machine translation systems are very feasible yet no mention of them is found in this discourse.

6.3 *“Bridge the gap” in training institutions and industry representatives*

Quite a different discourse emanates primarily from university-level translator-training institutions, of which there are now more than 500 worldwide, that interact with industry representatives. Here the supposition is that employers require translators to use technologies, so trainers should ask the employers which technologies are required and then teach those technologies to trainee translators. This “bridge the gap” logic is at the base of a number of empirical studies (for example, Toudic, 2012; China Academy of Translation & Translators Association of China, 2016; Horbačauskienė, 2017; Schnell & Rodríguez, 2017; Rodríguez de Céspedes 2019), all of which emphasize the need for skills in using translation memories and post-editing machine translation. Here we should also include the discourses of language-service providers that have developed training resources. SDL, in particular, not only produces translation software but also markets training materials and provides certification in collaboration with translator-training institutions. The presumed gap can be bridged from both sides.

This discourse is based on several presuppositions. It supposes that all employers actually know about automation, that they are able to speak on a level that is somehow general enough to concern future employment trends, and that all students are going to be employed as (company) translators. Legitimate questions might be raised on all these points.

With respect to the use of translation memories, in particular, the increase in productivity can work more to the benefit of the employer than to the translator, particularly when one considers that the employer is automatically using the translator’s work to improve future databases (cf. Nunes Vieira 2020). As such, the employers’ discourse can be expected to overstate the need to work with automation and to understate any relation between automation and wage dispersion.

More significantly, studies of employment among graduates of translation and interpreting programs show with some consistency that only about a third of them actually work as translators and/or interpreters for any length of time (Hao and Pym 2021). Their multilingual skills are also used in education and a wide range of communication activities. Even though those skills increasingly include the ability to work with translation technologies, that does not mean that changes in the technologies are likely to bring about

radical modifications in the structure of employment across the board. No matter what the employers say, only a minority of students are actually headed their way.

6.4 *“Do what the machine can’t do”, in training institutions and professional associations*

A slightly different discourse insists that translators should not only engage in the front-line automation practices but should also seek to develop specifically automation-resistant skills.

This can be seen in the two competence models elaborated by the European Masters in Translation (EMT 2009, 2017). The revised 2017 model not only gives more emphasis to the usefulness of machine translation in the translation process but more significantly increases the weighting of spoken “personal-interpersonal” and “service provision” skills. That is, it emphasizes skills that are not yet automated.

Similar advice comes from the Fédération Internationale des Traducteurs, where it is recommended that translators “should act as language services advisors or language consultants, advising their customers on the best approach to a particular assignment and explaining the benefits or drawbacks of certain translation methods” (FIT 2017: 2).

A further example is found in the School of Applied Language and Intercultural Studies at Dublin City University (2020), which has an established reputation as the world leader in translators’ human-computer interaction and collaborations with industry. When it outlines how its graduates can “future-proof” their language skills, the School mentions the need to work with technology (“digital skills”) but also insists on “interpersonal skills”, “critical thinking”, “creativity” and “learning to learn”. That is, the emphasis is tipping towards doing things that machines cannot yet do.

In all of these examples, automation is welcomed with one hand and distanced with the other. That is, one can both work with translation technologies and go beyond them – it is not a “one or the other” choice (as seems to be argued in Kenny 2018).

The one snag in this discourse is that there is no guarantee that the interpersonal tasks cannot be automated. As mentioned by Jetzsche (2019), workflow software is partly replacing the work of project managers, whose prime job is to use advanced interpersonal skills to keep multiple parties coordinated. There must remain at least lingering doubt as to how far language skills can wholly be “future-proofed”.

6.5 “No longer a translator” in work with automation

One further set of discourses sometimes makes no direct reference to automation as such but might speculatively be considered a response to it precisely because of that silence. It can most readily be seen in the proliferation in names for what translators do, where some translators are no longer named as translators.

Bond (2018) scoured LinkedIn for the job titles of people who work for language service providers, coming up with over 600 different titles. Many of these play on concepts such as localization (localization manager, localization strategy consultant) and there is a wide range of titles that emphasize the importance of addressing clients’ specific needs, and indeed intensive communication with clients. For instance, here are some of the job titles derived from the simple idea of solving clients’ problems (Bond 2018): *solutions architect, director of client solutions, solutions consulting and director of technology solutions, cloud solutions architect, or solutions manager for machine intelligence*. The people bearing these job titles have a background in translation and are ostensibly working with translation technologies. Whether or not they are in some way particularly qualified to “solve problems” is not something we can judge here. The telling point, though, is that the word “translation” has disappeared from their titles. Automation has moved them on to other names.

6.6 “Do more than translate” in overlaps with other professions

A second variant on nomenclature change is found in academic literature on an array of instances where the core tasks of translation are joined to skills in neighboring fields, giving new names for perhaps new activities. Here the word “translation” is partly retained but is joined to the names of other professions: “journalistic translation” becomes “journalation” (Filmer 2014; Valdeón 2015), translation and editing is “transediting” (from Stetting 1989), translation and artistic creation is “transcreation” (e.g. Pedersen 2014), translation and adaptation has long been “transadaptation” (in audiovisual translation and language testing), and translation and audiodescription bucks the trend by becoming “accessibility

management” (e.g. Orero 2017), losing the reference to translation but nevertheless offering employment to translators.

As automation advances into myriad everyday translation tasks, some translators are turning to high-stakes communication activities where their language skills take on new names and may be combined with neighboring skill sets.

7 Conclusion: Changes in the concept of translation

So is automation changing the translation profession? The quantitative data suggest that there might indeed be change, primarily related to wage dispersion. The qualitative messages from the various discourses on translation nevertheless suggest some deeper types of change.

First, when we lay out the various discursive positions, from those that are most opposed to automation through to those that most clearly build on it, the clearest change is in the concept of translation itself – not just in the names, but in the range of activities and the spread of the skill sets involved. When the Quebec association took it upon itself to warn the public about machine translation in 2009, the message went hand in hand with an ultimately unsuccessful campaign to restrict the professional title “translator” to the certified members of the association (see Pym 2012:82). No one outside the association could call themselves a “translator”. This concept of translation was highly restrictive in terms of both social extension and the skill sets involved. Then, with each step towards greater acceptance of automation, the skill sets grow and the term “translation” embraces an ever wider set of tasks until we reach the point where the word itself disappears or is joined to other activities. When everyone can translate with machine translation, more or less, translators find more things they can do and other names for their activities. This may be the most profound response to automation.

Our second conclusion comes from comparing these discourses with a trend observed in language-intensive professions in general. Looking at data from the United States, Ubalde and Alarcón (2020) find that “hard verbal-reasoning skills” are rewarded with high average salaries, whereas “interactive and multilingual skills” are “undervalued and even penalized”. For example, if you are a Spanish-English interpreter working in the courts or healthcare (as cases of “interactive multilingual skills”), automation is scarcely touching you and neither are

major financial rewards. One would be forgiven for concluding that translators seek to move *away* from those interactive multilingual skills. When we look at the discourses in and around the translation profession, however, we find precisely the opposite conclusion. The more translators are aware of automation and are prepared to work with it, the more they seek to have their multilingual interactive skills valued, either to make the results of automation trustworthy (for example, in the discourse of the OTTIAQ) or to explain and humanize the benefits of technology (for example, in the case of the various “solutions architects” and the like). But rather than actually doing the translations, these interactive skills are used to talk about machine translations and interact with them in various ways.

Is automation changing the profession? Part of our answer is predictable: there are indeed a few signs of wage dispersion in some segments, although there was dispersion prior to the recent avatars of automation. Our other responses are perhaps not quite so obvious and cannot point to any direct economic causation, since there are many local discursive factors involved as well. On the one hand, the very concept of translation is becoming progressively wider, according translators conceptual space to work with and alongside automation. On the other, the kinds of interactive interpersonal skills that are not (yet) automated are being upwardly valued as ways of authorizing and humanizing the benefits of automation.

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