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Artificial intelligence and posthumanist translation: ChatGPT versus the translator

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Abstract: Although automated translation has been available for decades in myriad forms, the implication of the current exponential advancement in artificial intelligence (AI) for communication in general and translation in particular is more starkly affrontational than ever. Although Large Language Models, of which ChatGPT is exemplary, were not specifically designed for translation purposes, they are attested to have attained a sufficient degree of technical sophistication as to generate translations that match or surpass dedicated translation systems in the market like Google Translate and DeepL. This impacts the *modus operandi* of communication and the self-concept of language professionals including, of course, translators. This article asks how translation as a field of practice can best respond to this development. It critically reflects on the implications of AI for the conception of translation, arguing that an alternative framing around the idea of distribution allows us to rescale translation toward broader competencies and conceive of AI as a prosthesis of translators' minds. The article advocates a posthumanist perspective on translation with a view to expanding its spectrum of skills, modes, and media as well as transcending the traditional personae of translators.

Keywords: artificial intelligence; ChatGPT; distributed cognition; posthumanism; translation

The advancement of AI translation systems has been remarkable, with each iteration building on the successes of its predecessors. Early attempts, such as rule-based systems, were limited in their ability to capture the nuances of natural language. However, with the advent of statistical machine translation, algorithms were able to learn from bilingual text corpora and generate translations that more closely resembled human translations. The development of neural machine translation marked a significant shift, with deep learning models that could better capture the context and meaning of words in a sentence. The latest iteration, GPT-4, is a game-

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changer with its unprecedented translation capacities, including the ability to translate between modalities.

1 Introduction

Full Disclosure: I did not write the foregoing paragraph. ChatGPT-4 did, albeit after several iterations. The prompt used was this: ‘Write in about 150 words, in the style of Steven Pinker, on the development of AI translation systems. Mention GPT-4 and its translation capacities. Use an academic tone’. The same method can be used to produce more extended texts (see, e.g., Howard 2023), including, potentially, an article like the one you are now reading. To start this article with an AI-generated preamble themed reflexively on itself is more than just to provoke a laugh: the irony created by way of the metalinguistic conundrum aptly captures the mixed feelings around the rise of ChatGPT and the proliferation of GenAI (Generative Artificial Intelligence) applications it has triggered.

So let us begin again.

Although machine translation (MT) and computer-assisted translation (CAT) have been available for decades in myriad forms, the implication of the current exponential advancement in artificial intelligence (AI) for communication in general and translation in particular is more starkly affrontational than ever. Prior to the rise of Large Language Models (LLMs), many a professional translator would still have remarked, not without condescension, that online translation tools habitually misconstrued lexical meanings out of context and occasionally churned out unidiomatic structures, particularly when translating across different language families. And even though Google Translate had been enhancing its capacities in remarkable ways since at least 2016, the prevailing view was still that MT had inherent flaws that only human translators could remedy. Today these same professionals may begin to feel an onset of dystopia for their field of practice. Although LLMs, of which ChatGPT is exemplary, were not specifically designed for translation purposes, they are attested to have achieved a sufficient degree of technical sophistication as to produce linguistically fluent and logically coherent translations that match or surpass dedicated translation systems like Google Translate and DeepL. Considering that LLMs are only at their nascent stage, it is almost certain that MT will be able to operate with increasing autonomy, at least with respect to specialized technical communications.

Why this should be a cause for anxiety cannot be more obvious: an extrapolation from the present state of the art in AI technologies would show that humans can partially be displaced in the near future across several modalities of creative communication, including copywriting, translation, graphic illustration, sound synthesis, and—God forbid—fiction writing. A Zoom conference meeting convened

in March 2023 among Japanese-English professional translators on the implications of AI indicates that at least some participants expect human translators to eventually be made redundant (Gally 2023a). With the rapid technologization of communication via AI, the sci-fi realm of cyborgs and androids is no longer so fantastical, and the era of anthropocentric thinking will come to its end, if it has not already. This impacts the *modus operandi* of communication and the self-identity of language professionals including, of course, translators.

This article asks how translation as a field can best respond to this development. It begins with a brief overview of the lineage of MT technologies, with an eye to MT's possible impact on the positioning of human translators. Examples will then be presented concerning ChatGPT's translational efficacy as compared with dedicated translation systems in the market, focusing on discourse-level issues that typically trip up MT. On this basis the article reflects on the implications of current AI developments for the conception of translation. This culminates in my argument that an alternative framing around the ideas of distribution and posthumanism can help rearticulate the translator's persona and the ambit of translation practice.

2 ChatGPT and its discontents

Long before ChatGPT took the world by storm in late 2022, MT had already had a visible place among practitioners, particularly in the localization industry.¹ MT, along with CAT, offers an efficient and financially viable way to produce different language versions of source texts with controlled terminologies. Rule-based and statistical machine translation (SMT) systems are two milestones in this trajectory, balancing efficiency with a reasonable degree of accuracy. The quality of translation output is typically ensured by human intervention post-MT. The translator comes in—or is reduced to, as some would say—more as a post-editor to finetune MT output (O'Brien 2022; O'Brien et al. 2014). Hence, in his typology of translation solutions, Pym (2016) proposes that 'text tailoring' be included in a translator's repertoire of techniques, 'where translators legitimately alter what is actually said in the text', with alterations ranging from 'simple corrections of mistakes, the deletion of significant stretches of material that is not relevant to the purpose of the new text' to 'the addition of new material that may enhance that purpose, as in the case of extensive explanations of historically dated or otherwise little-known terms and customs' (231). This suggests a pivoting of the translator's role away from conventional translating even before ChatGPT came about. As Pym (2016: 231) maintains, since MT

1 For a comprehensive review of MT's development, see Kenny (2018, 2022).

has reached the stage where it is frequently more cost-effective to have translators post-edit rather than translate from scratch, the added value of our work must increasingly be found at *higher levels of cross-cultural communication*, including text selection and alteration. *The term 'translation' is not anchored to some eternal essence where such things are unthinkable.* (Emphasis added)

Pym's prescient statement was made in the mid-2010s. It was around this time that MT made a significant leap forward, arriving at Neural Machine Translation (NMT), a translation technology described as applying 'a large artificial neural network toward predicting the likelihood of a sequence of words, often in the form of whole sentences'. This represents an advancement from SMT in terms of memory and time consumption, with NMT 'train[ing] its parts end-to-end to maximize performance', thereby propelling it 'to the forefront of machine translation, recently outcompeting traditional forms of translation systems'.²

All of this is taken to a different level by ChatGPT, which operates on LLMs drawing on massive volumes of data and trained on supercomputing infrastructures, wired with the capacity to reinforce its own learning based on human feedback. Research has shown that LLM systems as applied to translation compare favourably with dedicated translation systems on sentence-level benchmarks (Hendy et al. 2023), at least when translating into high-resource languages like English (Jiao et al. 2023). This is notwithstanding that the quality of translation is influenced by prompting strategies (Vilar et al. 2023; Zhang et al. 2023). Taking this to the level of discourse, Karpinska and Iyyer (2023) demonstrate that translations of paragraph-level texts by ChatGPT contain fewer mistranslations, grammatical infelicities, and stylistic inconsistencies as compared to Google Translate, though errors could still be found. The fact that the source texts used by Karpinska and Iyyer were taken from contemporary fiction is significant, as literary translation has always been seen as the nemesis of MT and, therefore, the exclusive preserve of human translators (for a discussion on ChatGPT's efficacy in literary translation, see Gally 2023b).

There is the counterargument that an ability to translate by way of algorithms does not mean computers have any kind of human-like intelligence. Gigerenzer (2022: 96) maintains that '[w]ithout understanding, even a good translation system remains an *idiot savant*'. More specifically, MT is susceptible to errors due to its inability to infer lexical meanings from contexts. Gigerenzer demonstrates this by having MT translate a series of sentences containing a polysemous word: 'Little John was looking for his toy box. Finally, he found it. The box was in **the pen**. John was very happy'. Gigerenzer finds, at the time of his writing, that DeepL could indeed read 'the pen' correctly, that is, as not referring to the piece of stationery but to an enclosure for kids or animals. However, he finds that simply changing 'the pen' to 'his

2 <https://deepai.org/machine-learning-glossary-and-terms/neural-machine-translation>.

pen’ was enough to confound the machine, which in the latter case would render ‘pen’ in German as if it were the writing instrument: *Die Schachtel war in seiner Feder* (97). This, for Gigerenzer, evidences MT’s inability to perform contextual interpretation for want of human psychology, hence his conviction that ‘deep learning in itself will come to be seen as a cul-de-sac. Without the help of human psychology, it will become clearer that the application of this type of machine learning to unstable situations eventually runs up against insurmountable limitations. We will finally recognize that more computing power makes machines faster, not smarter’ (Gigerenzer 2023: n.p.).

Gigerenzer is right, though we should add two caveats to his argument. First, not all writing we encounter in our daily or professional lives involves linguistically tricky situations as with ambiguity and polysemy. The latter belong to the domain of creative writing, but even here, contrary to popular assumption, one must not too hastily assume that MT is completely untenable (see Karpinska and Iyyer 2023; Gally 2023b). As noted earlier, specialized translation involving texts with iterative structures and controlled vocabulary is eminently automatable even before the advent of LLMs. Second, Gigerenzer’s experiment needs updating, given that any test run through MT systems is contingent on the state of the art *at the time of writing*. In July 2023 I ran the same passage through ChatGPT-4 and the problematic segment ‘The box was in his pen’ was rendered in German as *Die Kiste war in seinem Gehege*, hence giving the correct equivalent of ‘pen’ in the context of the passage, namely ‘enclosure’ (*Gehege*). This does not invalidate Gigerenzer’s argument, but it does mean we cannot take for granted the presumed weakness of AI with respect to contextual work. Even if AI can never *acquire* human logic, they may be able to *mimic* such logic to an extent that enables them to serve as adequate stand-ins in handling instrumental translation tasks. In this regard, Gigerenzer’s (2022) suggestion that human translators have a perennial advantage over their machine counterparts, and that ‘how to teach a neural network to acquire common sense remains an unsurpassed challenge’ (97), may need to be qualified. The next section presents examples that go some way toward such qualification.

3 Discourse issues

To date research on ChatGPT’s translational capacity, mostly carried out by computing specialists, is quantitative and statistical. This section presents a more textured analysis on the program’s efficacy in translation. Similar to Gigerenzer’s ‘pen’ example, the cases below revolve around the discourse-level aspects of cohesion and coherence, both of which involve contextual work beyond sentence level.

These aspects are generally challenging for the amateur translator and, we might hypothesize, for ChatGPT as well.

A methodological caveat is in order. A key limitation in performing tests on ChatGPT should be recognized from the outset, namely the inconsistency of results. For better or worse, ChatGPT allows users to generate any number of different translations of the same passage through iterative prompting.³ The technology is also still evolving, and so running the same passage through different versions of the program will likely come up with different results. Thus, tests or experiments conducted with ChatGPT are not necessarily replicable, and so any claims made on the basis of a given set of results can only be contingent, as subsequent iterations will produce outcomes that may or may not corroborate those initial claims. This need not discourage us from making preliminary observations based on the technology at the time of writing. Of interest to us is what ChatGPT can *potentially* do as compared to dedicated translation programs and also human translators, irrespective of the iterations. The critical reflections arising from the observations will thus likely remain relevant even if the specific translations in the examples are superseded by the time this article is published and read.

3.1 Cohesion

In discourse linguistics, cohesion refers to ‘the network of lexical, grammatical and other relations that provide links between various parts of a text’; these links function to ‘organize and, to some extent, create a text, for instance by requiring the reader to interpret words and expressions by reference to other words and expressions in the surrounding sentences and paragraphs’ (Baker 2018: 194, based on Halliday and Hasan 1976). One of the most common cohesion devices in English is pronominal reference—the use of pronouns to refer to an antecedent entity, participant, or event in the same text. In topic-prominent and pro-drop languages like Japanese (Hasegawa 2014), however, cohesion works differently. In these languages, once a grammatical topic is announced at the start of a discourse, it is assumed to sustain itself through the text that follows until a new topic appears. A corollary of this is that subjects are not a mandatory component in Japanese clauses.

³ This is in contrast to dedicated translation programs like Google Translate, DeepL, and Bing Microsoft Translator, whose results are relatively stable over a period of time (Gally 2023c), although these deep learning models are continuously retrained based on new data, which means their output is also in-flux (Kenny 2022: 45–46). For practical purposes, this instability of output by ChatGPT need not be a limitation, for it means the program can instantly generate multiple spontaneous solutions around a given prompt, hence providing potentially more options for human translators to choose from in accordance with the specifications of the task at hand.

In other words, the relatively low frequency of pronominal reference in Japanese results in the preponderance of null subjects and zero anaphora. Consider the following example:⁴

Original Japanese: シンガー・ソングライターの大黒摩季さんは、今年5月27日にデビュー30周年を迎えました。およそ1年かけて全国47都道府県を回るライブツアーを続けつつ、12月14日に30周年記念アルバム「BACK BEATs #30th Anniversary -SPARKLE-」を発表。1990年代からたくさんのヒット曲を世に送り出し、歌い続けてきた大黒さんが、30周年の節目に思うことを聞きました。インタビュー前編は、新アルバムやオーケストラとの共演について語ります。

This passage is about the female Japanese singer Maki Ohguro 大黒摩季, who appears at the beginning of the text and is implicitly referred throughout without the use of pronouns or co-references. The problem with translating this text into English is not just that pronouns need to be supplied at various junctures; their gender and number also need to be determined and rendered with consistency. Let us compare four translations produced by ChatGPT-3, Google Translate, DeepL, and Bing Microsoft Translator in early 2023.

ChatGPT-3: Singer-songwriter Makki [sic] Ohguro celebrated **her** 30th debut anniversary on May 27 of this year. While continuing a nationwide tour that visited all 47 prefectures in Japan over the course of about a year, **she** released the 30th anniversary commemorative album “BACK BEATs #30th Anniversary -SPARKLE-” on December 14. Ohguro, who has been releasing many hit songs since the 1990s and has continued to sing, was asked what **she** thinks about the milestone of **her** 30th anniversary. In the first part of the interview, **she** talks about the new album and **her** collaboration with an orchestra.

Google Translate: Singer-songwriter Maki Ohguro celebrated **her** 30th anniversary on May 27th. On December 14th, **they** announced their 30th anniversary album “BACK BEATs #30th Anniversary -SPARKLE-” while continuing **their** live tour around 47 prefectures in Japan for about a year. We asked **Mr.** Oguro [sic], who has released many hit songs to the world since the 1990s and continued to sing, what **he** thinks about the 30th anniversary milestone. The first part of the interview talks about **his** new album and **his** collaboration with the orchestra.

DeepL: Singer/songwriter Maki Ohguro celebrated the 30th anniversary of **her** debut on May 27 this year. **She** has been singing and releasing many hit songs since the 1990s, and *we asked her what she thinks about the 30th anniversary.* We asked **him** about **his** thoughts on the 30th anniversary. In the first part of the interview, **he** talks about the new album and performing with an orchestra.

Bing Microsoft Translator: Singer-songwriter Maki Oguro [sic] celebrated the 30th anniversary of **her** debut on May 27 this year. While continuing a live tour that took **them** to 47

4 The author would like to thank Tom Gally (www.gally.net) for offering the first two examples in this section.

prefectures nationwide for about a year, **they** released **their** 30th anniversary album “BACK BEATs #30th Anniversary -SPARKLE-” on December 14. We asked **Mr. Daikoku**, who has been singing many hit songs since the 1990s, what **he** thinks on the milestone of **his** 30th anniversary. In the first part of the interview, **he** talks about **his** new album and performing with the orchestra.

Here, only ChatGPT correctly identifies the gender of Maki Ohguro (although it wrongly spells her name) and consistently uses the third person singular feminine pronoun (see words in bold). Contrast this with the other three translations, which show varying degrees of inconsistency in respect of pronominal choice, shuttling between masculine and feminine, singular and plural. DeepL goes further to delete the title of the anniversary album and the segment about the singer’s tour in Japan; it also repeats the sentence concerning what the singer thinks about her anniversary milestone (see segments in italics). The worst performer in this instance has to be Bing Microsoft Translator which, in addition to confusing the singer’s gender, inexplicably comes up with the name Mr. Daikoku. The latter is nonexistent in the original Japanese; its abrupt appearance ruptures the chain of cohesion around Maki Ohguro in addition to rendering the passage incoherent.

Consider another example taken from the Japanese newspaper *Asahi Shimbun* (Dec 12, 2022). This is a biographical note on the actress Miki Mizuno.

Original Japanese: マイペースで自分の道を、着実に歩んできた人——俳優・水野美紀さんのこれまでを振り返ると、そんな言葉が浮かぶ。中学1年生の時に受けたオーディションをきっかけに芸能界入り。「踊る大捜査線」や「TEAM」などの人気シリーズに出演し、26歳で初めて主演を務めたドラマ「女子アナ。」で演じたまっすぐで頑張り屋の女性像には、特に同世代の女性たちから支持が寄せられた。演じる役の幅を広げる上で大きな武器となったのが、アクションの実力。小学校時代から少林寺拳法を習ってきた水野さんは、10代の頃から本格的にレッスンを受け、キレのいい動きを作品でたびたび披露してきた。

The first segment of the text before the dash functions like a quotation, using the indefinite noun 人 (person) as the head noun; and as with the first example, the topic Miki Mizuno 水野美紀 threads itself through the passage without pronominal referencing. Both Google Translate and Bing Microsoft Translator shuttle between masculine and feminine pronouns as with the previous passage. They also introduce an ‘I’ into the quotation in the first line where there is none in the Japanese original, hence foregrounding the authorial voice of the journalist who penned the article. In the Google Translate version, there is additionally a confounding switch to the first person plural in the (mis)translation ‘We received support’ (cf. ‘She received support’).

Google Translate: A person who has steadily walked **his** own path at **his** own pace—when I look back on actor Miki Mizuno’s past, those words come to mind. **He** entered the entertainment

world after an audition **he** received when **he** was in the first year of junior high school. Appeared in popular series such as “Odoru Daisoussen” and “TEAM”, and starred for the first time at the age of 26 in the drama “Joshi Anna.” **We** received support. **Her** ability to act has become a great weapon in expanding the range of roles **she** can play. Mizuno, who has been learning Shorinji Kempo since elementary school, has taken lessons seriously since **his** teens, and has often demonstrated sharp movements in **his** works.

Bing Microsoft Translator: When **I** look back on the past of actor Miki Mizuno, a person who has steadily walked **his** own path at **his** own pace, such words come to mind. **He** entered the entertainment world after an audition **he** received when **he** was in the first year of junior high school. **She** starred in popular series such as “Dancing Detective Line” and “TEAM” and starred in the drama “Joshi Ana,” in which **she** starred for the first time at the age of 26, and **her** role as a straight, hardworking woman was especially popular with women of **her** generation. A major weapon in expanding the range of roles **he** played was **his** ability to act. Mizuno, who has been learning Shaolin Kempo since elementary school, has been taking serious lessons since **he** was a teenager and has often shown sharp movements in **his** works.

DeepL does a decent job this time by sustaining the feminine pronoun throughout in reference to Miki Mizuno. In the first sentence, the narrator’s voice does not intrude via an additional pronoun and the use of ‘her’ to point back to ‘a person’ exemplifies a now-conventionalized usage (in reversal of the longstanding practice of defaulting to the masculine pronoun) for referencing indefinite persons in many types of discourse.

DeepL: A person who has steadily followed **her** own path at **her** own pace—those are the words that come to mind when looking back on actor Miki Mizuno’s career. **She** entered the entertainment industry after an audition when **she** was in **her** first year of junior high school. **She** appeared in popular series such as “Bayside Shakedown” and “TEAM,” and at the age of 26, **she** played the lead role in **her** first drama, “Shojo Ana. **Her** portrayal of a straightforward, hard-working woman was particularly popular among women of **her** generation. **Her** action skills were a major weapon in expanding the range of roles **she** could play. Ms. Mizuno, who has studied Shorinji Kempo since elementary school, began taking lessons in earnest when **she** was a teenager, and has often demonstrated **her** sharp moves in **her** films.

ChatGPT, in addition to using the feminine pronoun consistently—and also correctly rendering 少林寺拳法 as Shaolin Kungfu—surprises in its use of the third person plural ‘their’ to reference the indefinite noun phrase in the first line. This latter grammar is emergent and increasingly prevalent in contemporary English. As it were, ChatGPT updates its English grammar to current usage, at least in this instance.

ChatGPT-3: A person who has steadily walked **their** own path at **their** own pace—when looking back on the career of actor Miki Mizuno, such words come to mind. **She** entered the entertainment industry after an audition **she** took in **her** first year of junior high school. **She** appeared in popular series like “Bayside Shakedown” and “TEAM,” and in **her** **first** leading role in the drama “Joshi Ana” at the age of 26, **she** received support from women of **her** generation

for **her** portrayal of a straightforward and hardworking female character. A major weapon in expanding the range of roles **she** played was **her** action skills. Mizuno, who had been learning Shaolin Kung Fu since elementary school, began taking formal lessons in **her** teens and frequently showcased **her** sharp movements in **her** work.

In a more recent iteration in mid-2023, a curious turn occurred when the same passage was translated with ChatGPT-3.5, although this does not appear to be replicable. For unknown reasons, the program decides to collapse the first two segments in the Japanese text, condensing the quotation's meaning into one word ('steadfast') and changing the position in which it occurs. This alters the cohesion pattern of the text. In the original text, そんな言葉 (such words) points the reader back to the quotation, whereas in this second translation, the cohesion link is rendered unnecessary due to ChatGPT's restructuring of the original line:

ChatGPT-3.5: Looking back on the career of actor Miki Mizuno, one word that comes to mind is "steadfast." She entered the entertainment industry after auditioning in her first year of junior high school. [...]

We leave aside the question of whether this is a justified move, as that would depend on the purpose, or *skopos*, of the translation. (Following functionalist thinking in translation [Nord 2018] and judging from the informative nature of the text, the move might be justified if the translation is commissioned for publication in a popular magazine for a lay audience.) The important point for us here is twofold. First, ChatGPT's choice of word is precise, as the metaphorical phrase in the Japanese quotation (A person who has steadily walked their own path at their own pace) does describe a 'steadfast' attitude to life. Second, the option to compress a long phrase into a single word, which is a substantial shift, is seldom taken by MT in general. Even though the algorithmic operations governing this particular move is a black box, the very fact that ChatGPT could implement such a shift shows it can potentially depart from MT's default literal approach and emulate human translators as to how creative interventions might be introduced.

3.2 Coherence

Coherence refers to the network of conceptual relations or meaning dependencies perceived by language users to bind a text together. It is the underlying current of a text often manifested through cohesive devices that serve to explicate conceptual relations between different textual segments (Baker 2018: 236). It is thus unsurprising that a lack of coherence is a distinctive trait of MT, which prior to LLMs has been using a sentence-by-sentence approach to translation. The question is whether and how LLMs have changed the game. Let us look at the opening paragraph from Sayaka

Murata's novel *Convenience Store Woman*, together with its published English translation by Ginny Tapley Takemori (cited in Wakayabashi 2021: 198). The passage describes the plethora of different sounds audible in a convenience store:

コンビニエンスストアは、音で満ちている。客が入ってくるチャイムの音に、店内を流れる有線放送で新商品を宣伝するアイドルの声。店員の掛け声に、バーコードをスキャンする音。かごに物を入れる音、パンの袋が握られる音に、店内を歩き回るヒールの音。すべてが混ざり合い、「コンビニの音」になって、私の鼓膜にずっと触れている。

A convenience store is a world of **sound**. From **the tinkle** of the door chime to the **voices** of TV celebrities advertising new products over the in-store cable network, to the **calls** of the store workers, the **beeps** of the bar code scanner, the **rustle** of customers picking up items and placing them in baskets, and the **clacking** of heels walking around the store. It all blends into the convenience store **sound** that ceaselessly caresses my eardrums.

In the Japanese text, coherence is created through the rhetorical repetition of two words relating to aurality: 音 (sound) and 声 (voice), giving rise to a rhythm that ties in with the sonic theme of the passage. The published English version by Takemori reproduces this network of meaning relations by tracing the sound words, although the phrase パンの袋が握られる音に (the sound of holding a bread bag) is inadvertently dropped. Takemori's translation also enriches the rhetorical colour of the passage. Whereas the Japanese text reiterates the same phrasal structure XXX-sound or XXX-voice, the translation introduces greater aural variety by way of onomatopoeic words that are not in the Japanese text ('tinkle', 'rustle', 'beeps', 'clacking'), leading to a coherence pattern that is more textured than in the Japanese original. The English translation initially appears as part of an article titled 'Poetry for all senses: SWET summer party at Rikugien', published in a newsletter titled *SWET*. It is also published in the online nonfiction magazine *LongReads*.⁵ Judging from these titles, the translation would probably be read by a more casual audience, as opposed to serious literary critics, thus justifying the translator's intervention.

ChatGPT, which obviously does not have text-type considerations in regard, offers a fairly competent translation, not least because the phrase omitted from the human translation is retrieved. The repetition of the structure *sound of XXX* corresponds to the reiterative XXX-sound/voice patterning in the Japanese text, thus maintaining its coherence around the sound theme.

ChatGPT-4: Convenience stores are filled with **sounds**. The **chime** when a customer enters, the idol's **voice** promoting new products on the in-store broadcast. The clerk's **calls**, the **sound** of scanning barcodes. The **sound** of putting items in a basket, the **sound** of grasping a bread bag,

5 <https://longreads.com/2018/08/14/convenience-store-woman/>.

and the **sound** of heels walking around the store. All of these **sounds** mix together, becoming the “**sound** of the convenience store,” constantly touching my eardrums.

Assuming that Takemori’s translation is the benchmark (disregarding the omission for now), ChatGPT’s version falls short slightly in terms of the texture of coherence due to its mundane reiteration of the word ‘sound’ following the original Japanese. But all is not lost, and herein lies ChatGPT’s potential: the coherence pattern can be modulated by way of prompting. To test this hypothesis, I started a new conversation and asked ChatGPT to translate the same Japanese passage using the following prompt:

You are a Japanese-English translator. I want you to translate into English the following passage in which sound is a key theme, as expressed in the phrases チャイムの音, アイドルの声, 掛け声, スキャンする音, 入れる音, られる音, ヒールの音, and コンビニの音. When translating the passage, ensure that the sound theme is adequately expressed in the English translation. The passage is as follows: [Japanese text].

This relatively elaborate prompt containing a specific instruction to focus on the sound theme yields a different output as follows:

ChatGPT-4: Convenience stores are filled with **sounds**. From the chime that **rings** as customers enter, to the **voices** of idols promoting new products over the in-store broadcast. The clerk’s **spirited calls** are accompanied by the **beeping** of barcode scans, the **noise** of items being placed in baskets, the **crinkling** of bread bags being grasped, and the **clicking** of heels as people walk around inside. All these **sounds** blend together, creating the “**sound** of the convenience store” that constantly touches my eardrums.

As compared with its first translation, ChatGPT shows more variety in sound-related vocabulary in this latter version, texturing the coherence of its translation approximately to the standard of the one published in the newsletter—not to mention that the human translation omits a phrase while ChatGPT does not. This indicates that ChatGPT has the *potential* to create feasible and publishable translations as long as it is guided with carefully written prompts. This has important implications for the conception of translation and the positioning of translators, to which we now turn.

4 The translator’s persona: wordsmith to consultant

None of the foregoing examples are meant to show that ChatGPT can substitute human translators on a general basis—not yet at least. The program has no regard for performance reliability as well as ethical responsibility; and although preliminary evidence suggests that ChatGPT may register a better overall performance

than dedicated translation systems, particularly on the level of discourse, it is still prone to errors (Gally 2023c). Be that as it may, the examples do show that neural networks, even without the capacity to think, nonetheless have the potential to offer translation solutions with a *semblance* of ‘common sense’ (cf. Gigerenzer 2022: 97). They indicate a development trajectory in AI technologies that will shake up translating as a vocation. Even post-editing—the fallback plan, so to speak, for human translators—can in part be taken over by intelligent systems through, for instance, the iterative use of prompts. It seems inevitable, then, that translators will gradually recede to the role of post-post-editors, then post-post-post-editors and so on. Ultimately, a paradoxical point may be reached where translators do anything but translate, serving for instance as bilingual consultants or language project managers working at a remove from translating per se. This predicament (if it should be seen as a predicament at all), while not entirely new, is now imminent.

In coming to terms with this paradigm shift, a different imaginary of translation is in order, one that rescales the ambit of translation beyond meaning transfer and text production, and that considers technology not as a supplement to but a *prosthesis* of the human intellect. In terms of its conception, translation *as an event* can no longer be restricted to translating *as an act*, given that AI and other communicative modalities will increasingly be drawn into and embedded within the workflow. In this new ecology, translation is a networked and (partially or wholly) programmable event involving multiple agents working in orchestration, not an isolated act executed by individual professionals.

The upshot of this is a radical shift in the translator’s role and persona. Translators would pivot their creative energies away from the technicalities of linguistic equivalence toward the logics of metadiscourse, of which ChatGPT prompts are an instantiation. In this regard, within the short to mid-term at least, designing precise prompts to lead ChatGPT (or other AI applications) toward producing desired outcomes would become an integral skill. The rise of what is called prompt engineering, however, is only a symptom of the broader shift whereby the translator’s toolkit would now have to include principles, strategies, and techniques pertinent to translation even if they are strictly speaking not about translating per se. And as mentioned earlier, AI technologies would likely compel a fundamental shift in the locus of translators’ work from the *doing* of translating toward the *consulting* and *managing* of crosscultural projects. As Pym (2023a) predicts, in addition to prompt writing, project management is set to become an important aspect of the translation profession. Rather than primarily linguistic and solitary, the translator’s job would lean toward the logistical and the interpersonal.

Such a development, in an uncanny way, harks us back to the theory of translational action advanced in the 1980s by the German functionalist school in translation studies. In this theory, translation-as-action refers broadly to ‘the process of

producing a message transmitter of a certain kind, designed to be employed in superordinate action systems in order to coordinate actional and communicative cooperation' (Holz-Mänttari in Nord 2018: 13). It then makes sense to think of translation as an interpersonal and interactional event involving a host of agents, including the initiator-commissioner, the source-text producer, the translator (in their conventional capacity), the target-text receiver, and the end-user. Depending on the nature of the task, the network of agents may also include such entities as government departments, translation agencies, publishing houses, graphic design consultancies, and so on.

To this list we now need to add AI systems that facilitate the stages of, minimally, source-text production and translation, and potentially other processes as well. All the above agents have differential roles 'interconnected through a complex network of mutual relations' (Nord 2018: 19). The chain of workflow that connects this series of agents is what Holz-Mänttari (cited above) calls a 'superordinate action system'. Such systems are germane to complex commissions that include but go beyond conventional translation. These include the localization of games and websites (Jiménez-Crespo 2013), crowdsourcing for online collaborative translation (Jiménez-Crespo 2017), compilation of multilingual medical glossaries shared within/across hospital networks (cf. Brøgger 2017), provision of interpreting-cum-consultancy services in asylum or social welfare settings (Baynham et al. 2017; Blackledge et al. 2018), and so on.

Following the idea of translational action, one might postulate that the translator's new role would be more managerial than translatorial: to coordinate the design of 'message transmitters' (which can be textual or multimodal) appropriate to the commission at hand, as well as to facilitate the cooperation among all agents involved, including AI translation systems. Such coordination and facilitation would often transcend the borders of language, but also modes and media, and, importantly, established disciplinary boundaries, where questions like 'Is *that* called translation?' would be immaterial. With a change in the translator's persona from that of a wordsmith working with textual material to that of a project manager or consultant working across languages, modes, and media, the ontological grounds upon which the translation profession is based will shift as well. It is here that we must recall Pym's (2016: 231) remark, cited earlier, that translation as a word-concept 'is not anchored to some eternal essence' bound to desk(top)-based translating, and that 'the added value of our work must increasingly be found at higher levels of cross-cultural communication, including text selection and alteration'. In light of ChatGPT's potential in translation, it is apparent that the translator's rescaling to 'higher levels of cross-cultural communication' will be more tectonic than going from translating to post-editing. It entails a complex repertoire of skills—logistical, managerial, interpersonal—needed for intercultural communication and

transmedial decision-making. The façade of the translation profession will undergo an inexorable change.

The ramifications are immense. Ontologically, translation as such will diffuse into the translational, which includes but is not limited to the transfer of meaning between languages. If, as proposed by Pym, the job specifications of translators should indeed move toward higher levels of communication under the new technological order, their mindset and self-concept will need to be adapted accordingly. We have already noted that the personae of translators will morph toward the managerial and logistical; this, in turn, will trigger fundamental changes in the nature of translation training—including self-development on the part of professional translators who may not have undergone institutionalized training. A pertinent question to ask is whether the relatively static criteria used to assess translation quality, whether in the industry or in the classroom, are still efficacious. Take, for example, the marking rubrics for the final capstone project adopted by the Master of Arts in Translation programme under which I am currently teaching in my university. The project requires students to translate a piece of text either from Chinese into English or vice versa (weighted 80 %) and write a translator's preface on the basis of their capstone experience (weighted 20 %). The rubrics comprise two sections, one for the translation itself and the other for the preface. The former consists of four parameters, the first three of which are Faithfulness, Grammar and Structure, and Style (the fourth being Learning Attitude, immaterial to the present discussion). To obtain a grade within the A-range for the translation itself, a student's output must fulfill the following requirements under the three parameters:

Faithfulness

Has demonstrated an excellent understanding of the source text and is able to **translate it faithfully** without any unnecessary additions or omissions

Grammar and Structure

Has **minimal grammatical errors** and has rendered a **readable** translation; has presented a coherent piece of work with effective use of language devices

Style

Has demonstrated **an excellent command of language**, in the sense of having adopted a style that aligns with that of the genre of the source text; has used proper diction, collocations, and manipulated a variety of language structures effectively

These grade descriptions are by no means singular; the requirements with respect to grammaticality, diction, collocation, and structure are fundamental to all language-

related courses. They also resonate with the requirements of professional translation certification tests. For example, Australia's National Accreditation Authority for Translators and Interpreters (NAATI) sets language competency as its first KSA (knowledge, skills, attributes) for accredited translators. According to their formal definition, language competency comprises vocabulary knowledge, grammar knowledge and idiomatic knowledge of two languages in relation to the following aspects (NAATI 2015: para 5.1): register and style appropriate to end use; idiomatic collocation, lexis and syntax; vocabulary, including non-standard forms and foreign loan words; grammatical structures, including tense, mood, aspect, voice, gender and grammatical numbers; punctuation and paragraphing; orthography and its variations; word and language usage appropriate to audience and context; pragmatics, i.e. the underlying meaning of language in context; and textual devices that create cohesion and coherence.

Descriptors such as these converge on an obsession with the mechanics of translating. One problem is that they fail to account for dynamic criteria of translation quality assessment in the digital age, where the phenomenon of 'post-print translation literacies' (Cronin 2013: 100) means that not every piece of translation needs to be immaculate—'good enough' (Hönig and P. Kussmaul in Pym 2023b: 62–64) or 'fit for purpose' (Drugan 2013) suffices in many professional settings. And even if 'good enough' is not good enough, as it were, many of the requirements in traditional rubrics are arguably achievable by AI, for which producing a **faithful, readable** translation with **minimal grammatical errors** and demonstrating an **excellent command of language** is not an issue (words in bold appear in the grade descriptions cited above). We have also seen that even discourse-level issues like cohesion and coherence are potentially within ChatGPT's reach. The requisite condition for this, of course, is a well-crafted prompt: 'Translate the following passage into [target language]. Do not add or omit any information'; 'Revise the following translation, ensuring it is grammatical, readable, and coherent'; 'Translate the following passage, paying special attention to the use of proper diction, collocations, and a variety of structures'; 'Translate the following passage, using the style of a [genre of the source text or author/translator]'. Any one of these or variant thereof will likely generate different results, which should be seen as a strength; the sheer variety of outcomes represents the affordance of ChatGPT to tailor-make its output to users' specifications.

Herein lies the crux of the issue: it is pertinent that the teaching (in the classroom) or professional development (in the industry) of translation pivot away from translating toward other skills with a view to controlling, enhancing, or otherwise facilitating MT. This could for instance be prompting, viz. how to craft a ChatGPT prompt in the best possible manner so as to enhance the compatibility of a piece of MT with a given commission. This does not mean displacing entirely the curricula on

contrastive linguistics and translating strategies; these knowledge and skills conventionally associated with translator training constitute the ballast of the practice and will come into play in the course of human interventions, if any, after MT. Conventional translation curricula (or any programmes for professional development), however, do need an overhaul to make space for value-adding skills at ‘higher levels of cross-cultural communication’ (Pym 2016: 231). Post-editing is an obvious candidate but also, as suggested above, prompt-designing, which may need to be fully accounted for pedagogically by devoting entire modules to the subject. And there will be others, depending on the state of technology at any given point in time. This strategic pivoting from translating skill toward a repertoire of skills aligns with the prospective shift in the translator’s persona discussed earlier. If a translator’s professional scope is to go beyond translating *per se*, it makes sense that relevant skills other than those of language transfer would need to be incorporated into the translator’s toolkit.

Crucially, these other skills should go beyond text-tailoring (Pym 2016: 231–32), prompting, and other ‘hard’ skills to encompass the ‘softer’ skills of critical-creative thinking on intercultural communication and of managing language-based projects, including their interactional and interpersonal dimensions. Returning to the assessment rubrics used in the MA programme I teach for, recall that students are required to write a preface after completing their translation; in order to attract an A-range grade for this component, a translator’s preface needs to ‘[address] interesting translation problems encountered and translation approaches adopted with very relevant examples’ and show ‘[a] clear understanding of the translation theories employed’. This is all good, and perhaps we might also require students to discuss how they organize their tools and resources, including human resources (e.g., interacting with supervisors or other resource persons like proof-readers), in the course of the project. However, this preface component accounts for only 20 % of the final grade as opposed to the 80 % weighting accorded to the translation output itself. Judging from how translation technologies are developing at the time of writing, this mark allocation is disproportionate. If, as Gigerenzer (2023) would have it, the Achilles heel of AI lies with its lack of human psychology, then more premium will now need to be placed on *thinking* translation vis-à-vis *doing* translation in any kind of (self-)assessment rubrics, and this would no doubt impact the substantive content of translator (self-)training programs. Ultimately, one’s reasoned, theoretically-grounded justification for using certain translation strategies and techniques would be at least as important as the execution of those strategies and techniques. In industry settings the analogical equivalent of writing a translator’s preface is the pitching of a product or service to a client—why and how a product is localized in a particular way, why and where intercultural nuances are worked in, how translational marketing is applied to capture global markets, and so forth. If in the

foreseeable future the ‘doing’ can be relegated (or should we say *delegated?*) to AI—in part or in whole and to varying extents—the best response is to find a niche outside of the nitty-gritties of translating. This niche lies precisely in the design of critical, creative, and affective translational solutions to commissions, entailing multi-competencies that lie beyond language transfer.

In all fairness, these non-linguistic competencies have not gone completely unnoticed, but are arguably subjugated to language competency. NAATI (2015), for instance, recognizes three interlocking competencies placed below/after language competency. These three sets of knowledge and skills speak directly to the prospective shift in the translator’s persona toward language management and consultancy, discussed above. They are: *research competency*, which includes ‘knowing how to evaluate the reliability of information and sources of information’ (para. 5.3); *technological competency*, which involves ‘working with digital texts and their effective reception, treatment and transmission to clients/commissioners’ (para. 5.4); and, crucially, *service provision competency* (para. 5.7), which describes how

the translator handles the entire translation assignment, from initial contact, quoting and specifications, through the translation and revision processes, to the eventual delivery of the translation and dealing with any post-delivery requirements... [and] the application of administrative processes in line with regulatory requirements as well as marketing, negotiation, networking, time management, contract management, intellectual property requirements and determining the value of the services provided.

To narrow the chasm and create synergy between translation technology and translation competency development, this trio of competencies, among some others like ethical competency, would need to be repositioned nearer the centre of (self-) training programmes and factored into (self-)appraisal frameworks. Such repositioning will facilitate the delivery and uptake of these competencies alongside the traditionally important knowledge and skills pertaining to language and meaning transfer.

5 Distributed cognition and the posthumanist turn in translation

The rise of ChatGPT, together with throngs of other LLM-based applications, is yet another episode in the macrohistory of the human-technology interface, where material changes trigger new modalities of translation (see Cronin 2013: chap 1). The evolution in deep learning algorithms as instantiated by ChatGPT has qualitatively altered the materiality of interaction between users and machines. This change in

materiality will lead to a subtle transition of communication in general and translation in particular from the technological turn (O'Hagan 2013) to a posthumanist turn. With this transition, a paradigm shift with respect to the predisposition of translation practice and the self-concept of professional translators is in order.

Posthumanism serves as a corrective to the anthropocentric tendencies of humanism. If humanism is 'the ethical outlook that says each individual is responsible for choosing his or her values and goals and working towards the latter in the light of the former' (Grayling 2013: 239), posthumanism seeks to transcend 'the traditional humanist ways of thinking about the autonomous, self-willed individual agent in order to treat the human itself as an assemblage, co-evolving with other forms of life, enmeshed with the environment and technology' (Nayar 2014: 4). This takes us to the concept of distribution, premised on the idea that communicative events and human agency are heterogeneously constituted and subject to dispersal across dynamically networked nodal points. AI is one such nodal point—one traversed by an increasing number of edges (connections) emanating from other nodes in the network. Elsewhere I have proposed a distributive perspective on translation as 'a radical intervention to translation studies in enabling a different imaginary of textuality' (Lee 2023: 376):

Embedded within a larger textual-media ecology, translation is enacted through dialogical interaction among the persons, texts, technologies, platforms, institutions, and traditions operating within that ecology. This gives rise to a different ontology of translation: translation, like distributed language, is non-local in that it is not the sole preserve of the translator's creative and subjective mind and is therefore not a local realm *sui generis*. (Ibid.)

Germane to our discussion is the idea of distributed cognition, which decentres human subjectivity and agency in the way we make sense of the world, and emphasizes the role of artefacts—'things' in general—within broader networks of actants (cf. the more anthropocentric term 'actors'). AI platforms are one such artefact-actant in contemporary communication, perhaps a highly privileged one at that. Distributed cognition has been taken up rigorously by applied linguists (Cowley 2012; Pennycook 2018; Thibault 2011). It is not lost on translation studies scholars either, specifically in the subfield of cognitive translation studies or cognitive translatology.

Distributed cognition in CT [Cognitive Translatology] does not only belong to the study of professional translation in terms of the complex network of relationships and actor interactions that occur in any given professional translation process from beginning to end... It can also be the complex network of interactions between agents, community managers, programmers, initiators, volunteer translators, revisers, etc. that can take part in a variable way in any given volunteer collaborative project online. (Jiménez-Crespo 2017: 103)

In Jiménez-Crespo's case, distributed cognition encapsulates the operation of crowdsourcing practices, where translators—themselves consumers of popular cultural products—engage with many invisible others in online communities as well as with a multitude of digital platforms, tools, and applications. The cognitive work that goes into the translational *prosumption* (Cronin 2013: 100) of audiovisual products is in this sense 'distributed' across various actants (see Risku and Windhager 2013 on the similar idea of 'extended translation'). All of this holds in our AI context, with one distinction: ChatGPT has the apparent ability to 'speak back'. This speaking back adds another layer of interaction to the chain of translational communication, complicating the intersubjectivity between actants within 'the complex network of interactions between agents, community managers, programmers, initiators, volunteer translators, revisers, etc.' (cited above). A personified machine that unsettles the conventional human-machine interface, ChatGPT represents the Uncanny, creating an almost surreal scenario where the human user, with a temporary suspension of disbelief, speaks to their algorithmic counterpart which (*who?*) sometimes responds as if it (*he/she?*) has real intelligence, even if it doesn't.

This uncanniness, I argue, contributes to the sense of crisis that came about with the birth of ChatGPT. The human(ist) psyche, suddenly confronted with a faceless virtual clone, is arrested by a siege mentality. The resolution of this crisis lies with a paradigm shift toward posthumanism. This requires a comprehensive coming-to-terms with 'a political ontology of things' (Bennett 2010) that foregrounds the interconnectedness of artefactual entities and material technologies with human agency. Communication, including translation, is certainly one of those 'things' to be reshaped by this posthumanist ontology. Such an ontology will enlarge the spectrum of skills, modes, and media covered by translation practice and shift the translator's self-concept toward a posthuman, less anthropocentric persona that transgresses the human-machine divide. Ultimately, what needs to be distributed is not just cognition, but also the translator's ego.

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