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9 Metaphor in Literary Machine Translation

Style, Creativity and Literariness

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9.1 Introduction

Metaphor and translation are no strangers to each other. In fact, they share not only an etymology (*metaphor* originating from Greek *meta* [change, e.g. of place] and *pherein* [to carry] and *translate* from Latin *trans* [across] and *ferre* [to carry]) but also their main concepts and terminology (e.g. *source*, *target*, *substitution* and *transfer*). And although there is a relatively steady stream of studies on metaphor in translation to be found in the academic literature (see Schäffner, 2017 and Shuttleworth, 2017 for useful overviews), these studies have tended to focus either on offering theoretical deliberations on the translatability of metaphor (e.g. Nida, 1964; Dagut, 1976) or on providing models for metaphor translation in terms of translation procedures proposed for different types of metaphor (e.g. Van den Broeck, 1981; Newmark, 1988).

Despite the fact that as academic disciplines both Metaphor Studies and Translation Studies have undergone the same developmental phases from an initial focus on language in 'traditional approaches', followed by a cognitive and cultural turn in the 1980s, many researchers from Translation Studies still approach metaphor as a predominantly linguistic phenomenon (cf. Burmakova & Marugina, 2014; Dagnev & Chervenкова, 2020), focusing heavily on unique and creative instances of metaphor. Likewise, many researchers from Metaphor Studies still treat translation as a rather simplistic process of linguistic substitution, disregarding extratextual factors that influence the translation process and the decisions translators make.

Metaphor translation can be approached from a linguistic or conceptual perspective, as illustrated by the models developed by Newmark (1988) and Schäffner (2004). Many studies focus on the type of linguistic metaphor involved and whether the languages involved provide equivalent metaphors (e.g. Newmark, 1988). More cognitively oriented studies consider whether the cultures involved employ similar or different conceptual metaphors to understand a particular phenomenon (e.g. Schäffner, 2004) or on

whether similar or different mapping conditions apply (e.g. Mandelblit, 1995). However, none of the existing theories or models, nor the empirical research based on them, seem to pay much attention to the perspective of metaphor as a rhetorical device and an important tool in creating stylistic coherence throughout a text. Nor do the overviews of how particular procedures or approaches relate to different linguistic categories or conceptual structures investigate how textual patterns of metaphor may be affected by the translator's local and global decisions. The stylistic properties, purposes and effects of metaphor have, it seems, been largely overlooked or taken for granted. Yet translation decisions based solely on a metaphor's linguistic and conceptual properties without consideration of its communicative purpose may lead to disruptions in stylistic coherence (e.g. Dorst, 2018).

Dorst (2018) argues that disruptions to the stylistic coherence of metaphor patterns can be related to Berman's (2021 [1985]) notion of deforming tendencies, Venuti's (2021) concept of domestication and Toury's (1995) law of growing standardisation. Whether wittingly or not, translators may well be altering patterns of metaphor in literary texts to conform to the norms of the target language and culture, diminishing and deleting the metaphors' stylistic and creative potential for the sake of fluency and idiomaticity. The question asked in the current chapter is whether a comparison between human and machine translation of metaphor in literary texts can provide us with more insight as to whether a translation process that is driven by statistical computation rather than norm-governed behaviour leads to metaphor translation that is either more stylistically accurate or detrimental to the text's aesthetic value. While human translators are more likely to be creative in their solutions, the question remains as to whether this has a positive or negative effect on the creativity of the metaphors (when original metaphors are replaced with conventional ones), as well as the creativity of the text, i.e. when creative solutions make the text idiomatic rather than stylistically foregrounded.

9.2 Metaphor in Literary Translation

Metaphors have traditionally been considered a notorious problem in translation as they are both linguistically and culturally embedded. Newmark (1988, p. 104) even went as far as to consider metaphors 'the most important particular problem in translation'. Many scholars in Translation Studies have considered the translatability of metaphor and the different approaches that can be taken based on the type of metaphor in question. In general, most settle on three approaches: 1) direct translation: turning a metaphor into the same metaphor; 2) substitution: turning a

metaphor into a different metaphor; and 3) paraphrase: a shift to a non-figurative equivalent.

Newmark (1981, pp. 88–91) distinguishes no fewer than seven different procedures, which he lists in order of preference:

- Reproducing the same image in the TL
- Replacing the image in the SL with a standard TL image
- Translating metaphor by simile
- Translating metaphor by simile plus sense
- Converting metaphor to sense
- Deleting the metaphor
- Translating the same metaphor combined with sense

Newmark's (1988, pp. 106–113) model, and most of the empirical work based on it, uses a linguistic classification of metaphor types—into dead, cliché, stock, adapted, recent and original—to determine which translation procedure is preferred. To Newmark, only dead metaphors are truly translatable. Both Van den Broeck (1981) and Alvarez (1993) see conventional metaphors as the 'most translatable' ones, while they consider original metaphors to be extremely difficult to translate, and stock metaphors to be translatable only if the two cultures are closely related (Alvarez, 1993, p. 137). Similarly, Al-Hasnawi (2007, n.p.) maintains what determines how difficult a metaphor is to translate is not the presence or lack of lexical equivalents in the languages involved, but 'the diversity of cultural conceptualization of even identical objects or worlds in both communities whose languages are involved in translation'.

In recent studies focusing specifically on literary translation (e.g. Ali, 2006; Park, 2009; Chita & Stavrou, 2020; Dagnev & Chervenкова, 2020), Newmark's list of procedures is still the most commonly used method of analysis. Chita and Stavrou (2020, p. 128) use it to analyse the translation of Wilde's *Picture of Dorian Gray* into German and Greek, showing that the translators usually reproduced the image of the metaphors in their translations, opting for retention over substitution or deletion perhaps as a strategy to 'preserve the accuracy of the literary style'. However, they note that 'in many cases the translators' intent to reproduce the metaphors in the target language was not successful' (ibid.) and argue that the translators were possibly hesitant to translate more freely out of respect for the canonical source text.

A similar point is made by Park (2009) on the basis of his analysis of five Korean translations of the short story *Ligeia* by Poe. Park demonstrates that the transfer of meaning takes priority over the transfer of form, arguing that '[w]hen the semantic translation cannot help T[arget]T[ext] readers understand the metaphor, the translator should try to find equivalence

rather than identity' (p. 155). In such cases, translators should opt for any of the seven procedures proposed by Newmark except the first (retention of the SL image). Park emphasises that in order to 'make a proper metaphor translation, translators should recognize that metaphor translation needs relevant knowledge and substantial background study' (p. 170).

Dagnev and Chervenкова (2020) identified the conceptual metaphors underlying metaphorical linguistic expressions in five canonical works—Joseph Conrad's *Heart of Darkness*, Virginia Woolf's *Mrs. Dalloway*, George Orwell's *1984*, Richard Russo's *Empire Falls* and James Joyce's *The Dead*—and how they were translated into Bulgarian to determine whether metaphors are lost or transformed. Distinguishing between 'sleeping metaphors (lexicalised—non-transparent)', 'linguistically expressed conceptual metaphors (entrenched—conventional and activated in the text)' and 'creative metaphors (novel)' (p. 103), and focusing on whether they occur in the same or a different mapping condition, they found that lexicalised metaphors were more often transformed than sleeping or creative ones, most likely due to their culture-specific nature and their linguistic entrenchment. Creative metaphors translated most readily, while foregrounded metaphors, grammatical metaphors and culturally bound ones turned out to be the ones most difficult to translate (p. 110). Contrary to their expectations, they did not find many instances of metaphor explication, paraphrase or loss, and the target texts were not inferior to the source texts in terms of their metaphor depth and variety, suggesting that 'Toury's law of growing standardization (1995) is not applicable to the translation of highbrow literature by well-established and experienced literary translators' (ibid., p. 110).

This last claim is interesting in light of the common distinction between experienced and novice translators. Ali (2006) looked specifically at students training to become literary translators. Starting from Newmark's list of procedures, he warns against 'the dangers involved in the application of the set of translation procedures proposed by some translation theorists as "alternative solutions" in cases where a given SL metaphor does not lend itself to being retained in a TL' (p. 134). Ali shows that Newmark's model does not make clear or explicit how translators should choose between the different procedures, 'thus turning metaphor translation into a random process' (ibid.). He argues that translators need a solid understanding of the complex nature of metaphor and the many different forms and functions it may have in authentic discourse. They also need to understand the relevance of the metaphor in both the source and target culture, as well as their own personal views on the purpose of their translation, i.e. 'whether the aim is to produce a *semantic* translation (loyal to the SL culture) or a *communicative* translation (primarily oriented towards the TL reader)' (ibid.).

This brings us to the focus of the current chapter, as it suggests that for the translation of metaphor in literature to be ‘correct’ or ‘appropriate’, an MT system would need to adhere to an intricate set of rules and guidelines that capture both the complex nature of metaphor as well as the complex nature of translation. A small but growing number of studies (e.g. Green et al., 2010; Voigt & Jurafsky, 2012; Jones & Irvine, 2013; Besacier, 2014; Toral & Way, 2015a, 2015b, 2018; Genzel et al., 2010) has investigated the usefulness of statistical and neural machine translation (NMT) systems for literary translation (see Introduction of this volume for a more detailed discussion) and obtained promising results. However, no studies have thus far focused specifically on metaphor, so we do not at present know whether the perceived quality of literary MT or the errors observed are in any way related to the presence of particular types or uses of metaphor. Nevertheless, a recent study by Guerberoof-Arenas and Toral (2022) suggests that metaphor is one important unit of ‘creative potential’ in literary texts, and as such, it is expected that metaphors may pose a problem in translation that requires a creative solution, while MT tends to be direct, which in this case means that it will retain the metaphor by default.

9.3 Comparing Human and Machine Translations of Metaphor in Literature

The comparison below is based on a short excerpt taken from Margaret Atwood’s *The Handmaid’s Tale* (1985). Eight students taking an advanced MA course in Literary Translation at Leiden University translated the opening paragraph (from ‘A chair, a table, a lamp.’ to ‘Why do I want?’ (1996, p. 17), 191 words) and closing paragraph (from ‘Better her than me...’ (1996, p. 20) to ‘Why tempt her to friendship?’ (1996, p. 21), 603 words) of Chapter 2 ‘Shopping’ (794 words in total) into Dutch for their final assessment. No specific instruction or reading had been provided during the course on Metaphor Studies or metaphor translation. I was the course instructor and selected these fragments because they illustrate the novel’s complex style and contain both highly conventionalised and thus less noticeable uses of metaphor alongside very striking and original uses. I was curious to see whether the students would approach the conventional metaphors differently from the original ones. In the present chapter, the eight student translations are compared to the official Dutch translation (De Blaauw, 1987) and output produced by Google Translate’s NMT system.

As already mentioned, the excerpt contains a number of striking and original metaphors. In line with the findings of Dorst (2011, 2015), these creative metaphors are all expressed as similes. The fact that this short passage has no fewer than four similes in close proximity (a phenomenon called

‘clustering’), and the fact that they are all extended and creative is particularly noteworthy seeing as the number of similes is generally low even in fiction (Steen et al., 2010; Dorst, 2011). The four similes in the relevant passage (1996, p. 20) are also semantically related via ‘bodies’—‘heads’—‘voices’:

- (1) [...] all the different kinds of mischief that our bodies, like unruly children, can get into.
- (2) We would nod our heads as punctuation to each other's voices, signaling that yes, we know all about it.
- (3) [;] gently we would complain, our voices soft and minor key and mournful as pigeons in the eaves troughs.
- (4) I hear where you're coming from, as if the voice itself were a traveler, arriving from a distant place.

Not surprisingly, Google Translate retains all of these metaphors and produces a direct translation that follows the sentence structure and word order very closely:

- [1] *alle verschillende soorten onheil waar ons lichaam, net als onhandelbare kinderen, in terecht kan komen.* [all different sorts of evil/mischief/calamity where our body, just like unruly/unmanageable children, can end up]
- [2] *We knikten met onze hoofden als interpunctie voor elkaars stemmen, om aan te geven dat ja, we er alles van weten.* [We nodded with our heads like punctuation to each other's voices, to indicate that yes, we know all about it]
- [3] *zachtjes klaagden we, onze stemmen zacht en mineur en treurig als duiven in de dakgoottrokken.* [softly complained we, our voices soft and minor and sad like pigeons in the gutter troughs]
- [4] *ik hoor waar je vandaan komt, alsof de stem zelf een reiziger is, die van een verre plaats komt.* [I hear where you from come, as if the voice itself a traveller is, who from a far place comes]

What is perhaps surprising is that this translation is error free and reads naturally. Despite Atwood's liking for long and interrupted sentences with lots of commas, the Dutch sentences are idiomatic and correct and read as natural conversation, even in places where you would expect the machine to run into difficulty. The simple conclusion, therefore, is that such original metaphors are not problematic for the machine since they normally require metaphor retention, and their linguistic expression as a simile is well-suited to direct translation.

When looking at the human translations, the students also behaved as would be expected based on previous research into metaphor translation

(see Section 9.2) and the procedures proposed by Newmark (1988): for all of these similes, the students opted for metaphor retention, just like Google Translate. The official translation, however, shows some clear deviations from this expectation. Though similes 3 and 4 have been retained, in simile 1 ‘mischief’ has been substituted by an alternative metaphor ‘*last*’ [burden] (2020, p. 25). This alternate metaphor not only loses the specific connotations of ‘mischief’ and its connection to ‘unruly children’, but is also a highly conventional one, since ‘*last hebben van*’ [be troubled by] is the common expression for health problems, unlike the ST’s description of aches and illnesses as ‘mischief’. In simile 2, the most creative part of the simile has been deleted: ‘*We zouden elkaars stemmen met hoofdknikjes begeleiden*’ [We would accompany each other’s voices with nods] (2020, p. 25). Though it can be argued that this partial substitution evokes associations with music (‘*begeleiden*’ means ‘accompany’, as in ‘be accompanied on the violin’), and the idea of nodding as punctuation is perhaps not essential to the novel’s main themes, it is particularly strange that such a creative and original image has simply been deleted.

There are also a number of variations in the human translations that indicate where the translators struggled, but also where they may have created added literary value. One metaphor the student translators seemed to have struggled with is ‘I hear where you’re coming from’. Considering how the simile develops, it makes sense to translate the metaphor directly, yet the fact that this is not a fixed expression in Dutch may have prompted the students to look for alternatives. In fact, they produced eight different translations, with only one student opting for the literal ‘*Ik hoor waar je vandaan komt*’ [I hear where you’re coming from], which is also the solution the professional translator chose. The other solutions are ‘*Ik snap waar je vandaan komt*’ [I understand where you’re coming from], losing the connection with sound, as do the solutions ‘*Ik zie waar je vandaan komt*’ [I see where you’re coming from], ‘*Ik begrijp waar je vandaan komt*’ [I understand where you’re coming from] and ‘*Ik zie wat je bedoelt*’ [I see what you mean]; the latter also deletes the ‘coming’ metaphor, thus losing the connection with ‘traveller’. Two opt for alternative movement/travel metaphors, namely ‘*Ik kan erin komen*’ [I can get into it > I can understand] and ‘*Ik ga helemaal met je mee*’ [I go with you all the way > I totally agree]; these display a certain level of creativity but are not well matched with the continuing simile of the voice as a traveller.

One important aspect of stylistics where the human translator can create added literary value is by retaining and recreating wordplay and sound effects, both of which occur at different points in the excerpt, though perhaps only noticeable to the careful reader. One instance occurs in the simile in the opening of the chapter: ‘Above, on the white ceiling, a relief ornament in the shape of a wreath, and in the center of it a **blank**

space, plastered over, like the place in a face where the eye has been taken out' (1996, p. 17; emphasis added). This metaphor is in itself not difficult to understand or translate, and both Google Translate and the human translators (professional and student) retain the metaphor image, with only minor variations in lexical choice between synonyms that do not affect the metaphor image (e.g. '*ruimte*' [space] versus '*plek*' [spot]). Yet what makes this metaphor creative and interesting is the sound effect created by 'space—place—face' combined with the wordplay on 'blank face'. The reference to the meaning of 'blank' evoked by its collocation with 'face'—that is, expressionless and devoid of emotion—is now projected onto 'space'. This elusive reference is impossible to translate directly into Dutch since the two meanings 'empty' and 'expressionless' require two different words.

The student translations show that they have all but one opted for the more literal interpretation that applies to the ceiling, '*leeg*' [empty]. Only the choice for '*ijlte*' counts as a creative solution here, marked and more poetic in terms of lexical choice and providing an elusive reference to the verb '*ijlen*' [talk in a way that shows you are delirious]. The same student who opted for '*ijlte*' also found a way to recreate the sound effect, namely by being more creative in translating 'plastered over' to create a rhyme with 'face': '*een ijlte, met pleister gedicht, zoiets als de plek in een gezicht waar een oog uit is gestoken*' [a hollowness, with plaster closed off, something like the place in a face where an eye has been stabbed out]. In both decisions, the human translator has added creativity and literariness to the translation, without altering the metaphor. Conversely, and surprisingly, the professional translator has altered and normalised the structure of the sentence, combining 'plastered over' with 'empty space', thus reducing the number of interruptions in the sentence and changing its flow.

While the creative, more literary metaphors may thus be relatively unproblematic for both human and machine translation, it may be more interesting to look at those cases of metaphor that may well slip through the cracks of our attention, but which, especially in literary texts, may actually be an inherent part of the fabric of authorial style. There are several conventional metaphors in the excerpt. One of the least striking examples at first glance is perhaps the use of 'touch' in 'This is the kind of touch they like: folk art, archaic, made by women, in their spare time, from things that have no further use' (1996, p. 17) where the noun is used in its conventional metaphorical sense of 'quality' or 'feature'. Yet Atwood is cleverly playing on two common collocations of 'touch', namely 'a personal touch' and 'a nice touch'. Normally, this kind of description of a room would include a reference to 'a personal touch' which makes the omission of 'personal' in this context appear deliberate, reinforcing the idea that everything and everyone in this world has been de-personalised. The formulation 'touch

they like' subtly suggests that this is the opposite of 'a nice touch'; it is the last thing the narrator likes, which is reinforced by the later confession, 'I hunger to touch something, other than cloth or wood. I hunger to commit the act of touch.' (1996, p. 21) where the unusual collocation 'commit the act of touch' signals that touching is considered a crime. A quick corpus search of the novel (see also Chapter 12, this volume) reveals that different forms of the lemma 'touch' occur 42 times, creating a lexical network throughout the novel that supports this main theme.

Looking at the translations, the most natural way to translate 'touch' is by reducing it to sense, since the Dutch word 'aanraking' does not have the same polysemy and Dutch readers might not understand the description of a carpet as a form of touching. As pointed out by Guerberof-Arenas and Toral (2022), creativity only works if it is both original and acceptable. Retaining the metaphor may be original here, but probably not acceptable. Google Translate of course retains the metaphor. Apparently, nothing in the immediate context has led the algorithm to privilege a non-direct translation (see Chapter 1, this volume). Interestingly, if we add 'personal' to the English sentence, the output produced by Google Translate changes into the non-direct '*Dit is het soort **persoonlijke touch** waar ze van houden*'. The human translations show that the naturalness of using 'aanraking' must indeed have played a role: of the eight students, only one has opted for retention, three have used '*detail*' [detail], one used '*stijl*' [style] (also the word used in the official translation), one used '*sfeer*' [atmosphere], one used '*toets*' [brushstroke] and one opted for deletion of the metaphor: '*Dit is waar ze van houden*' [This is what they like]. Though the English metaphor is conventional and stylistically relevant, it is very hard to translate and the preferred solution is clearly an idiomatic translation.

Equally hard to translate, for both humans and machine, is the colloquial 'I've heard them at it sometimes' (1996, p. 21). Google Translate mistranslates the idiomatic metaphor 'to be at it' (which conceptualises actions and states as locations) as '*Ik heb ze er wel eens naar horen luisteren*' [I've heard them listen to it at times], which is an incredibly complex formulation and a fluent translation but the wrong meaning. But the machine is not the only one confused by this inconspicuous metaphor; three of the eight students also misunderstood it and produced incorrect translations: '*Ik hoorde ze er soms over*' [I heard them about it sometimes], '*Ik hoorde ze af en toe gaan*' [I heard them go sometimes] and '*Ik heb ze er af en toe over gehoord*' [I have heard them about it sometimes]. The same happens for the conventional idiomatic metaphor 'but they found her out all right' (1996, p. 21), which Google Translate incorrectly translates as '*maar ze hebben haar goed gevonden*' [they did well in finding her]. Only one student also misunderstood the expression, producing '*maar ze vonden haar in prima gezondheid*' [but they found

her in good health]. The other seven students translate the expression correctly, but once again we see that there is much more variation in the options they choose: *'maar ze hadden haar door'* [but they had her through > they were unto her], *'maar ze hebben haar even goed te pakken gekregen'*/*'maar ze hebben haar net zo goed gepakt'* [but they caught her all right], *'maar ze is wel gesnapt hoor'* [but they caught her], *'maar ze hebben haar mooi doorzien'* [but they saw through her all right] and *'maar ze zijn er natuurlijk achter gekomen'*/*'maar ze zijn er toch achter gekomen'* [but they came behind it of course > they discovered it all right].

For the conventional metaphor 'eat up' in, 'Jealousy, it must have been, eating her up.' (1996, p. 21) there is more consensus amongst the student translators, with only one opting for the direct translation *'opeten'* and one opting for the normal Dutch collocation with *'verteerd worden door'* [be digested/consumed by], and five students choosing the near-synonym *'opvreten'* (*'vreten'* being the vulgar form of *'eten'*, i.e. eat without manners), which is commonly used in the Dutch expression *'vreten aan'* for when you are plagued by negative emotions (English 'a gnawing guilt'). One student used a different metaphor, namely *'vermorzeld door jaloezie'* [crushed by jealousy], a novel combination in Dutch. The official translation deletes the eating metaphor, opting for *'Ze was natuurlijk straaljaloers'* [She was of course really jealous] (2020, p. 25), which draws attention because of the novel compound *'straaljaloers'*. Since *'straal'* [beam, jet] normally combines with *'bezopen'* [drunk] in *'straalbezopen'*, meaning 'very drunk', this marked lexical choice may be intended to suggest 'drunk with jealousy' to the reader, creating a semantic link with the following sentences, in which the women talk about a man drinking toilet cleaner and not noticing because he was probably too drunk.

Google Translate of course predictably retains the metaphor image: *'Jaloezie, dat moet het geweest zijn, haar opeten'* [Jealousy, that must have been it, eating her]. However, the interrupted sentence structure has resulted in a grammatically incorrect (and rather ridiculous-sounding) translation, since *'haar opeten'* shows no agreement with the subject *'Jaloezie'*. Yet it is not the metaphor itself which is problematic here, only Atwood's preference for complex and interrupted sentences. When presented with the same metaphor in a normalized sentence structure, Google Translate produces a translation that is idiomatic, namely *'Paula werd dagenlang verteerd door schuldgevoelens'* [Paula was for days consumed by feelings of guilt]. This shows that when we analyse MT output, we have to be aware that problems and errors in metaphor translation may not in fact be a metaphor problem but rather a problem of linguistic realization and sentence structure.

9.4 Conclusion

Overall, the results support Ali's (2006) claim that both metaphor and translation are highly complex phenomena that require considerable knowledge of the language and cultures involved and the process of metaphor translation cannot be reduced to a simply mechanical application of translation procedures for pre-defined types of metaphor. Interestingly though, and perhaps against common expectations, the results also show that metaphor translation is not necessarily difficult or problematic for MT engines, even in literary texts. Similar to Dagnev and Chervenкова (2020), the current study found that creative metaphors translate quite readily, while foregrounded metaphors and grammatical metaphors are more problematic. This can now be argued to be the case for both humans and machines.

While Chita and Stavrou (2020) and Dagnev and Chervenкова (2020) found that the professional translators preserved the literary style of the source texts very carefully, sometimes even unsuccessfully, and as such did not show signs of Toury's norm of standardisation, the current study found that it was the professional translator who most often opted for deletion and normalisation, especially for creative metaphor, similar to the findings of Dorst (2018). Yet the substituting metaphors could often also be related to stylistic considerations, which is in line with Park's (2009) claim that translators do need to keep the reader in mind and may opt for equivalence when retaining the metaphor image disrupts the reading experience. While humans are clearly more creative in the solutions they consider, and their solutions in themselves may be creative and original, this does in fact sometimes mean that the stylistic coherence of metaphor patterns is altered, disrupted or removed.

For both humans and machines, the creative, more clearly literary metaphors appeared to be the easiest to translate, most likely since direct translation is simply the most suitable solution. Of course, we should be careful not to suggest that the process leading up to these solutions is similar since human translation involves decision-making while MT involves computation. The machine does not reflect on the different options in light of the text's genre, style, *skopos* and the expectations of the reader. It calculates what is the most likely translation for words in context, and as such the decision to retain or alter a metaphor may be affected more by sentence context, and the training data, than the metaphor's form or function.

When metaphors are conventional, especially in the form of fixed collocations or idiomatic expressions, human translators show more variation in their solutions and the machine starts making mistakes. What makes such metaphors difficult to translate, especially for a machine, is that they require careful attention to the way the metaphor

is used as part of larger stylistic patterns and is meant to evoke particular connotations and associations in the reader. Such a dynamic and careful balancing of meaning, form and function is hard to capture in the kind of ‘hard-and-fast rules’ in current models of metaphor translation that link specific procedures to specific types of metaphor. To improve the quality of translation of metaphors by generic and literary MT engines, we should not focus only on the creative and literary, but instead look more closely at those metaphors that are so mundane that they easily escape our attention. The least creative metaphors often require the most creative solutions, and this is exactly where human translators can start showing off what it means to re-create literary style.

References

- Al-Hasnawi, A. R. (2007). A cognitive approach to translating metaphors. *Translation Journal*, 11(3). <https://translationjournal.net/journal/41metaphor.htm>
- Ali, A. S. M. (2006). On the translation of metaphor: Notions and pedagogical implications. *International Journal of Arabic–English Studies*, 7, 121–36. <http://www.ijaes.net/article/FullText/6?volume=7&issue=1>
- Alvarez, A. (1993). On translating metaphor. *Meta*, 38(3), 479–90. <https://www.erudit.org/fr/revues/meta/1993-v38-n3-meta341/001879ar.pdf>
- Atwood, M. (1996 [1985]). *The Handmaid’s tale*. Vintage Books.
- Atwood, M. (2020 [1987]). *Het verhaal van de dienstmaagd*. Trans. G. de Blaauw. Prometheus.
- Besacier, L. (2014). Traduction automatisée d’une œuvre littéraire: Une étude pilote. *Traitement Automatique du Langage Naturel (TALN)*, Marseille. <https://hal.inria.fr/hal-01003944>
- Berman, A. (2021 [1985]). Translation and the trials of the foreign. In L. Venuti (Ed. & Trans.), *The translation studies reader* (4th ed., pp. 247–60). Routledge. <https://doi.org/10.4324/9780429280641>
- Burmakova, E., & Marugina, N. (2014). Cognitive approach to metaphor translation in literary discourse. *The XXV annual international academic conference, language and culture*, 20–22 October 2014. *Procedia—Social and Behavioral Sciences*, 154, 527–33. <https://tinyurl.com/4xwwckmw>
- Chita, A., & Stavrou, C. (2020). The metaphor in literature and the effect on translation. *Nordic Journal of English Studies*, 19(2), 117–42. <https://njes-journal.com/articles/abstract/10.35360/njes.562/>
- Dagnev, I., & Chervenkova, Z. (2020). Comparative study of metaphor in literary texts and their translations. *5th International e-Conference on Studies in Humanities and Social Sciences*. <http://centerprode.com/conferences/5IeCSHSS.html>
- Dagut, M. (1976). Can metaphor be translated? *Babel*, 22(1), 21–33. <https://doi.org/10.1075/babel.22.1.05dag>
- Dorst, A. G. (2011). *Metaphor in fiction: Language, thought, communication*. Boxpress. <https://tinyurl.com/3x8fcd8d>

- Dorst, A. G. (2015). More or different metaphors in fiction? A quantitative cross-register comparison. *Language and Literature*, 24(10), 3–22. <https://journals.sagepub.com/doi/10.1177/0963947014560486>
- Dorst, A. G. (2018). Translating metaphorical mind style: Machinery and ice metaphors in Ken Kesey's *One Flew over the Cuckoo's Nest*. *Perspectives*, 27(6), 875–89. <https://www.tandfonline.com/doi/full/10.1080/0907676X.2018.1556707>
- Genzel, D., Uszkoreit, J., & Och, F. J. (2010). 'Poetic' statistical machine translation: Rhyme and meter. *Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing*, Cambridge, MA (pp. 158–66). <https://aclanthology.org/D10-1016/>
- Greene, E., Bodrumlu, T., & Knight, K. (2010). Automatic analysis of rhythmic poetry with applications to generation and translation. *Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing*, Cambridge, MA (pp. 524–33). <https://aclanthology.org/D10-1051/>
- Guerberof-Arenas, A., & Toral, A. (2022). Creativity in translation: Machine translation as a constraint for literary texts. *Translation Spaces*, 11(2), 184–212. <https://doi.org/10.1075/ts.21025.gue>
- Jones, R., & Irvine, A. (2013). The (un)faithful machine translator. *Proceedings of the 7th Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (LaTeCH 2013)*, Sofia, Bulgaria (pp. 96–101). Association for Computational Linguistics. <https://aclanthology.org/W13-2713/>
- Mandelblit, N. (1995). The cognitive view of metaphor and its implications for translation theory. *Translation and Meaning*, 3, 483–95. <https://www.sciencedirect.com/science/article/pii/S1877042814056304>
- Newmark, P. (1981). *Approaches to translation*. Pergamon.
- Newmark, P. (1988). *A textbook of translation*. Prentice Hall International.
- Nida, E. A. (1964). *Towards a science of translating, with special reference to principles and procedures involved in bible translating*. Brill. https://www.academia.edu/40285991/Toward_a_Science_of_Translating_by_EA_Nida
- Park, O. (2009). The issue of metaphor in literary translation: Focusing on the analysis of a short story translation. *Journal of Language & Translation*, 10(1), 155–75. https://www.researchgate.net/publication/314084692_The_Issue_of_Metaphor_in_Literary_Translation_Focusing_on_the_Analysis_of_a_Short_Story_Translation
- Schäffner, C. (2004). Metaphor and translation: Some implications of a cognitive approach. *Journal of Pragmatics*, 36, 1253–69. <https://www.sciencedirect.com/science/article/abs/pii/S0378216604000244>
- Schäffner, C. (2017). Metaphor in translation. In E. Semino & Z. Demjen (Eds.), *The Routledge handbook of metaphor and language* (pp. 247–62). Routledge. <https://doi.org/10.4324/9781315672953>
- Shuttleworth, M. (2017). *Studying scientific metaphor in translation: An inquiry into cross-lingual translation practices*. Routledge. <https://doi.org/10.4324/9781315678085>
- Steen, G. J., Dorst, A. G., Herrmann, J. B., Kaal, A. A., & Krennmayr, T. (2010). Metaphor in usage. *Cognitive Linguistics*, 21(4), 765–96. <https://doi.org/10.1515/cogl.2010.024>

- Toral, A., & Way, A. (2015a). Translating literary text between related languages using SMT. *Proceedings of the Fourth Workshop on Computational Linguistics for Literature*, NAACL, Denver, CO (pp. 123–32). <https://aclanthology.org/W15-0714.pdf>
- Toral, A., & Way, A. (2015b). Machine-assisted translation of literary text: A case study. *Translation Spaces*, 4(2), 240–67. <https://doi.org/10.1075/ts.4.2.04tor>
- Toral, A., & Way, A. (2018). What level of quality can neural machine translation attain on literary text? In J. Moorkens, S. Castilho, F. Gaspari, & S. Doherty (Eds.), *Translation quality assessment: From principles to practice* (pp. 263–87). Springer. <https://arxiv.org/abs/1801.04962>
- Toury, G. (1995). *Descriptive translation studies—And beyond*. John Benjamins. <https://doi.org/10.1075/btl.4>
- Van Den Broeck, R. (1981). The limits of translatability exemplified by metaphor translation. *Poetics Today*, 2, 73–87. <https://doi.org/10.2307/1772487>
- Venuti, L. (Ed.). (2021). *The translation studies reader*, 4th ed. Routledge. <https://doi.org/10.4324/9780429280641>
- Voigt, R., & Jurafsky, D. (2012). Towards a literary machine translation: The role of referential cohesion. In D. Elson, A. Kazantseva, R. Mihalcea, & S. Szpakowicz (Eds.), *Proceedings of the NAACL-HLT 2012 Workshop on Computational Linguistics for Literature*, Montréal, Canada (pp. 18–25). Association for Computational Linguistics. <https://aclanthology.org/W12-25.pdf>