CHAPTER 7
Translation of academic discourse from and into the *lingua franca*: A corpus study of reformulation

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Abstract

In recent decades, considerable research attention has been given to cross-cultural communication in academic and scientific texts in the context of applied linguistics. In translation studies, interest for this field of translation has been growing, and it is becoming increasingly clear that translation of academic texts comprises a range of very diverse practices. An interesting factor that may play a role in the selection of the translation approach is translation direction: while translation from a peripheral language into the *lingua franca* enhances the accessibility and the impact of the study, translation from the *lingua franca* into a peripheral language contributes to the development of disciplinary terminology, reaffirming the functionality of academic registers in the target language, and promotes the pedagogical application and popularization of established theories. The aim of this paper is to analyse potential differences between translation from and into the *lingua franca*, using translation between Slovene and English as an example. A corpus analysis of a small bidirectional

translation corpus of 36 academic texts focuses on the use of reformulation, i.e., a discourse strategy where the same idea is restated in different words, used to enhance text comprehensibility. The results show that translators intervene with the use of reformulation use. Moreover, the findings reveal that reformulation is added and omitted in different ways, depending on the translation direction. The results also show that reformulation is used in slightly different ways in English and Slovene texts

Keywords: translation of academic discourse, English as a *lingua franca*, corpus study, reformulation, bidirectional corpus

Izvleček

V zadnjih desetletjih je bilo v okviru uporabnega jezikoslovja veliko razisko-valne pozornosti namenjene vprašanjem medkulturne komunikacije v aka-demskih in znanstvenih besedilih. V prevodoslovju narašča zanimanje za to področje prevajanja in vedno bolj postaja jasno, da prevajanje akademskih besedil obsega širok razpon zelo različnih praks. Zanimiv dejavnik, ki mor-da prispeva k različnim prevajalskim pristopom, je smer prevajanja: prevaja-nje iz perifernega jezika v *linguo franco* pomembno prispeva k odmevnosti in vplivnosti študije, prevajanje iz *lingue france* v periferni jezik pa pripomore k razvoju strokovne terminologije, krepi polno funkcionalnost ciljnega jezika in spodbuja pedagoške aplikacije in popularizacijo znanstvenih dognanj. Namen pričujočega prispevka je razčleniti potencialne razlike med prevajanjem v in iz *lingue france* na primeru prevajanja med slovenščino in angleščino. Korpusna analiza majhnega dvosmernega prevodnega korpusa 36 akademskih besedil se osredotoča na rabo reformulacije, to je diskurzne strategije, s katero se neka ideja ponovno izrazi z drugimi besedami, s čimer se izboljša razumljivost bese-dila. Rezultati pokažejo, da prevajalci v rabo reformulacij posegajo. Prav tako se pokaže, da se reformulacije dodajajo in izpuščajo na različne načine glede na smer prevajanja, pa tudi da je v slovenskih besedilih reformulacija uporabljena na nekoliko drugačen način kot v angleških.

Ključne besede: prevajanje akademskega diskurza, angleščina kot *lingua fran-ca*, korpusna študija, reformulacija, dvosmerni korpus

1   INTRODUCTION

The question of how research findings and scholarly theories are communicated across lingua-cultures has been addressed from a range of perspectives. However, while a number of studies have focused on questions related to facilitating *lingua franca* communication among multilingual scholars, including contrastive studies (e.g., Hu and Cao 2011; Molino 2010; Pisanski Peterlin 2005; Vassileva 2001), applied linguistic studies (e.g., Charles 2019; Hyland 2000), research focusing on academic literacy development (e.g., Duff 2010; Lillis and Curry 2006), research on English as an academic *lingua franca* (e.g., Mauranen 2010), translation is relatively rarely examined as a strategy of cross-cultural communication in academic settings. Within the field of applied linguistics, the role of language mediators has been addressed above all from the perspective of language editing/copyediting (Harwood et al. 2009; Mauranen 1997), while translation, as a related form of language meditation, remains less explored. On the other hand, there is an increasing interest in the area of translation of academic discourse (sometimes narrowed down to "scientific translation") in the field of translation studies, most notably in the work of Montgomerry (2000, 2009), Olohan (2015) and Bennett (2007, 2011). In addition, the number of empirical studies focusing on the characteristics of translated academic texts in the field is growing (Paradiž, this volume; Pfau 2015; Pisanski Peterlin 2008, 2016; Williams 2007).

As more insight is gained into translation of academic discourse, different types of translation purposes and approaches to translation, including intralingual translation for popularization purposes (cf. Gopferich 2008), parallel publications of original and translated academic texts (cf. Alharbi and Swales 2011; Perales-Escudero and Swales 2011; Van Bonn and Swales 2007), translation for outreach purposes (cf. McGrath 2014), self-translation (cf. Jung 2002; Pisanski Peterlin 2019) are explored. The translation of academic texts is increasingly recognized to constitute a range of diverse practices. An interesting factor that may also play an important role in the selection of translation strategies, but remains largely unexplored, is the relationship between the source and target languages. While translation from a peripheral language into the *lingua franca* ensures that new research findings become accessible to international readers, thus greatly enhancing the impact of a study, translation from the *lingua franca* into a peripheral language contributes to the development of disciplinary terminology, reaffirming the functionality of academic registers in the target language, and promotes the pedagogical application and popularization of established theories. The purpose and scope of the two translation directions are thus quite distinct, and it seems important to gain a better understanding of the ways in which this is reflected in the translation strategies used in the two translation directions.

The present paper aims to investigate potential differences between translation from and into the academic *lingua franca* by examining the differences between Slovene to English and English to Slovene translation in terms of the use of reformulation. Reformulation is the discourse strategy of restating an idea in different words, and is used to enhance the comprehensibility of the text. It is also a potential translation strategy. Using a small bi-directional corpus of academic writing translated from Slovene, a language of limited diffusion, into English, the contemporary academic *lingua franca*, and vice versa, the role of reformulation in the two translation directions is explored.

Specifically, the following research questions are addressed:

1. Are interventions with reformulations used in translation to re-negotiate the meaning of the text?

2. Are the differences between translation from and into English as the *lingua franca* of academic communication reflected in the use of reformulations in translations?

3. Are there differences between the main types of reformulation used in Slovene and English academic texts?

2   REFORMULATION

Reformulation has been shown to be an important element of academic discourse (cf. Cuenca 2003; Cuenca and Bach 2009; Hyland 2007; Murillo 2012). Hyland (2007, 269) underlines that the function of reformulations in scholarly writing is very different from that of the function of reformulations in unplanned spoken discourse, where they constitute repairs, i.e., they are used when the speaker attempts to correct the first utterance by rewording (cf. also Blakemore 1993). As Hyland (2007, 269) points out, in writing, their use is planned and "purposeful, indicating that the writer is seeking to convey particular meanings or achieve particular rhetorical effects". In Hyland's (2007) model, reformulation is one of the two subfunctions of code glossing (the other being exemplification).

Cuenca (2003, 1071) defines reformulation as a discourse function used to re-elaborate an idea, pointing out that the concept is "based on an equivalence operation"; i.e., the same idea is first stated and then restated in a different manner. However, Cuenca (2003, 1072) also notes that reformulation often goes beyond simple paraphrasing, and may also entail "explanation, specification, generalization, implication, gloss or summary".

Reformulation constitutes a key rhetorical strategy in academic writing, as it facilitates the reader's comprehension of complex concepts. It needs to be noted, however, that studies have shown that there are considerable cross-cultural differences in the use of reformulations in academic discourse (cf. Cuenca 2003). In translation studies, glossing[1] has been recognized as relevant, "because of the insights it offers into the relationship between science, society and language" (Sharkas 2011, 370). In her study of glossing in translated and original scientific articles in Arabic, Sharkas (2011) focuses on the use of "supplying original source-text technical terms between brackets after their target-language correspondents in the translated text" (Sharkas 2011, 372), although she points out that in the context of translation studies, the focus on glossing entails study notes and other types of information "added by the translator to compensate for the lack of precise equivalents to certain words in the source texts, or for a perceived lack of sufficient knowledge on the part of the reader" (Sharkas 2011, 371).

For the purposes of the present study, where the corpus used is relatively limited, reformulations are defined more broadly than glossing in Sharkas (2011) to include not only glosses appearing in brackets, but also other types of paraphrasing, introduced by markers such as *i.e.*, *or* and commas. Exemplifications (cf. Hyland 2007, 270–271), which clarify a concept by producing an example (as in following passage from an English translation from the corpus used in the present study, "…traditionally 'agricultural' municipalities have entirely average or even higher proportions of inter-municipality commuters <u>(e. g., Beltinci, Veržej, Ormož)</u>")[2] are not included in the analysis. Also excluded from the analysis are instances of reformulations expressed using percentages and similar, as in the following example from an English translation: "According to calculations, some 1,637.8 ha <u>or 29.2% of all water protection zones</u> are covered with anthropogenic impermeable surfaces." Although these examples are clearly reformulations, they do not constitute a potential challenge in translation, as they do not involve cross-cultural or cross-linguistic issues.

3 CORPUS AND PROCEDURE

3.1 Corpus

The 160,000-word bi-directional translation corpus of academic discourse comprises 36 geography research articles in Slovene and English. As translations of

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1 Sharkas (2011) employs the term *glossing* in accordance with its use in translation studies, where it refers to reformulations added by the translator.

2 The use of underlined text is mine.

research articles are only rarely overtly acknowledged as such (cf. Franco Aixela 2004), and only exceptionally published along with their corresponding originals (cf. Pisanski Peterlin 2019; see also Salager-Meyer for a discussion of bilingual journals), the availability of material for analysis is very limited. Geography was the only discipline for which bi-directional translations for this language combination were obtainable. Fortuitously, geography is also a particularly suitable discipline for investigations comparing translation into and from the *lingua franca*, as it deals with both global and local phenomena. The number of texts used was limited by the availability of English to Slovene translations.

The corpus consists of four subcorpora, comprising nine texts each: Slovene original texts (Slo-Or), their corresponding English translations (Eng-Tr), English original texts (Eng-Or) and their corresponding Slovene translations (Slo-Tr). All the texts were published between 2004 and 2014 in *Acta Geographica Slovenica*, a Slovene open-access geography journal where bilingual Slovene and English versions of papers are occasionally published side by side.

The nine Slovene articles are written by authors who are all native speakers of Slovene, while the translators of these articles are both native speakers of Slovene[3] and native speakers of English (cf. Pisanski Peterlin 2016: 275 for further details on the information available on the translators). The nine English articles are authored by scholars with different first languages[4] using *English as the lingua franca* (ELF) of academic communication. The translators of the English articles are not specifically credited, but given that Slovene is a language of lesser diffusion with just over two million speakers it seems obvious that all the translators were native speakers of Slovene working into their first language.

3.2   Procedure

The corpus was analysed using AntConc (Anthony 2018) concordance software using a list of search items that can potentially be used to introduce reformulations. The English list was based on several previous studies of reformulations (Cuenca 2003; Cuenca and Bach 2007; Hyland 2007), the Slovene search list was compiled using translations of the English reformulations. In addition to lexical items, brackets were also used to identify potential reformulations. The lists of search items are given in the Appendix. The output of the corpus search was examined manually to eliminate the instances that were not reformulations. Subsequently, the reformulations identified in the two translation subcorpora

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3   L1-L2 translation is not uncommon in the context of Slovene (see Pokorn 2009 and Hirci 2012 for details).

4   These languages are Spanish, Hungarian, Persian, Romanian, Serbian, Greek, Croatian, Turkish and English.

(Eng-Tr and Slo-Tr) were compared to their corresponding originals in the Slo-Or and Eng-Or subcorpora, respectively. For each reformulation in the translated text, it was determined whether there was a matching reformulation in the corresponding original text and vice versa. When the items with no apparent matching reformulations were identified in the output of the corpus search, the texts were manually examined to identify any additional matching reformulations not detected through a corpus search.

The matching reformulations (i.e., those recurring in both the original and its corresponding translation) were then investigated to determine whether any consisting patterns of reformulation could be observed. A comparison was made between the two translation directions. The reformulations without a match were examined separately for each subcorpus, and both additions (the reformulations found in the translations but not in the corresponding originals) as well as omissions (the reformulations found in the originals but not in the corresponding translations) were compared. The two translation directions were contrasted in terms of the frequency and the type of additions and omissions.

4   RESULTS

4.1   Quantitative comparison

The initial corpus search yielded a total of 4,022 potential reformulations. After eliminating those instances that were not reformulations and those that were identified twice, the total number of reformulations identified through corpus search was 443. The manual analysis identified additional eight instances of reformulations, bringing the total number of reformulations identified in the corpus to 451.

The total number of reformulations in the four subcorpora is given in Table 1, along with the numbers of matching reformulations for both translation directions, as well as the numbers of reformulations added and omitted in translation. The ratio between matching reformulations and additions/omissions is also expressed in terms of percentage to allow a better comparison between translation into and from ELF.

The analysis revealed that reformulations occurred in all four subcorpora. Regardless of the translation direction, most reformulations occurred in both the source and target texts. However, there are noticeable differences between the two translation directions in terms of omissions: in Slovene to English

Table 1: A quantitative comparison of reformulations across the four subcorpora

	Translation into ELF (Slovene to English)		Translation from ELF (English to Slovene)	
	Slo-Or	Eng-Tr	Eng-Or	Slo-Tr
Matching (%)	78 (75%)	78 (78%)	92 (81.4%)	92 (68.7%)
No match (%)	26 (25%)	22 (22%)	21 (18.6%)	42 (31.3%)
Total (100%)	104 (100%)	100 (100%)	113 (100%)	134 (100%)

translation, 25% of reformulations found in the source texts were omitted, as opposed to the English to Slovene translation where only 18.6% of reformulations from the source texts were omitted. The difference is even more pronounced in terms of additions: whereas 22% of the reformulations in the target texts in Slovene to English translation were added, additions were more frequent in the target texts in English to Slovene translation (31.3% of reformulations). The types of matching reformulations are outlined in subsection 5.2, while the types are of reformulations added and omitted in translation are detailed in 5.3 and 5.4, respectively.

4. 2   Reformulations retained in translation

A systematic examination of the reformulations retained in translation identified seven different types of reformulations. Three of these, **(near-)synonyms**, **paraphrase** and **abbreviations**, involved monolingual elaborations or re-wording. The fourth category, **cross-cultural explanation**, covered those reformulations that were used to explain a culture-specific, local concept. The remaining three categories of reformulation, **L3 term**, **gloss of a L3 term** and **L3 title,** entailed cross-linguistic reformulation involving a third language.

The seven types of reformulation are outlined in Table 2. For each type, a brief explanation is provided along with illustrative examples from the individual corpora. Throughout the paper, an English gloss is provided in inverted commas for all Slovene examples.

Some of the types of reformulations identified in Table 2 also occur as additions and omissions in subsections 4.3 and 4.4 respectively. For the sake of consistency and clarity, the same label is used in those sections.

Table 2: Types of reformulations retained in translation

	Slo-Or	Eng-Tr	Eng-Or	Slo-Tr
(Near-)synonym A (nearly) synonymous term or expression is provided	*Migracija oziroma selitev…* 'migration or moving'	*Migration or population movement…*	*…pathogens or microorganisms…*	*…patogeni ali mikroorganizmi…* 'pathogens or microorganisms'
Paraphrase A term or expression is rephrased, explained in more detail or defined	*Motorizacija (število osebnih avtomobilov na 1000 prebivalcev)…* 'motorization (number of cars per 1,000 residents)'	*Motorization (number of automobiles per 1,000 residents)…*	*…in what is considered the peak season (July–September)…*	*…na višku sezone (od julija do septembra)…* 'in the peak season (from July until September)'
Abbreviation The abbreviation, which typically subsequently replaces the term in question, is presented	*…digitalni model višin (DMV)…* 'the digital elevation model (DEM)'	*…the digital elevation model (DEM)…*	*…analytic hierarchy process (AHP)…*	*…analitični hierarhični proces… (AHP)* 'analytic hierarchy process (AHP)'
Cross-cultural explanation An explanation of a culture-specific concept or a regional geographic feature is provided	*…v zatrepu Bohinjske kotline (Ukanc)…* 'at the end of the Bohinj basin (Ukanc)'	*Ukanc is a place at the end of the Bohinj basin, hidden under the walls of the Komna plateau.*	*One-room apartments (conventillos)…*	*Enosobna stanovanja (conventillo)…* 'one-room apartments (conventillos)'
L3 term A term in a third language is given	*Med prostornino gorskega podora (angl.: major rockfall, nem.: Bergsturz) in kotom gibanja obstaja negativna povezava.* 'Between the volume of major rockfalls (Eng. major rockfall, Ger. Bergsturz) and the travel angle there is a negative correlation.'	*There is a negative correlation between the volume of major rockfalls (bergsturz) and the travel angle.*	*…exposed to a cold and dry winter bora wind (locally called the bura).*	*…izpostavljeno hladnemu in suhemu vetru, burji (lokalno ime bura).* 'exposed to a cold and dry wind, bora (local name bura)'

	Slo-Or	Eng-Tr	Eng-Or	Slo-Tr
Gloss af a L3 term An established term from a third language is glossed	-	-	…the so-called "conventillo" – a small convent…	…conventillo – samostanček… 'conventillo – a small convent'
L3 title The title in the original (third) language is given	-	-	…set down a more in-depth version of The Origin of Continents (Die Entstehung der Kontinente und Ozeane)…	…zasnoval bolj poglobljeno različico Nastanka kontinentov (Die Entstehung der Kontinente und Ozeane)… 'drafted a more in-depth version of The Origin of Continents (Die Entstehung der Kontinente und Ozeane)'

4.3   Reformulations added in translation

Additions in Slovene-English translation: Reformulations found only in the Eng-Tr Subcorpus

In Slovene-English translation there are several examples of (**near-)synonyms** and **abbreviations** (see examples 1 and 2) added in translation.

(1)   *environmental parameters (variables)*

(1a)[5]   *okoljskimi spremenljivkami* 'environmental variables'

(2)   *a Digital Terrain Model (DTM) or a Digital Elevation Model (DEM)*

(2a)   *digitalni model reliefa ali višin* 'Digital Terrain or Elevation Model'

Another type of reformulation added in Slovene-English translation involves **English glosses of Slovene expressions** in an attempt to bridge cross-linguistic differences. In two instances (3–4), the names of Slovene rivers are glossed in English, to further illustrate their characters; both examples occur in the same text.

(3)   *…its torrential character because it "rages" (the verb "besneti" in Slovene)…*

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5   The corresponding passages from the Slo-Or subcorpus are also given where relevant and marked with the letter *a*.

(3a) *… njenem hudourniškem značaju, ker ob visoki vodi »besni«…* 'its torrential character because it "rages" when the waters are high'

(4) *is similarly linked to the word nemil ("pitiless, cruel"), reflecting the periodic*

(4a) *…povezujejo z besedami »ne mil« oziroma »nemil«, kar pomeni, da je hudourniška Nemiljščica občasno neusmiljena …* 'is linked to the words "ne mil" or "nemil", meaning that the torrential Nemiščica is occasionally merciless…'

There is also a series of examples (cf. examples 5–8), all from the same text, where street names are glossed in English. A comparison of examples 7 and 8 shows that the glossing is inconsistent.

(5) *Cesta dveh cesarjev ("Street of Two Emperors")*

(6) *Dolenjska cesta ("Dolenjska Street")*

(7) *Tržaška cesta ("Trieste Street")*

(8) *Tržaška cesta (street)*

Finally, reformulations added in translation into English involve **cross-cultural explanations**. These explanations concern regional geography: where the Slovene original assumes that the reader is thoroughly familiar with the geography of Slovenia, the translation cannot make the same assumption (see examples 9–10).

(9) *most eastern part of the Slovenian Alps (Pohorje)*

(10) *except the seaside region called Primorska*

Additions in English-Slovene translation: Reformulations found only in the Slo-Tr subcorpus

In English-Slovene translation, **(near-)synonyms** and **abbreviations** (see examples 11–14) were also added in translation.

(11) *restavracije, prevozništvo in pomoč na domu (hišni pomočniki).* 'restaurants, transport services and household help (domestic helpers).'

(11a)[6] *restaurants, transport services and household help.*

Reformulation with abbreviation occurs both with a combination of a Slovene name and an English abbreviation (as in example 20), as well as with abbreviations that correspond to both the Slovene and English names (as in example 21).

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6   The corresponding passages from the Eng-Or subcorpus are also given and marked with the letter *a*.

(12)   *Evropsko geoznanstveno združenje (EGU) podeljuje medaljo Alfreda We-generja.* 'The European Geosciences Union (EGU) awards the Alfred Wegener Medal.'

(12a)   *The European Geosciences Union sponsors the Alfred Wegener Medal.*

(13)   Zelo pomemben napredek v urbanizmu predstavlja *uporaba geograf-skega informacijskega sistema (GIS)…* 'A valuable breakthrough in the field of urban planning is the application of the geographic informa-tion system (GIS).'

(13a)   *One of the valuable breakthroughs in the field of urban planning is the application of the GIS.*

Interestingly, there is an example 14 where the established (English) abbrevia-tion is given in parenthesis, but the name of the organization is mistranslated in Slovene.

(14)   *…pristop družbenega partnerstva, ki je vključeval vlado, sindikat in nove vladne organizacije (NGO)* '…a Social Partnership approach, involv-ing government, trades unions and new governmental organizations (NGOs)'

(14a)   *… a Social Partnership approach, involving government, trades unions and NGOs*

Furthermore, there were a number of cases where an English term was translated into Slovene, but the **English term was also provided** (see examples 15–16).

(15)   *Kasneje se je je prijelo ime »modra banana« (ang. Blue banana).* 'It later became known as "the blue banana" (Eng. Blue Banana).'

(15a)   *Later it was called by its popular name "Blue Banana".*

(16)   *uporabila inteligentni programski sistem, ki je temeljil na teoriji mehkih množic oziroma na mehkem sklepanju (angleško fuzzy inference)* 'used an intelligent software system based on fuzzy set theory or fuzzy inference (English fuzzy inference)'

(16a)   *using an intelligent system based on fuzzy inference*

Finally, there were a few cases where a **book title in another language** (German, Serbian, French,…) was provided along with the Slovene translation, as in exam-ples 17 and 18.

(17)   *z Wegenerjem sodeloval pri pisanju knjige Podnebja v geološki zgodovi-ni (Die Klimate der Geologischen Vorzeit)* 'collaborated with Wegener on the book *Climates of the Earth's Past* (*Die Klimate der Geologischen Vorzeit*)'

(17a) *together with Wegener he would engage in the writing of the* work Climates of the Earth's Past.

(18) *v publikaciji Glas, ki jo je izdajala Srbska kraljeva akademija, objavil članek z naslovom »Prilog teoriji matematske klime« (K matematični teoriji podnebja)* 'published the paper "Prilog teoriji matematske klime" (On the mathematical theory of climate) in the Serbian Royal Academy's journal *Glas*'

(18a) *published the paper "On the mathematical theory of climate" in the Serbian Royal Academy's journal* Glas

4.4   Reformulations omitted in translation

Finally, reformulations found in the originals, but omitted in translation are examined briefly and separately for each subcorpus of originals.

Omissions in Slovene-English translation: Reformulations found only in the Slo-Or subcorpus

As was the case with additions, (**near-)synonyms** and **abbreviations** were also omitted in translation in both directions. Examples 19–21 illustrate this type of omissions for the Slovene-English translation.

(19) *Na konglomeratni terasi […] prevladuje izprana prst ali luvisol* 'on conglomerate terrace […] leached soil or luvisol dominates'

(19a)[7] *…on conglomerate there is leached soil…*

(20) *Pri večjem vbočenju (konkavno)…* 'When the dip (concavity) is greater…'

(20a) *With larger slope concavity…*

(21) *Podoben algoritem sta uvedla tudi Hegg in Kienholz (1995) za trikotno nepravilno mrežo (TIN).* 'A similar algorithm was introduced by Hegg and Kienholz (1995) for the Triangular Irregular Network (TIN).'

(21a) *A similar algorithm was introduced by Hegg and Kienholz (1995) for the Triangular Irregular Network.*

In addition, another type of reformulation was regularly omitted in translation into English: where the **English term** (sometimes along with the German term, cf. example 23) was provided in the Slovene original along with the Slovene term,

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7   The corresponding passages from the Eng-Tr subcorpus are also given and marked with the letter *a*.

the bilingual or trilingual reformulation was not retained in translation for obvious reasons (see examples 22–24).

(22) *Pri razvoju računalniških programov za račun dosega skalnega podora (angl.: runout distance) je posebno pomembno…* 'In developing computer programs for the calculation of the runout zones (Engl.: runout distance), it is especially important…'

(22a) *In developing computer programs for the calculation of the runout zones it is essential…*

(23) *…srednji naklon (angl.: mean gradient; nem.: mittlere Neigung)* 'mean gradient (Eng.: mean gradient; Ger.: mittlere Neigung)'…

(23a) *… mean gradient…*

(24) *… med katerimi se pogosto uporablja indeks gradientov rečnih odsekov (ang. Stream Length-gradient index – SL indeks; Hack 1973)* '… among which the Stream-Length gradient index (Eng. Stream Length-gradient index – SL index) is frequently used; Hack 1973)'

(24a) *Among them is Stream Length-gradient index (SL index; Hack 1973)…*

In some of these cases, some degree of reformulation was retained in translation, but it was less extensive than in Slovene (see example 24a), again for obvious reasons.

Finally, a very infrequent omission of reformulation occurred with **paraphrases**: there were two cases when a specific term (the English term *commuter* and the Slovene term *hribinski plaz* 'rock burst') was explained in considerable detail in the original, but the explanation was not found in the translation.

Omissions in English-Slovene translation: Reformulations found only in the Eng-Or subcorpus

In English-Slovene translation, omissions of reformulations only involved **(near-) synonyms** and **abbreviations** (cf. examples 25–26).

(25) *These three centres or cores are…*

(25a)[8] *Ta tri območja so…* 'These three areas are…'

(26) *…in the European Spatial Development Perspective (ESDP) in 1999.*

(26a) *…Evropske prostorske razvojne perspektive iz leta 1999.* 'the European Spatial Development Perspective (ESDP) of 1999'

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8   The corresponding passages from the Slo-Tr subcorpus are also given and marked with the letter *a*.

5   DISCUSSION

The aim of the present study was to examine the role of reformulation in translation of academic discourse from Slovene into English and vice versa. The starting point of the analysis was the first research question, whether interventions with reformulations are used in translation to re-negotiate the meaning of the text. The results showed that interventions with reformulations did indeed occur, involving both the omission of reformulations found in the originals and addition of reformulations in the target texts.

The second research question was whether differences in the use of reformulation between the two translation directions can be observed. The results revealed pronounced differences between the two translation directions in terms of the frequency of reformulations: while 42 reformulations were added in English-Slovene translation, only 22 were added in Slovene-English translation. In fact, in Slovene-English translation there were more translations omitted from the Slovene originals (26) in translation than there were additions to the English translations.

In English-Slovene translation there was a strong focus on providing English equivalents along with the Slovene translations of terms. Two potential reasons for providing an English term or expression along with the Slovene translation seem particularly likely. The first is to provide absolute clarity: if the text introduced a Slovene equivalent for an English term for the first time (or the equivalent has been used before, but it is not yet familiar or generally accepted), the translator may have been somewhat tentative and unsure about whether the term would be understood properly (cf. Žigon and Almasy in this volume for similar findings in 19th century Slovene translations of German textbooks). The second reason is to educate the Slovene audience about established *lingua franca* equivalents used by the international discourse community of geographers. It seems very likely that sometimes the two reasons for providing the English-language equivalent are combined.

In addition, an interesting detail emerges in English-Slovene translation. It reflects the difference between the tendency of the source language, English, the *lingua franca* of academic communication, to favour a monolingual presentation of the content, and the tendency of the target language, Slovene, a language of limited diffusion, to favour a more multilingual approach.[9] This difference emerges in the case of several book and paper titles. While in some cases both the English originals and Slovene translations also present the original L3 title, there

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[9]   This is very much in accordance with the findings of Zlatnar Moe et al. (2019) for non-academic genres: they also found that translation strategies are influenced by the status of the source and target languages.

are also several examples where the English original only provides the English version of the title, while the Slovene translation gives both the Slovene version and the original German, French or Serbian version of the title.

In Slovene-English translation, there was much less emphasis on providing cross-linguistic equivalents. There were two cases where names of rivers in Slovene required glossing because the names were used to illustrate the untamed character of the rivers in the original. Linguistic equivalents were only provided in a few other, somewhat puzzling cases, where street names were glossed in English. These glosses all occurred in the same text, relatively close together. The textual data provide no clue as to the reasons for the unexpected English glosses: the glossed names, with the possible exception of Tržaška cesta (Trieste Road, the main road leading into Ljubljana from the south-west, i.e., the direction of the Italian city of Trieste), do not provide the reader with any relevant information about the location or characteristics of the streets in question; the translator's motivation to include the glosses remains unclear.

However, there is an interesting category of glosses that are added in Slovene-English translation: cross-cultural reformulations explaining the regional geography. The motivation for using these glosses is very clear. Whereas Slovene regional geography would be familiar to the Slovene readers, the same expectation cannot be made about the international audience of the English text.

Finally, it needs to be pointed out that some types of reformulation commonly occurred in both translation directions. Specifically, monolingual elaborations and re-wordings in the form of (near-)synonyms and abbreviations were retained, added and omitted in translation regardless of directionality. The reason for adding or omitting a (near-)synonym in translation probably varied, from situations where synonymy was more common (or simply more familiar to the author or translator) in one language than the other, to more complex situations where a certain term was more established in one of the languages, while additional explanation was required in the other language. As for abbreviations, reformulations were often added or omitted for discursive reasons: because the original and the translation were structured in a slightly different way, a term and the abbreviation might have been introduced sooner in one of the versions, or the abbreviation only replaced the term in one of the languages.

The third research question concerned potential differences between the use of reformulations in Slovene and English academic texts. The shows that there were more reformulations in Slovene than in English, regardless of whether English was the source or the target language, although the difference was smaller in Slovene-English translation. The fact that Slovene is a language of a lesser diffusion while English is the *lingua franca* of academic communication seems to be

reflected in the use of reformulations. Slovene texts, regardless of whether they were originals or translations, were very likely to include English language terms along with the Slovene terms, whereas bilingual Slovene and English expressions only occurred in English translations in the two cases described above: the glosses of river and street names.

6 CONCLUSION

Translation of academic texts involves a range of different practices, and translation direction is one of the factors that potentially influence the strategies employed by the translator. In the present study, translation of academic texts from and into the *lingua franca* were compared in terms of reformulation use. Reformulation is a discourse function with a prominent role in academic communication, contributing to the negotiation of meaning (cf. Hyland 2007). In translation, reformulation assumes additional functions as it contributes to the re-negotiation of the meaning across lingua-cultures.

The findings of the corpus analysis confirmed that reformulations in English-Slovene translation are used in a somewhat different way than in Slovene-English translation. Additions of reformulations were more frequent in translation from the *lingua franca* than in translation into the *lingua franca*; moreover, the reformulations in translation from the *lingua franca* were more likely to be multilingual. While the corpus used in the present study was very limited in size and the findings cannot be generalized, they nevertheless provide valuable clues about the role of directionality in translation of academic texts. The analysis of the small corpus offers strong support for the assumption that the strategies employed in translation depend on the translation direction and the relationship between the source and target languages. Furthermore, the findings reveal how the meaning is re-negotiated in translations through translators' interventions with reformulations. Finally, the results suggest that the scope of reformulation may be different in the *lingua franca* as opposed to a peripheral language.

These findings raise several interesting points for future research. The first concerns expanding the research paradigm to other discourse functions to determine whether the interplay of translation strategies and directionality is observable for a range of discourse functions. In addition, further research on the process of translation could provide important clues about the translators' decisions on when and how to interfere with reformulations. Finally, it seems important to gain insight into the impact of reformulations in translations of academic texts from the perspective of reception. Research focusing on reception would provide a better understanding of how the meaning is re-negotiated in translation.

Acknowledgement

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Appendix

English search list	*Slovene search list*
(	(
called	ali
Eng*	ang*
expression	besed*
i. e.	i. e.
i.e.	i.e.
in other words	ime*
known	izraz*
label	lokal*
local	namre*
locally	oznak*
name	poimenova*
named	pomeni
namely	povedano
or	pri nas
put another way	slo*
referred	termin*
Slo*	tj.
term	to je
that is	z drugimi besedami
which means	znan*
word	