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Transformation(s) in Translation

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Transformation(s) in Translation

Table of Contents

Introduction	1
<i>Joanna Pędzisz</i>	
Outline of an Artificial Intelligence Literacy Framework for Translation, Interpreting and Specialised Communication.	11
<i>Ralph Krüger</i>	
The Future of the Translation Profession in the Era of Artificial Intelligence. Survey Results from Polish Translators, Translation Trainers, and Students of Translation	25
<i>Marek Łukasik</i>	
What Can We Learn from the 21st Century Translator Pen? A Case Analysis on Comparing English-to-Chinese Rendition Differences between Human and Machine Translation.	41
<i>Tawei Wang</i>	
Interpreting Studies and the Need for a Systemic Turn	53
<i>Martina Behr</i>	
Polyphony as a Transformative Factor in Solopreneurship Education of Language Specialists	65
<i>Konrad Klimkowski</i>	
The Evolution of Students' Ability to Identify and Solve Different Types of Translation Problems: Insights From a Longitudinal Process and Product Study.	77
<i>Marta Chodkiewicz-Nalepa</i>	
An Investigation of Rater Effects on L2 Translation Performance Scores . . .	89
<i>Nilufer Aybirdi, Turgay Han</i>	

Übersetzungen polnischer Lyrik und translatorisches Handeln: Anthologie, Tandem, Interlinearversion	111
<i>Birgit Krehl</i>	
The Translation of Nature Terminology in Literary Texts: A Case Study . . .	125
<i>Raluca Sinu</i>	

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Introduction

Einführung

The issue of changes and modifications hidden within the concept of transformation is not new and is addressed in scientific discourse in its various varieties, forms, scopes and areas. The concept of transformation may be associated not only with the political dimension talking about systemic transformation. Social-ecological and societal transformation (Kistel et al., 2024; Weik et al., 2024), digital transformation (Deppe, 2024; Wirtz, 2024), economic transformation (Weik et al., 2024; Wolf, 2024), systemic transformation (Bernstein, 2022), and business transformation (Märk & Situm, 2024; Raharjo et al., 2024) are just a few selected examples of works in which the concept of transformation becomes a keyword for researchers' considerations and the social and scientific contexts in which the considerations are embedded, have broadened the meaning of this term.

Without a doubt, transformation is associated with a change in the features or properties of a given phenomenon, with a modification of its intensity or quality, or even with the formation of something already existing anew in a different dimension or with respect to different points of reference. Changes in circumstances and situations, various contexts, and the coexistence of various conditions mean that phenomena, objects and processes can undergo transformations. The focus of the considerations presented here is the *translation process*. A process that is subject to transformation because it depends on: a) the implementation of new tools used by translators to support their activities, b) other, new, changing needs of the translators themselves, the translation market, translation situations as communicative ones, and c) the essence and status of the translation process itself, not only as an activity in itself, but as an instrument for achieving other goals.

Based on only a few selected recent publications in the field of translation studies (Chen & Krueger 2024; Chen & Yan, 2024; Filar, 2023; Marczak, 2024; Riondel, 2024), which are briefly described below, a kind of transformational change can be observed, thanks to which the translation system as a communication system

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(F. Grucza, 1981; S. Grucza, 2014; Żmudzki, 2013) is embedded in a network of dependencies. These determine its essence and influences what the scientific discourse of translation studies is concerned with. Chen and Krueger (2024) explore the potential effectiveness of computer-assisted consecutive interpreting (CACI). Marczak (2024) emphasizes the importance of professionalism in translator education and discusses the internship as a learning mode that supposedly most closely reflects professional reality from the student's perspective. Riondel (2024) sees the revision, defined as the verification of a human translation by a second translator, as an important step in translation production. This issue is related to four others, namely the diversity of revision, the situational nature of revision, the difficulty of the task and the social dimension of revision, above all the principles of good communication. Chen and Yan (2024) see a close relationship between writing and translation that is not sufficiently explored in scientific discourse and translator training. The results of their study can help researchers and teachers gain a detailed understanding of students' performance in writing and translation. Filar (2023) on the other hand, considers the training of translators in the context of the theory of creative translation by Kußmaul (2007) based on cognitive theories of languages and psychological research on creativity and proposes translation tasks that stimulate creativity and reflexivity both at the level of receiving the source text and producing it in the target language.

This outline of various concepts is proof that the transformations in the development of translation skills are caused by the interpenetration of the assumptions of broadly understood translation studies and phenomena such as technological development, professionalization of education and its transfer to professional reality, relationality in the translation process (connected with the relationship between the participants of the process and the relationship of the activities that make up this process) and individual development that supports the development of translation competence.

Following on from the above considerations, transformations take on different forms and encompass different areas of the reality of translation. The articles presented in this issue of the journal visualize this – starting from the tools supporting the translation process, their operationalization in the translation process, through the visibility of the interpreters or translators in the process and their competencies, to the ability to reflect on their actions, to solve problems and to plan activities on a micro scale within the translation task, but also on a macro scale on the translation services market, up to the product – the target text, which has its own quality.

Ralph Krüger and Marek Łukasik point to technological changes that have an impact on translation studies. Their considerations focus on phenomena such as AI-driven tools, that may include neural machine translation systems, and the recent developments in generative AI or digital literacies. Ralph Krüger

emphasizes that they are the result of processes of digitalisation and datafication and traces the transition between machine-aided human translation (MAHT) and human-aided machine translation (HAMT) or machine-translation post-editing (MTPE). By establishing skills such as machine translation literacy, data literacy and artificial intelligence literacy Krüger tries to define an AI Literacy Framework for Translation, Interpreting and Specialised Communication in order to ultimately develop a set of AI-related competencies required by current and future stakeholders in the AI-saturated language industry. Marek Łukasik presents the results of a pilot study on the perception of the future of the translation profession in the era of artificial intelligence. On the one hand, it confirms that developments in generative AI can increase productivity and reliability, but on the other hand, there is still a knowledge gap regarding the more specific use of GenAI in the translator's profession. The assumed changes in the constitutive elements of translation studies as a scientific discipline also seems important, as evidenced by therecent publications, and the articles collected in this issue are a continuation of this.

Tawei Wang also looks at machine translation (MT) and identifies the differences between human translation and MT represented by the translator pen. The underlying qualitative and case-based text analysis is an impulse for further, broader research using various methods, including quantitative ones to expand research to artificial intelligence (AI) and natural language processing (NLP).

Also suggested in this issue of the journal is the systemic turn to which simultaneous interpreting should be subjected. Martina Behr points to the need for methodological consolidation, which can be achieved by drawing on the findings of systems theory and presents an example of the first system-dynamic model of simultaneous interpreting. The i-Model aims to show the first proof and benefits of a systems approach.

The idea and essence of polyphony becomes another phenomenon that is referred to in the research of translation studies. However, in this context, what is important is not the tools used to carry out the translation process, but the person – the future translator or interpreter – and the development of their skills. The notion of polyphony that Konrad Klimkowski adopts in his paper draws upon the concept of multiple voices introduced to translator education and is treated as an educational idea. The author tries to show how polyphony can be embedded in the content of classes and argues that polyphony can empower students' informed approach to career choices.

Marta Chodkiewicz-Nalepa also focuses on developing the competencies of future translators. The focus is on problem-solving and includes 315 problem-solving paths focusing in particular on verbal (but also non-verbal) evidence confirming students' awareness of the nature of the problems, the strategicness of the problem-solving process, and the plausibility of the final solutions provided.

Meanwhile, Nilufer Aybirdi and Turgay Han see translation as a writing assessment tool and a tool in teaching foreign languages. In this context, the assessment of the translation performance itself seems problematic as it depends on various factors, such as the influence of different social contexts on writing processes, the influence of learners' general knowledge and the level of language proficiency and judgment on writing skills. Thus, the authors address the area of reflections on the nature and meaning of assessment and self-assessment (also in the translation process) from the perspective of learners and teachers.

Birgit Krehl sees the translation process as a network of interactions and analyses tandem translation and interlinear translation as methods of translational action based on the joint action of several actors, which allows translators and poets to work closely together in various projects. The key words in her considerations are the visibility of the translator and the interaction between translators and between translators and poets in an anthology as a publication format.

The last article in the current issue of the journal is also devoted to literary translation. Raluca Sinu connects this issue with the still relevant problem of the translator's knowledge and the dependence of their translation decisions on the scope of their knowledge. The author researches terms related to nature terminology in the literary text highlighting possible explanations for the translation decisions. In this way, Raluca Sinu demonstrates the relationship between the translator's limited knowledge and the translation techniques and strategies used.

Lublin, September, 2024



Die Frage nach den Veränderungen und Modifikationen, die sich im Begriff der Transformation verbergen, ist nicht neu und wird im wissenschaftlichen Diskurs in seinen verschiedenen Varianten, Formen, Umfang und Bereichen behandelt. Der Begriff der Transformation kann nicht nur mit der politischen Dimension assoziiert werden, wenn z.B. von systemischer Transformation die Rede ist. Sozial-ökologische und gesellschaftliche Transformation (Kistel et al., 2024; Weik et al., 2024), digitale Transformation (Deppe 2024; Wirtz 2024), ökonomische Transformation (Weik et al., 2024; Wolf 2024), systemische Transformation (Bernstein, 2022), Unternehmenstransformation (Märk & Situm 2024; Raharjo et al., 2024) – dies sind nur einige ausgewählte Beispiele für Arbeiten, in denen der Begriff der Transformation zu einem Schlüsselwort für die Überlegungen der Forscher*innen wird und die sozialen und wissenschaftlichen Kontexte, in die die Überlegungen eingebettet sind, die Bedeutung dieses Begriffs erweitert haben.

Ohne Zweifel ist Transformation mit einer Änderung der Merkmale oder Eigenschaften eines bestimmten Phänomens verbunden, mit einer Modifikation seiner Intensität oder Qualität oder sogar mit der Neubildung von etwas bereits Existierendem in einer anderen Dimension oder unter Berücksichtigung anderer Bezugspunkte. Veränderte Umstände und Situationen, verschiedene Kontexte und das Nebeneinander unterschiedlicher Bedingungen führen dazu, dass Phänomene, Objekte und Prozesse Transformationen unterliegen können. Im Mittelpunkt der hier vorgestellten Überlegungen steht der Translationsprozess. Ein Prozess, dem nicht selten Transformationen zugrunde liegen, weil er von solchen Aspekten abhängt wie: a) Implementierung neuer Tools, die Übersetzer*innen und Dolmetscher*innen zur Unterstützung ihrer Tätigkeit verwenden, b) anderen, neuen, sich ändernden Bedürfnissen der Übersetzer*innen und Dolmetscher*innen selbst, dem Markt, Translationsituationen als Kommunikationssituationen, c) dem Wesen und Status des Translationsprozesses selbst, nicht nur als souveräne Handlung, sondern als Instrument zur Erreichung anderer Ziele.

Anhand einiger ausgewählter neuer Veröffentlichungen in der Translorik (Chen & Krueger 2024; Chen & Yan 2024; Filar 2023; Marczak 2024; Riondel; 2024), die im Folgenden kurz beschrieben werden, lässt sich eine Art transformativer Wende beobachten, dank der das Translationsgefüge als Kommunikationsgefüge (F. Grucza 1981; S. Grucza 2014; Żmudzki 2013) in ein Netz von Abhängigkeiten eingebettet wird. Diese bestimmen sein Wesen und beeinflussen, was der wissenschaftliche Diskurs in der Translorik in den Blick nimmt. Chen/Krueger (2024) untersuchen die potenzielle Wirksamkeit des computergestützten Konsekutivdolmetschens (CACI). Marczak (2024) betont die Bedeutung von Professionalität in der Ausbildung zukünftiger Übersetzer*innen und Dolmetscher*innen und diskutiert das Praktikum als Lernmodus, der die berufliche Realität aus Sicht der Studierenden am ehesten widerspiegeln sollte. Riondel (2024) betrachtet die Revision, definiert als die Überprüfung einer Übersetzung durch einen zweiten Übersetzer/ eine zweite Übersetzerin, als einen wichtigen Schritt in der Übersetzung. Dieses Problem hängt mit vier Fragen zusammen, nämlich: der Vielfalt der Revision, der situativen Natur der Revision, der Schwierigkeit der Aufgabe und der sozialen Dimension der Revision und vor allem den Grundsätzen guter Kommunikation. Chen and Yan (2024) sehen eine enge Beziehung zwischen dem Prozess des Schreibens und des Übersetzens, die im wissenschaftlichen Diskurs und in der Ausbildung der Übersetzer*innen nicht ausreichend erforscht wird. Die Ergebnisse ihrer Studie können deswegen helfen, ein detailliertes Verständnis der Leistung der Schüler*innen beim Schreiben und Übersetzen zu erlangen. Filar (2023) hingegen betrachtet die Ausbildung der Übersetzer*innen und/oder, Dolmetscher*innen im Kontext der Theorie der kreativen Übersetzung von Kußmaul (2007), die auf kognitiven Sprachtheorien und psychologischer Kreativitätsforschung basiert, und schlägt Aufgaben vor, die

Kreativität und Reflexivität sowohl in der Phase der Rezeption des Ausgangstextes als auch in der Phase der Produktion des Textes in der Zielsprache stimulieren.

Die obige Darstellung verschiedener Konzepte ist ein Beweis dafür, dass die Veränderungen in der Entwicklung von Translations- und translatorischer Kompetenz durch die gegenseitige Durchdringung und den Wechselspiel der Voraussetzungen der Translorik als wissenschaftlichen Bereiches und solcher Phänomene verursacht werden wie: technologische Entwicklung, Professionalisierung der Ausbildung und ihre Übertragung auf die berufliche Realität, Relationalität im Translationsprozess (Beziehung zwischen den Prozess-Teilnehmenden und das Zusammenspiel der Handlungen, die diesen Prozess ausmachen) und individuelle Entfaltung, die die Entwicklung von Translations- und translatorischer Kompetenz unterstützt.

Wie aus den obigen Überlegungen hervorgeht, haben Transformationen unterschiedliche Formen und umfassen unterschiedliche Dimensionen des Translationsprozesses. Die in dieser Ausgabe der Zeitschrift vorgeschlagenen Beiträge veranschaulichen diese – von den den Translationsprozess unterstützenden Werkzeugen und Instrumenten und ihrer Operationalisierung im Translationsprozess, über die Sichtbarkeit der Dolmetscher*innen oder Übersetzer*innen in dem Prozess und ihre Kompetenzen, bis hin zur Fähigkeit der Übersetzer*innen und Dolmetscher*innen, über ihre Handlungen zu reflektieren, Probleme zu lösen und Handlungen auf der Mikroebene im Rahmen der Translationsaufgabe, aber auch auf der Makroebene, auf dem Markt, zu planen, sowie zum Produkt – dem Zieltext, der seine eigene Qualität hat.

Ralph Krüger und Marek Łukasik weisen auf technologische Veränderungen hin, die sich auf die Translorik auswirken. Ihre Überlegungen konzentrieren sich auf Phänomene wie KI-gesteuerte Tools, wie neuronale maschinelle Übersetzungssysteme, die jüngsten Entwicklungen in der generativen KI oder digitale Kompetenzen. Ralph Krüger betont, dass sie das Ergebnis von Prozessen der Digitalisierung und Datafizierung sind, und nimmt den Übergang von machine-aided human translation (MAHT) zu human-aided machine translation (HAMT) oder machine-translation post-editing (MTPE) in den Blick. Durch die Etablierung von Fähigkeiten wie maschinelle Übersetzungskompetenz, Datenkompetenz und KI-Kompetenz versucht Krüger, einen KI-Kompetenzrahmen für Übersetzung, Dolmetschen und Fachkommunikation zu definieren, um letztendlich eine Reihe von KI-bezogenen Kompetenzen zu entwickeln, die von aktuellen und zukünftigen Stakeholdern in der KI-gesättigten Sprachindustrie benötigt werden. Marek Łukasik präsentiert hingegen die Ergebnisse einer Pilotstudie zur Wahrnehmung der Zukunft des Berufs des Übersetzers oder des Dolmetschers im Zeitalter der künstlichen Intelligenz. Einerseits bestätigt die Studie, dass Entwicklungen im Bereich der generativen KI die Produktivität und Zuverlässigkeit steigern können, andererseits besteht jedoch immer noch eine Wissenslücke hinsichtlich

der spezifischeren Nutzung von der generativen KI im Beruf des Übersetzers/ des Dolmetschers. Das Postulat der Änderungen in den konstitutiven Forschungsbereichen der Translorik als wissenschaftlicher Disziplin scheint ebenfalls wichtig zu sein, wie die genannten jüngsten Veröffentlichungen belegen. Die in dieser Ausgabe gesammelten Artikel sind demnach eine Fortsetzung davon.

Tawei Wang befasst sich auch mit maschineller Übersetzung (MÜ) und identifiziert die Unterschiede zwischen menschlicher Übersetzung und MÜ, die durch translator pen dargestellt werden. Die zugrunde liegende qualitative und fallbasierte Textanalyse ist ein Impuls für weitere, breitere Forschung mit der Verwendung verschiedener Methoden, darunter auch quantitativer, um eine für künstliche Intelligenz (KI) und natürliche Sprachverarbeitung (NLP) zu erweitern.

Eine weitere in diesem Sonderheft der Zeitschrift postulierte Wende ist die systemische Wende, der das Simultandolmetschen unterzogen werden sollte. Martina Behr weist auf die Notwendigkeit einer methodischen Konsolidierung hin, die durch die Nutzung der Erkenntnisse der Systemtheorie erreicht werden kann, und stellt ein Beispiel für das erste systemdynamische Modell des Simultandolmetschens vor. Das i-Modell soll erste Beweise und Vorteile eines systemischen Ansatzes aufzeigen.

Die Idee und das Wesen der Polyphonie werden zu einem weiteren Phänomen, das in der translationswissenschaftlichen Forschung erörtert wird. In diesem Zusammenhang sind jedoch nicht die Werkzeuge wichtig, die in den Translationsprozess mit einbezogen werden, sondern Menschen – zukünftige Übersetzer*innen und Dolmetscher*innen – und die Entwicklung ihrer Fähigkeiten. Der Begriff der Polyphonie, den Konrad Klimkowski in seinem Beitrag verwendet, stützt sich auf das Konzept der Mehrstimmigkeit, das in die Ausbildung von Übersetzer*innen und Dolmetscher*innen eingeführt und als pädagogische Idee behandelt wird. Der Autor versucht zu zeigen, wie Polyphonie in den Unterrichtsinhalt eingebettet werden kann, und zu argumentieren, dass Polyphonie den Studierenden eine fundierte Berufswahl ermöglichen kann.

Marta Chodkiewicz-Nalepa konzentriert sich auch auf die Entwicklung der Kompetenzen zukünftiger Übersetzer*innen und Dolmetscher*innen. Der Schwerpunkt liegt auf der Problemlösung und umfasst 315 Problemlösungspfade, die aufgrund verbaler (aber auch nonverbaler) Beweise etabliert werden, die das Bewusstsein der Studierenden für die Art der Probleme, die Strategie des Problemlösungsprozesses und die Plausibilität der bereitgestellten Endlösungen bestätigen.

Nilufer Aybirdi und Turgay Han hingegen sehen die Übersetzung als ein Bewertungsinstrument der Schreibfähigkeit und ein Werkzeug zum Einsatz im Fremdsprachenunterricht. Hinsichtlich dessen erscheint die Bewertung der Übersetzungsleistung selbst problematisch, da sie von verschiedenen Faktoren abhängt, wie etwa dem Einfluss unterschiedlicher sozialer Kontexte

auf Schreibprozesse, dem Einfluss des Allgemeinwissens der Lernenden und dem Niveau der Sprachkompetenz und der Bewertungsfähigkeit. Damit gehen die Autoren auf den Bereich der Überlegungen bezüglich des Wesens und der Bedeutung von Bewertung und Selbstbewertung (auch im Translationsprozess) aus der Perspektive der Lernenden und Lehrenden ein.

Birgit Krehl betrachtet den Übersetzungsprozess als Netzwerk und Wechselspiel von Interaktionen und analysiert Tandem-Übersetzen und Interlinearübersetzung als Verfahren translatorischen Handelns, die auf dem gemeinsamen Handeln mehrerer Akteur*innen beruhen und Übersetzer*innen und Lyriker*innen in verschiedenen Projekten eng zusammenarbeiten lassen. Das Schlüsselwort von Überlegungen der Autorin ist die „Sichtbarkeit“ der Übersetzer*innen und die Interaktion zwischen Übersetzer*innen und zwischen Übersetzer*innen und Lyriker*innen in einer Anthologie als Publikationsformat.

Auch der letzte Artikel in der vorliegenden Sondernummer der Zeitschrift widmet sich der literarischen Übersetzung. Raluca Sinu verbindet dieses Thema mit dem nach wie vor aktuellen Problem des Wissens der Übersetzer*innen und der Abhängigkeit ihrer Übersetzungsentscheidungen von den Wissensbeständen. In dem Beitrag werden Begriffe in den Blick genommen, die mit der Naturterminologie im literarischen Text in Zusammenhang stehen, und mögliche Erklärungen für die Übersetzungsentscheidungen aufgezeigt. Auf diese Weise zeigt Raluca Sinu die Beziehung zwischen dem (begrenzten) Wissen und den verwendeten Übersetzungstechniken und -strategien auf.

Lublin, September, 2024

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Outline of an Artificial Intelligence Literacy Framework for Translation, Interpreting and Specialised Communication

SUMMARY

This paper first traces the AI-induced automation of the digitalised and datafied language industry, with a focus on neural machine translation and large language models. The paper goes on to discuss a range of digital literacies that have become increasingly relevant in the language industry in light of these technologies, i.e., *machine translation literacy*, *data literacy* and *artificial intelligence literacy*. After highlighting the interface between these three literacies, the paper drafts an outline of an artificial intelligence literacy framework for translation, interpreting and specialised communication. This framework intends to capture an extensive set of competencies required by stakeholders in the AI-saturated language industry.

KEYWORDS

language industry; artificial intelligence; neural machine translation; large language models; machine translation literacy; data literacy; artificial intelligence literacy

1. Introduction: AI-induced automation of the language industry

The rapid evolution of modern artificial intelligence (AI) technologies within the machine learning (ML) paradigm has fuelled the (semi-)automation of intellectual labour in the language industry in recent years (cf. ELIS Research, 2023, pp. 37–39). This AI-fuelled automation has been most pronounced in the translation sector, where powerful neural machine translation (NMT) systems based on the transformer architecture (cf. Vaswani et al., 2017) have led to a widespread shift in production processes from *machine-aided human translation* (MAHT) to *human-aided machine translation* (HAMT) or *machine-translation post-editing* (MTPE). The transformer architecture for NMT systems consists of an encoder and a decoder side. The encoder transforms a given source text into a numerical vector representation which can be processed by the underlying neural network. The decoder then uses this vector representation of the source text to produce the target translation. This encoder-decoder architecture can be split into an autonomous encoder side, which serves as the architecture of so-called *encoder-only language*

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models like Google’s BERT model (Bidirectional Encoder Representations from Transformers), and an autonomous decoder side, which serves as the architecture of so-called *decoder-only language models* such as OpenAI’s GPT-4 model (Generative Pre-Trained Transformer). Due to their size, models such as GPT-4 are also called *large language models* (LLMs). The origins of recent LLMs in the transformer architecture for NMT systems is depicted in figure 1:

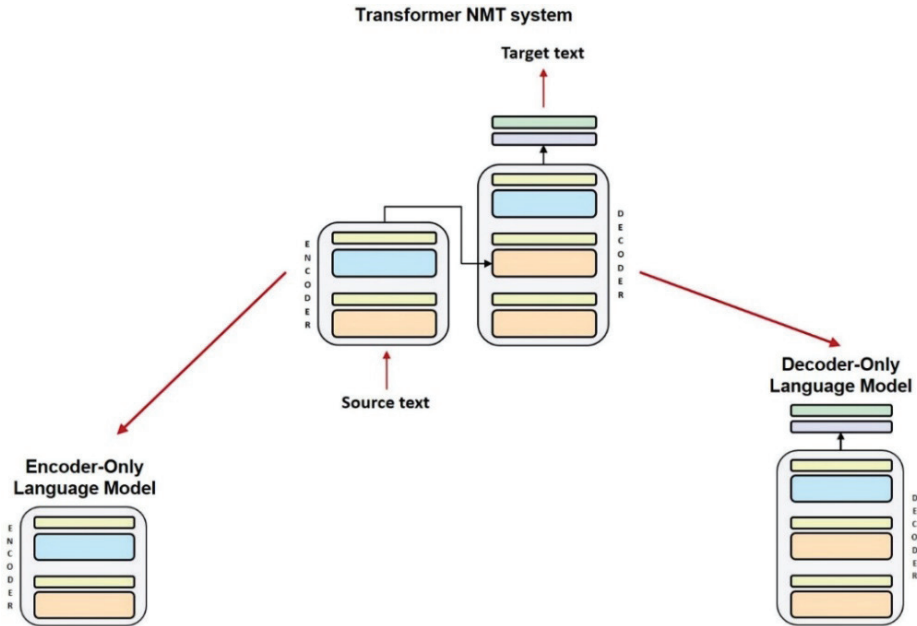


Figure 1: Origins of current LLMs in the transformer architecture for NMT systems

After being trained on massive amounts of data, LLMs exhibit an *in-context learning* behaviour (cf. Dong et al., 2023), which means that they can be conditioned ‘on the fly’ to perform a wide variety of different tasks via natural language prompting. For example, while dedicated MT systems such as DeepL can only perform machine translation, LLMs such as GPT-4 can be prompted both for machine translation and for a wide range of other tasks, such as autonomous text production, text optimisation or quality evaluation. Recent LLMs such as the current version of GPT-4 or Google’s Gemini 1.5 are so-called *multimodal language models*, which can process other modalities besides written language (sound, images, videos). Particularly the ability of recent LLMs to produce autonomous texts and to process spoken language makes them applicable to other sectors of the language industry beyond translation, most notably monolingual specialised communication/technical writing and interpreting. Due to their

high versatility, (multimodal) LLMs are also referred to as *general-purpose AI technologies*, which are defined as “machines designed to perform a wide range of intelligent tasks, think abstractly and adapt to new situations” (European Parliamentary Research Service, 2023, p. 1). These general-purpose technologies can potentially be used to further increase the degree of automation in a wide variety of language industry workflows. However, this requires a proper handling of these technologies along various dimensions (e.g., model interaction, workflow implementation, ethical considerations). In turn, this means that relevant language industry stakeholders will require an expanded set of digital competences in order to be able to harness the full potential of these technologies in an efficient and at the same time ethical and sustainable manner.

2. Digital literacies required in the digitalised and datafied language industry

The (semi-)automation of intellectual labour in the language industry through modern AI technologies is the combined product of processes of digitalisation and datafication. Digitalisation refers to the continuous development or evolution of digital technologies (most recently and notably in the form of powerful artificial neural networks) such as NMT systems or LLMs. Datafication, on the other hand, describes the process of accumulating and providing to relevant stakeholders large amounts of digital data (texts, images, videos, etc.) which can be used to train AI technologies in the ML paradigm. In the context of translation, which has been at the forefront of AI-induced automation via NMT, this has led to calls for adequate digital literacies on the part of the various stakeholders in the modern digitalised and datafied translation industry.

Three such digital literacies stand out in particular. The first one is *machine translation literacy*, which is defined by O’Brien and Ehrensberger-Dow (2020, p. 146) as “knowing how MT works, how it can be useful in a particular context, and what the implications are of using MT for specific communicative needs”. With a focus on the professional translation industry, Krüger (2022, p. 249) built on this concept and developed the concept of *professional MT literacy*, which describes “the full range of MT-related competences professional translators (and other language professionals) may require in order to participate successfully in the various phases of the MT-assisted professional translation process”. The second digital literacy recently propagated in the context of translation studies is *data literacy*. The concept is defined by Ridsdale et al. (2015, p. 11) as “the ability to collect, manage, evaluate, and apply data, in a critical manner”. The third and most recent digital literacy with high relevance in a translation/language industry context is *artificial intelligence literacy*, which Long and Magerko (2020, p. 1) define as “a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and

use AI as a tool online, at home, and in the workplace”. Given the pervasiveness of powerful AI technologies in modern societies, voices are emerging that posit AI literacy as one of most important literacies of the 21st century, together with traditional reading, writing, mathematical and overall digital skills (cf. Ng et al., 2021, p. 9). MT literacy, data literacy and AI literacy are not isolated concepts but rather interrelated in various ways, as shown in figure 2:

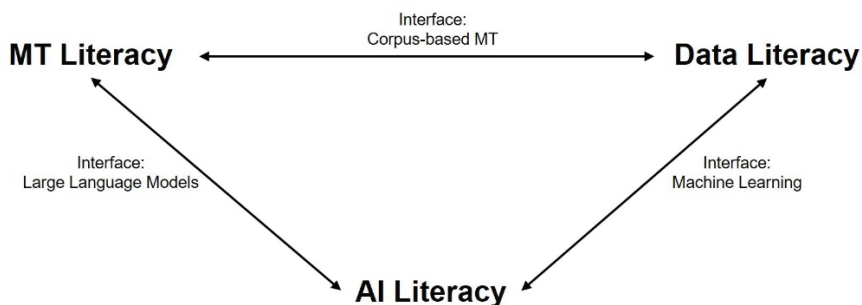


Figure 2: Interfaces between MT literacy, data literacy and AI literacy

The interface between MT literacy and data literacy is the paradigm of corpus-based MT. Contrary to systems from the earlier paradigm of rule-based MT, corpus-based MT systems do not operate on translation rules explicitly coded by humans. Instead, they are trained on large volumes of translation data (source texts and their translations) and derive their own translation rules from these training datasets. NMT is the most current variant of corpus-based MT, which makes data literacy an important component of contemporary MT literacy. This interface between MT literacy and data literacy formed the basis of the DataLit^{MT} research project (cf. DataLit^{MT}, 2023), which developed didactic resources for teaching data literacy in the context of professional MT literacy to students of translation studies/specialised communication programmes at BA and MA levels.

The interface between data literacy and AI literacy is the machine learning paradigm in AI research, which develops AI technologies that are able to acquire knowledge on their own by extracting patterns from training datasets. ML is thus the more general paradigm within overall AI research that informs the more specific paradigm of corpus-based MT. Modern high-performing AI technologies such as LLMs belong almost exclusively to the ML paradigm and are based on an inseparable combination of model algorithms (most notably the transformer) and their training data. Accordingly, Schüller et al. (2023, p. 426) argue that “data literacy and AI literacy cannot be separated from each other as data serves as the fuel for AI”.

Finally, the interface between AI literacy and MT literacy is established by recent LLMs which, as discussed in section 1, emerged from the NMT transformer architecture. Given the origins of these LLMs in NMT, several subcomponents of MT literacy can be transferred more or less directly to the wider concept of AI literacy, as will be illustrated in the following section.

3. Outline of an Artificial Intelligence Literacy Framework for Translation, Interpreting and Specialised Communication

In this section, I present an outline of an AI Literacy Framework for Translation, Interpreting and Specialised Communication. The framework is based primarily on three existing digital literacy frameworks: 1) The *Professional MT Literacy Framework* (cf. Krüger, 2022, p. 250) developed as part of the DataLit^{MT} project. Expanding upon the definition of professional MT literacy discussed in section 2, the framework distributes overall professional MT literacy over the five dimensions of *technical MT literacy*, *linguistic MT literacy*, *economic MT literacy*, *societal MT literacy*, and *cognitive MT literacy*. Each of these dimensions is divided further into individual subdimensions. 2) The *DataLit^{MT} Framework*, which is an MT-specific data literacy framework also developed in the context of DataLit^{MT} (cf. Krüger, 2022, p. 264). The framework covers the typical data lifecycle of an MT project and includes the five dimensions of *Data Context*, *Data Planning*, *Data Collection/Production*, *Data Evaluation*, and *Data Use* (again, divided further into individual subdimensions). 3) The AI literacy framework developed by Long and Magerko (2020), which is a generic framework structured along the five questions of *What is AI?*, *What can AI do?*, *How does AI work?*, *How should AI be used?*, and *How do people perceive AI?*¹ A reduced version of the proposed framework in its draft version is depicted in figure 3:

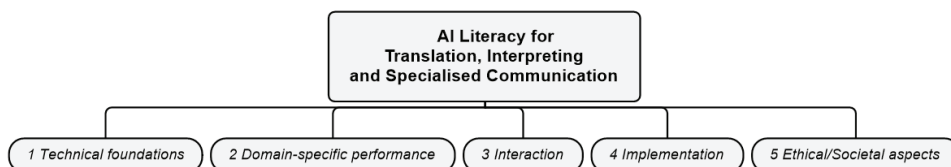


Figure 3: Outline of the Artificial Intelligence Literacy Framework for Translation, Interpreting and Specialised Communication (reduced version)²

¹ The Professional MT Literacy Framework and the DataLit^{MT} Framework as well as the interface between the two frameworks are discussed in more detail in Krüger (2022). Long and Magerko's AI literacy framework as well as its interface with the previous two frameworks are discussed in more detail in Krüger (2023).

² A digital version of this framework is available under the following link: th-koeln.de/itm/ai-literacy/

The individual dimensions of the framework will be discussed in the following sections. Since the full framework is too extensive in scope to be elaborated here in full detail, the discussion will summarise briefly the respective dimensions and then focus only on selected sub-dimensions.

3.1. Technical foundations

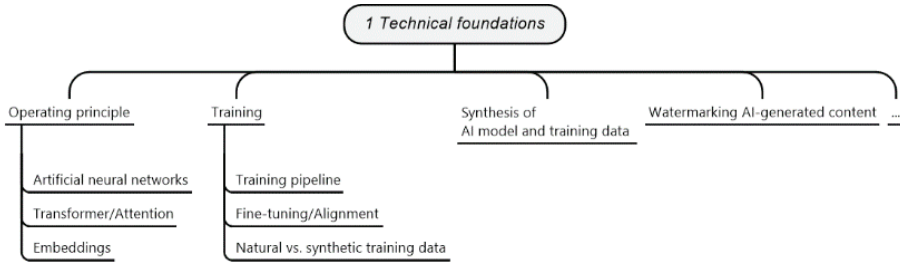


Figure 4: Dimension “Technical foundations”

The first dimension of the proposed framework is concerned with the technical basics of modern AI technologies. This dimension illustrates that the framework only captures a snapshot of the highly dynamic AI landscape and may soon have to be updated. For example, while the transformer is still the state-of-the-art architecture underlying modern AI technologies (and is hence listed under *Operating principle*), competing architectures (e.g., state space models such as *Mamba*, cf. Gu & Dao, 2023) are emerging, which may replace or compete with the transformer as the leading AI architecture in the future. The subdimensions *Training* and *Synthesis of AI model and training data* establish a direct link between this AI literacy dimension and data literacy (see section 2). For example, the data lifecycle of a typical MT project depicted in the DataLit^{MT} Framework basically covers the typical training pipeline of modern AI technologies such as LLMs. The aspect of *Natural vs. synthetic training data* covers a pressing topic in current AI research, namely the tendency to use synthetic (i.e., machine-generated) data to satisfy the extensive training data requirements of these systems, which may negatively affect system performance. For example, Shumailov et al. (2023, p. 1) show that relying extensively on synthetic data in AI model training (at the expense of natural, human-produced data) can lead to what the authors call “model collapse”. In a similar vein, Alemohammad et al. (2023, p. 1) find that, “without enough fresh real data [...], future generative models are doomed to have their quality (precision) or diversity (recall) progressively decrease”³. Watermarking

³ This technical aspect of modern AI technologies is linked to the aspect of identifying the human added-value vis-à-vis these technologies (see section 3.2). In this context, Shumailov et

AI-generated content is also becoming more and more important in an era where AI technologies can imitate human written and spoken language at a very high level and can produce photorealistic images and videos, which drastically increases the risk of AI-induced manipulation (see section 3.5 concerned with ethical/societal aspects of AI). For example, LLMs could potentially be misused in language industry project management by having them mimic human project managers and using them to manipulate freelance translators, interpreters or technical writers to accept unprofitable jobs, unreasonable deadlines, etc.

3.2. Domain-specific performance

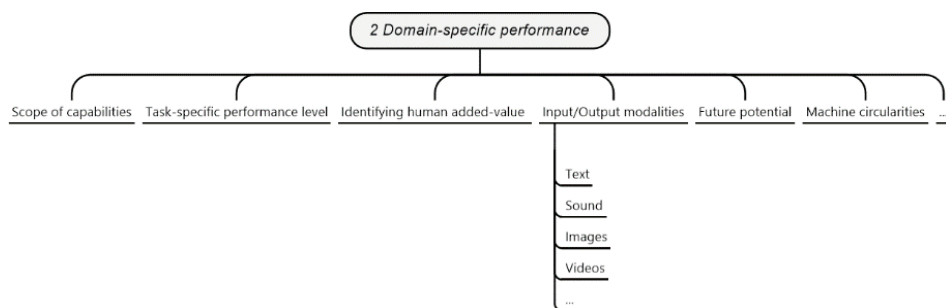


Figure 5: Dimension “Domain-specific performance”

The second dimension of the proposed framework covers the domain-specific performance of current AI technologies such as LLMs. Determining this performance is not a trivial task, since these general-purpose technologies do not betray their affordances in a straightforward way. This means that these systems, contrary to narrow expert systems such as dedicated MT systems (DeepL, etc.), do not readily ‘tell’ their users what to do with them because they can potentially be used for a vast variety of different tasks. Therefore, in order for relevant stakeholders to be able to determine the actual scope of capabilities of current LLMs, to measure their task-specific performance level (which also includes knowledge about the range of input/output modalities these models can handle) and to be able to articulate the added value that humans still provide in AI-fuelled language industry processes, these stakeholders require an adequate AI literacy. Determining this domain-specific performance of current AI technologies is also a prerequisite for integrating these technologies into actual professional workflows (see section 3.4). Given the high pace of current AI development, such an AI literacy also involves the ability to make informed speculations about the future

al. (2023, p. 1) point out that “the value of data collected about genuine human interactions with systems will be increasingly valuable in the presence of content generated by LLMs [...]”.

potential of these technologies⁴. The high versatility of general-purpose LLMs may also pose a risk of introducing machine circularities into language industry production processes, e.g., when an LLM such as GPT-4 is asked to pre-edit a text for MT, to then machine translate this text and to also post-edit this text with the aim of optimising its quality. In order to avoid such machine circularities, process chains such as these – even though they could now be handled by a single AI model – should ideally be distributed over different technologies and/or human experts.

3.3. Interaction

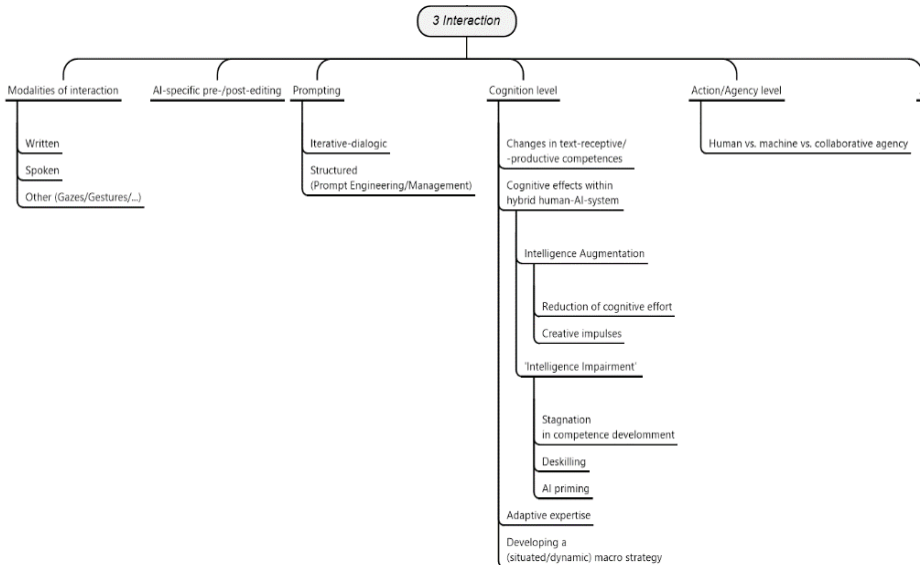


Figure 6: Dimension “Interaction”

This dimension covers aspects of human-AI interaction and is, perhaps unsurprisingly, the most extensive dimension of the proposed framework. The available modalities of interaction are related to the input/output modalities covered in section 3.2. For the near future, standard interaction modalities will most probably be written and spoken language, but other modalities, such as gesture interaction, are already being explored (cf., e.g., the work by Herbig et al., 2019 on multi-modal post-editing). The notion of AI-specific pre/post-editing is informed by MT pre-/post-editing but is wider in scope. For example, notes by design engineers could be structured/optimised by human pre-editors and then be

⁴ Which also has an ethical/societal dimension, see the *Impact assessment* subdimension in section 3.5.

fed into an LLM which then produces an operating manual based on these notes (which would then have to be checked by human post-editors). The cognitive dimension of human-AI interaction is very important and therefore features prominently in the proposed framework. Within a hybrid human-AI system, both positive and negative cognitive effects can emerge. Positive cognitive effects can be subsumed under the term *intelligence augmentation*, which “focuses on AI’s assistive role, emphasizing the fact that cognitive technology is designed to enhance human intelligence rather than simply replacing it” (Szczerbicki & Nguyen, 2021, p. 381). Examples of such intelligence amplification effects would be a reduction in cognitive effort involved in a particular task or creative impulses provided by the AI system. Negative effects could be subsumed under a neologism such as *intelligence impairment* and would include an AI-induced stagnation in competence development (e.g. a stagnation in translation competence in translation students under the influence of NMT systems), an AI-induced loss of competences (*deskilling*, e.g., professional translators losing the ability to translate from scratch because of the permanent availability of MT) or AI priming, i.e., “the cognitive residue that a task performed with technology has on the human mind” (Markauskaite et al., 2022, p. 6). Modern AI technologies also raise new questions concerning the relationship between human and machine agency and the potential merging of these two forms of agency in human-AI interaction. For example, van Lier (2023, p. 80) conceptualises LLMs and humans as the two components of a collaborative agent system. In such a system, LLMs remain – at least for now – the non-autonomous part, which is under human expert supervision.

3.4. Implementation

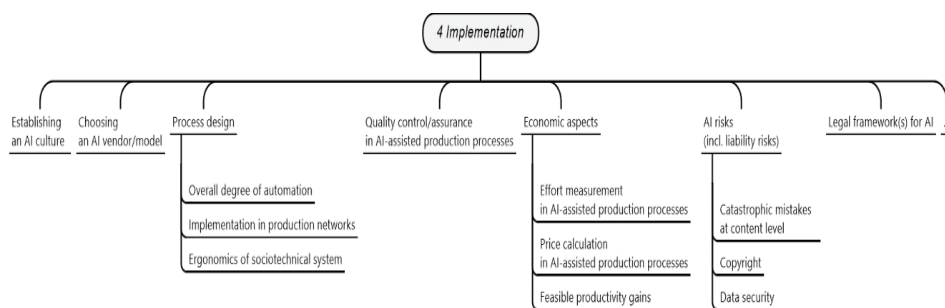


Figure 7: Dimension “Implementation”

This dimension is concerned with the implementation of AI technologies in language industry workflows and is heavily informed by the DataLit^{MT} Framework and the Professional MT Literacy Framework. Establishing an AI

culture involves identifying and specifying areas of application where particular tasks could be solved using AI technologies, and establishing guidelines for using these technologies in an ethical and safe manner (see *Establishing a data culture* as part of the *Data Context* in Krüger, 2022, p. 265). This aspect is of particular importance in the language industry and other professional sectors since a recent survey by Salesforce (2023) among employees of international companies found that over half of the survey participants working with generative AI did so without consent from their employer and 7 in 10 participants had never received any training on how to properly use generative AI in the workplace. Process design involves establishing desirable and feasible degrees of automation and implementing AI technologies in production networks⁵. Here, overall sociotechnical considerations and aspects of organisational and cognitive ergonomics have to be taken into consideration. These aspects have been researched extensively in translation studies (see e.g., Ehrensberger-Dow & Massey, 2017) and can also inform process design in production networks fuelled by new AI technologies such as LLMs. The economic and risk dimensions of the proposed framework are derived from the subdimensions of *Effort estimation/measurement in MTPE*, *Price calculation in MTPE*, *Feasible productivity gains in MTPE*, and *Potential business risks of MT* as part of the *Economic MT Literacy* dimension of the Professional MT Literacy Framework. Again, these subdimensions focus on the more narrow use case of MT but can be extrapolated more or less directly to a wider range of use cases involving general-purpose LLMs. A major legal framework governing the future use of AI technologies is the European Union’s AI Act (cf. European Parliament, 2023). The AI Act adopts a risk-based approach to AI technologies, which may affect AI implementation in the language industry and other professional sectors.

3.5. Ethical/Societal aspects

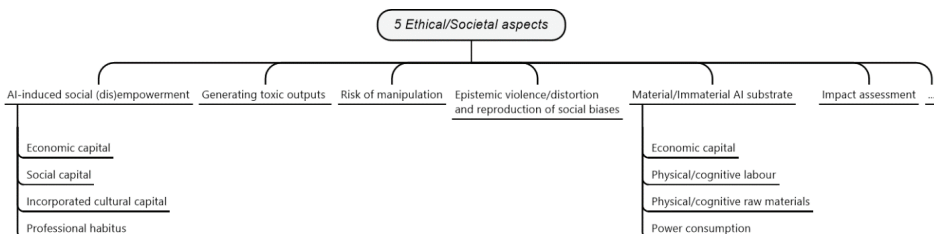


Figure 8: Dimension “Ethical/societal aspects”

⁵ While avoiding machine circularities as discussed in section 3.2.

The final dimension of the proposed framework is concerned with ethical aspects of modern AI technologies, which transcend the language industry and other professional sectors and are highly relevant for AI-saturated societies in general (cf., e.g., Crawford, 2021). Again, translation studies has already brought forth a considerable body of work on this topic, which focuses mostly on the ethical/societal dimension of NMT (cf, e.g., Moniz & Parra Escartín, 2023). One important aspect is potential AI-induced social (dis)empowerment of people affected by these technologies, which the framework models along the Bourdieusian dimensions of *capital* and *habitus* (cf., e.g. the Bourdieusian analysis of MTPE by Sakamoto, 2019). Other relevant aspects are the misuse of LLMs for generating toxic outputs via *jailbreak prompting* (cf. Yong et al., 2024) or the risk of manipulation associated with modern AI technologies (cf. the brief discussion in section 3.1). AI-induced epistemic violence/distortion refers to the potential misrepresentation of reality by data-driven AI systems, for example, by amplifying stereotypes in their underlying training data such as gender or age bias (in an MT context, cf. Bianchi et al., 2023). The notion of *Material/Immaterial AI substrate* involves an awareness of the potential exploitative nature and the environmental impact of AI, which requires large amounts of economic capital and physical/cognitive labour and raw materials and is at the same time a very energy-intensive technology (cf. Crawford, 2021). Finally, powerful AI technologies such as multimodal LLMs also require impact assessments, both at the level of individual industries as well as at overall societal level, in order to analyse the multifaceted consequences of these technologies along relevant dimensions (as sketched in the AI Literacy Framework). Given the high pace of development of current AI research, such assessments must include a forward-looking element, which could be informed, among other things, by ethical frameworks such as Brey's (2012) "anticipatory ethics for emerging technologies".

4. Conclusions

This paper presented an outline of an AI Literacy Framework for Translation, Interpreting and Specialised Communication. The next steps will be to finalise the framework (taking into account its inherent dynamicity and openness due to the high pace of current AI development) and to establish competence levels and competence descriptors for the individual (sub)dimensions of the framework. A blueprint of such competence levels could be Schüller et al.'s (2023, p. 429) three roles of 1) *informed prosumers* (people who produce and consume data and AI in an informed manner), 2) *skilled users* (people who use data and AI in a skilled and responsible manner), and 3) *expert creators* (people who create new insights, solutions, and tools using data and AI). Once the competence levels and descriptors of the framework have been established, they will form the basis for developing didactic resources (in the spirit of the DataLit^{MT} project) for

developing an extensive set of AI-related competences required by current and future stakeholders in the AI-saturated language industry.

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The Future of the Translation Profession in the Era of Artificial Intelligence. Survey Results from Polish Translators, Translation Trainers, and Students of Translation

ABSTRACT

Technological advancements in computer science, particularly in machine translation (MT), have progressively transformed the translation profession. Recent developments in MT, such as neural machine translation tools and AI-powered chatbots, have improved translation speed and accuracy, shifting the translator's role more toward that of an editor or proofreader and expanding the scope of translator competencies. However, with the growing role of automated systems, professional translators have expressed concerns about the future of their profession. This paper aims to highlight the views of Polish professional translators, students of translation, translation teachers, and other language professionals on this topic. The findings presented are part of a broader international pilot study on perceptions of the future of the translation profession in the era of artificial intelligence. The analysis reveals that while the prevailing opinion is that human translators will always be necessary, the increasing influence of AI-powered tools cannot be underestimated.

KEYWORDS

artificial intelligence; neural machine translation; professional translation; translation studies

1. Introduction

“The mechanization of translation has been one of humanity’s oldest dreams. In the twentieth century, it became a reality, in the form of computer programs capable of translating a wide variety of texts from one natural language into another” (Hutchins & Somers, 1992, p. 1). Indeed, machine translation (MT) was one of the first applications envisioned for computers (Russel & Norvig, 2010 p. 860). Initially seen as a “decoding problem, belonging to the area of cryptography” (see Weaver, 1949)¹, computer-performed translation was soon a research topic of many research teams, both in the United States and elsewhere in the world. The first report on the feasibility of MT was published as soon as 1951 (see e.g. Bar-Hillel, 1951). Throughout the decades that followed, MT research went through

¹ The document, seen by Weaver as a ‘memorandum’, is widely regarded as the work laying foundations for future developments in MT.

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times of rapid development and years of stagnation. Yet, the research has had a profound impact on subsequent MT systems, computational linguistics, and artificial intelligence (Hutchins & Somers, 1992, p. 6). Back in 1992, the authors noted that “For many observers of MT development, it has been the conventional wisdom that the most likely source of techniques for improving MT quality is the research on natural language processing within the context of Artificial Intelligence (AI)” (p. 313)².

Indeed, a significant breakthrough came with the introduction of neural machine translation (NMT) (Poibeau, 2017, p. 181–196). Advanced machine learning algorithms have provided increased quality compared to previous solutions. For example, deep learning systems based on artificial neural networks and vast textual databases implemented by Google in 2016, reportedly cut the error rate by 60% (Castelvecchi, 2016; Wu, 2016). This event was a pivotal moment for the translation profession, transforming it to a considerable extent (rather than rendering translators redundant). Not only did NMT become part of the translators’ workbench, but it also increased the need for post-editing tasks (also called machine translation post-editing, or MTPE) (see Moorkens, 2022).

Yet, it was the release of ChatGPT in November 2022 that reignited the public imagination regarding the possibilities of the new technology and its novel applications. Based on large language models (LLMs) and an example of generative AI, or GenAI, the chatbot can perform a variety of language-related tasks, including translation. This is a result of the very nature of LLMs. According to Ray,

LLMs are AI models that are trained on vast amounts of text data in order to learn how to understand and generate human language. These models use a combination of neural networks and machine learning algorithms to process language in a way that is similar to the way humans do. LLMs have revolutionised NLP [natural language processing] by enabling computers to understand and generate human language more accurately and effectively than ever before. (Ray, 2023, pp. 133–134; addition mine)

All LLMs on the market mention translation as one of their key capabilities (Ray, 2023, p. 134). Once again, a new technology has posed a threat to the translation profession. However, Pym (2024) suggests that any technological development has been successfully embraced by the translation profession, allowing the processing of ever growing number of translations. Also, none has led to job losses. As the researcher puts it,

² It needs to be noted that in their work Hutchins and Somers refer to only “semantics-oriented” approach, stemming from the fact that any MT system must be able to ‘understand’ the meanings of texts, since “translation is concerned primarily with conveying the content of ‘meaning’ of a text in one language into a text in another language [...]” (Hutchins & Somers, 1992, p. 314).

The translation industry survived neural machine translation in 2016, so why should it not also survive generative AI? The hopeful argument here is that, as long as the outputs are not always optimal, post-editing will be needed, and in order to post-edit you have to know how to translate, so it can be business as usual for all of us. (Pym, 2024)

The technology comes with some inherent limitations, and it is still a matter of debate what the future of the profession will be (see Gordon, 2024, p. 9). Admittedly, changes in the translation profession were envisioned as early as 1952. Bar-Hillel emphasised that fully automatic MT was not feasible (at the time) as there was “no method, for the time being, by which the machine would eliminate semantical ambiguities” (Bar-Hillel, 1952, p. 229). Accordingly,

[f]or those targets in which high accuracy is a *conditio sine qua non*, pure MT has to be given up in favor of a mixed MT, i.e., a translation process in which a human brain intervenes. [...] the human partner will have to be placed either at the beginning of the translation process or the end, perhaps at both, but preferably not somewhere in the midst of it, according to a well-known principle of electronic computer handling. (Bar-Hillel, 1952, p. 230)

Bar-Hillel directly outlines the roles of the pre-editor and the post-editor, detailing their tasks on the following pages of his seminal paper. In the era of AI translation, the latter role is seen as one of great significance, particularly in tasks requiring human-quality translation. However, according to Moorkens et al. (2024), “[p]redictions that ‘post-editing will dominate translation production’ (Lommel & DePalma 2016: 20) do not seem to have materialised in all segments of the market” (p. 2). One survey shows that 46.5% of translators taking part in the study never accept MTPE jobs, mentioning little or no satisfaction (including intellectual and financial ones) from performing the task and the time needed to complete a post-editing assignment as the main reasons (Farrell, 2023, pp. 54–55). There is, however, a 4% year-to-year growth in the number of post-editing assignments commissioned to translation providers (ELIS, 2024; data compared with study results from 2023).

Despite the above-mentioned assertions, the future of the translation profession, as reported/ perceived by the community in question, does not seem to be certain. According to a 2024 survey by the Society of Authors, the UK’s largest trade union for writers, illustrators, and translators, 37% of translator respondents have used GenAI in their work, with 8% claiming that they had been asked to do so by the publisher or the commissioning organisation. The majority of translators (77%) think that AI will negatively impact future income from their creative work, with 36% pointing out that they have already lost work due to GenAI (SoA, 2024).

The European Language Industry Survey 2024 reveals a negative sentiment in the translation industry, despite a positive outlook noted in 2023 (ELIS, 2023, 2024). The report notes that “At current pace, it is expected that some form of

MT or AI will be used in more than 50% of professional translations by 2025” (ELIS, 2024). The proponents of the technology emphasise that AI translation will increase efficiency, will be a source of additional editing work, and will be a motivator for clients to choose human translation due to bad AI experiences. On the other hand, the opponents raise issues of the indiscriminate use of the technology, which may lead to quality issues, a fear that widespread acceptance by the general public [of the technology] will increase acceptance of machine translation – with or without post-editing – as a valid replacement for human translation, arguing that it will result in the reduction of appreciation, and therefore also the financial compensation, for human language work (ELIS, 2024, pp. 41–42).

Another survey conducted by the French Society of Translators (fr. *Société française des traducteurs*) in November and December 2023 prompted the Steering Committee of the Society to issue a Statement in which they emphasise that translators rank “competition from AI as their main concern” and list the major (negative) impacts of AI on the translation profession, including: the disappearance of the translators’ role as experts in language and intercultural communication, the poor remuneration paid for post-editing tasks, which by their nature are time-consuming and non-intellectually stimulating, and the fact that machine-produced texts and speeches never attain a professional level of quality (SFT, 2024). The Statement concludes as follows:

The Steering Committee of the *Société française des traducteurs* is expressing the significant concerns of the professions it represents to ensure that human beings remain central to this new technology. They aim to prevent the unsupervised development of generative AI solutions for translation and interpreting from diminishing the richness of language and critical thinking, which are fundamental to communication and our humanity.

Voices of concern have also been expressed by, for example the European Council of Literary Translators (CEATL, 2024)³.

The changing landscape of the translation profession prompted an international group of researchers to study the perception of the role that AI plays in translation and the level of knowledge/ competence regarding the current affordances of GenAI (from the perspective of a translation task). The results of the study will be used to develop methods and draft materials that will aid modern translator education. In particular, this paper discusses the results of a questionnaire obtained from Polish professional translators, university teachers (translation trainers), and university students attending translation courses. The following paragraphs focus on the methodology adopted (Section 2), present the results with some

³ See also CEATL survey reports on the use of AI by individual literary translators: https://www.ceatl.eu/wp-content/uploads/2024/04/CEATL_AI_survey_for_members.pdf

preliminary comments (Section 3), discuss the results obtained, putting them in a wider context (Section 4), and conclude with some guidelines concerning the new educational pathways that need to be followed (Section 5).

It is hoped that the results of the pilot survey will shed light on the current concerns of translation professionals in Poland and will facilitate the development of more effective and relevant curricula that address the evolving needs and challenges faced by translators in the era of AI-powered technologies.

2. Methodology

As mentioned above, the study aims to explore the views of the existing and emerging AI-powered translation tools on the translation profession, and to measure the level of knowledge/ competence regarding the capabilities of GenAI tools.

An international group of researchers designed a questionnaire, whose identical (localised) copies were distributed among the study participants (professional translators, translation trainers, and translation students) in Croatia, Italy, Poland, Romania, Slovenia, and Spain. The study was conducted in January and February 2024, with a total of 241 responses gathered. Full results are currently being processed for further analysis. The present paper discusses partial results gathered from participants registered on Polish professional translators' forums or studying/ working at Polish universities. A total of 40 participants took part in the survey, 21 of whom were professional translators, 12 were students of translation, 3 worked as teachers of translation, while 4 survey participants did not indicate their profession⁴. Table 1 summarises the working languages indicated by the respondents.

Table 1. Working languages of study participants

Language	No. of respondents
English	38
Polish	34
German	8
French	5
Russian	5
Spanish	2
Portuguese	1
Italian	1
Latin	1

⁴ It is assumed that they were the representatives of the target groups, since the survey was distributed among the groups indicated.

The study aimed at both (1) the evaluation of the expertise of study participants in the application of LLM-based systems in a specific task related to translation activity, and (2) the elicitation of opinions on the future of the translation profession in the era of AI-powered tools. The questionnaire included the following questions:

(1) Evaluation of AI-related knowledge/ competence.

1. Do you use any AI-powered chatbots (such as ChatGPT, Bard⁵, etc.)? If you do, do you have a premium account?
2. What AI-powered tools do you use in your studies/work?
3. Do you use AI-powered tools such as ChatGPT in translation?
4. Do you use AI-powered tools such as ChatGPT in terminology extraction?
5. Do you use AI-powered tools such as ChatGPT in text fine-tuning for register?
6. Do you use AI-powered tools such as ChatGPT in error correction?
7. Is the use of AI in your work routine a breach of confidentiality?
8. Does the use of AI-powered tools breach (in any way) your work ethics?

(2) Opinion on the future of the translation profession.

9. Which statement is more viable in your opinion:
 - Human translators will always be essential.
 - I foresee a future where AI can fully replace human translators.
10. Please explain your point of view on the future of the translation profession.

Question 1 aimed to elicit yes/no answers. Question 2 included a checkbox set (answers: ChatGPT, Bing Chat⁶, Bard, Copilot, Other (an open-ended response option)). Questions 3-6 were a multiple-choice set (answers: 'This is not possible'; 'I do not know how to do it'; 'I do it rarely'; 'I do it occasionally'; 'I do it often'; 'I do it on a daily basis'). Questions 7 and 8 aimed to gather yes/ no/ I do not know answers. Question 9 provided three options as answers: 'Human translators will always be essential'; 'I foresee a future where AI can fully replace human translators'; 'I have no opinion'; or 'Other' (an open-ended response option). Question 10 was an open-ended question.

The answers were gathered in a spreadsheet, with numerical data processed for quantitative summary and visualisation. The open-ended responses were analysed manually. The responses to Question 10 were also analysed manually, then rephrased, and arranged according to the target group analysed (here: professional translators and students of translation⁷).

⁵ Now known as Google Gemini.

⁶ Now known as Microsoft Copilot.

⁷ The decision to include the answers of the two participant groups only was linked to the need of focussing on the respondents who are or will soon be members of the profession, and in this way

3. Results

(1) Evaluation of AI-related knowledge/ competence

Of all study participants, 50% use some kind of AI-powered chatbot (47.5% of professional translators and 58% of translation students). Additionally, 15% of the users taking part in the study have a premium account of the tool. The majority (70%) of the respondents who use an AI-chatbot use only one tool, followed by those who use two (25%), and three tools (5%). ChatGPT is the tool used by all those admitting to using an AI-powered chatbot, followed by ‘other’ tools at 25%, and Bard at 5%.

The following part of the study focussed on the respondents’ self-assessment as regards their knowledge/ competence in the use of generative AI in translation or translation-related tasks (terminology extraction, register fine-tuning or error correction) and have been collated into one data set (Figure 1), a detailed discussion of which is presented below.

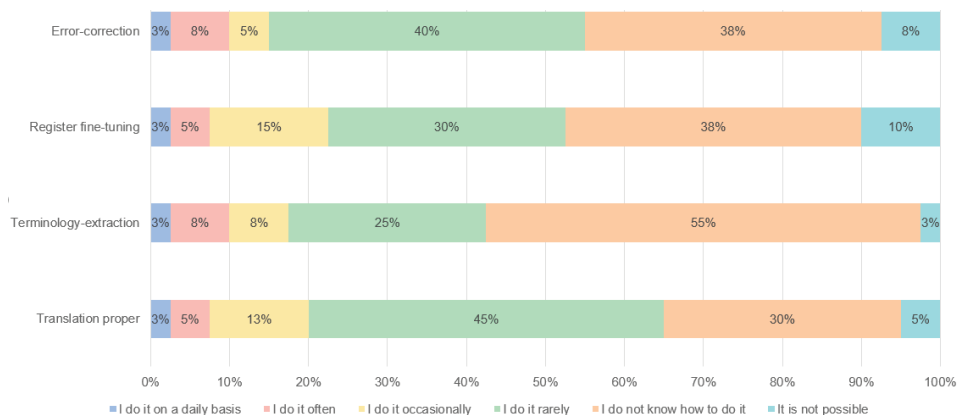


Figure 1: Summary of the answers linked to the responders knowledge of/ competence in using GenAI tools in translation and translation-related tasks (Questions 3–6)

The data presented in Figure 1 reveal that the majority of respondents use GenAI tools in the translation proper (66%), followed by those who use the technology in error correction (56%), register fine-tuning (53%), and terminology extraction (44%). Quite surprisingly, as regards terminology extraction, the majority of respondents (58%) lack the knowledge or skills to perform such activity. Overall, the competence gap is quite extensive, ranging from 35% to 58% across all tasks. Only 3% of all respondents use GenAI tools in all the translation and translation-related tasks on a daily basis. Of all those who use GenAI in the translation proper, 68% use the technology rarely, which may indicate a lack of trust in the tools.

obtain data that were aligned to the overarching aim of the entire international study.

In relation to the question of whether the use of AI in the work routine is a breach of confidentiality (Question 7), 30% of respondents have no attitude or knowledge on the matter, followed by those who confirm that it is in breach of confidentiality (25%), and those who overtly state it is not an issue (25%). Another 20% did not answer the survey question.

Regarding the question related to work ethics (Question 8), 55% of respondents claim that the use of AI-powered tools does not breach their work ethics, followed by those who claim that it does (22.5%) or do not know whether it does or does not (22.5%).

(2) Opinion on the future of the translation profession

The study revealed that 52% of all study participants foresee a future where human translators will always be essential, while 43% of the respondents think that in the future AI can fully replace human translators. The remaining survey participants have ‘no opinion’ (5%), with one overtly claiming that the future in this respect is difficult to predict (see Figure 2). The percentage breakdown for professional translators and students of translation is presented in Figure 3 and 4.

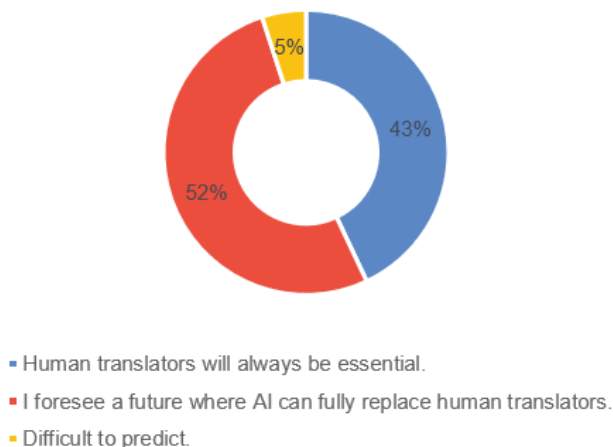


Figure 2: A percentage breakdown of the study participants' opinion on the future of the translation profession in the era of AI

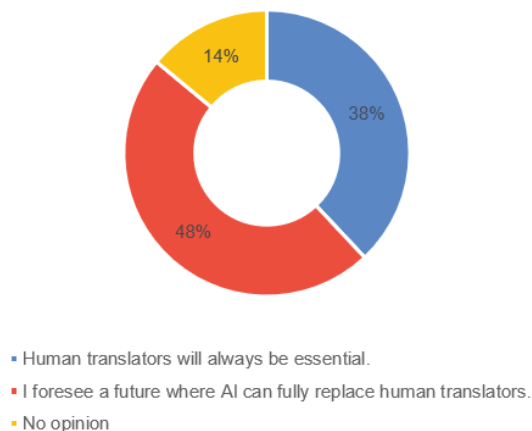


Figure 3: A percentage breakdown of the professional translators' opinion on the future of the translation profession in the era of AI

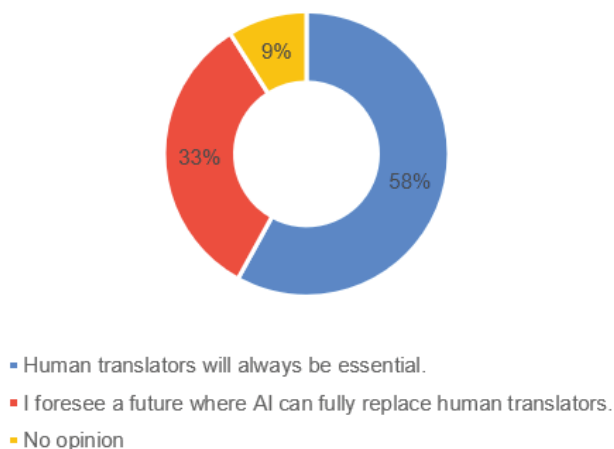


Figure 4: A percentage breakdown of translation students' opinion on the future of the translation profession in the era of AI

The data reveal that almost half of all translators taking part in the study predict the future in which AI can fully replace human translators. Conversely, the majority of students think that human translators will always be indispensable. This may stem from the greater awareness of professional translators of the capabilities of modern translation tools, and a potential knowledge gap regarding the technology in students (43% of the students who think that human translators will always be essential have not used any GenAI tool).

The qualitative part of the survey yielded valuable data, with more than 82% of study participants providing additional explanation as to the future of the profession in the era of AI-powered tools. The summary of the answers is presented below, while the discussion of the results is presented in the following section.

- (A) I foresee a future where AI can fully replace human translators (professional translators)
1. Although AI can fully replace HT, sworn translator's verification (and stamp) will always be necessary.
 2. Highly specialised AI tools will gradually phase out human translators.
 3. "I have worked as a translator for almost 20 years and during this time I have seen enormous progress in the field. Translations made by AI-powered tools are almost perfect today, even into Polish, which seemed impossible only a couple of years ago. Given the speed of the progress, I think we will soon all be jobless".
 4. The job of the translator will be more of supervising the effects of machine/AI translation than the actual translation.
 5. AI will replace HT in spite of the fact that it is not fit for some types of translations, for example ones requiring creativity (fiction books, poems, specialist texts, computer games, movie/series dialogues).
 6. AI translation is cheaper.
- (B) I foresee a future where AI can fully replace human translators (translation students)
7. In more or less 10 years the profession will be gone or marginal, maybe used only under certain circumstances/for certain texts that cannot be shared with any external servers (or maybe new AI tools will come with data protection safeguards).
 8. AI can replace HT because the technology has progressed a great deal. Nowadays AI can translate not only written, but also spoken texts. Even if today the translations come with mistakes, in 15–20 years this will no longer be the case.
 9. The capabilities of AI translation apps and web services should not be underestimated.
 10. The development of AI will only be expansive. AI translation is already good enough for scientific texts, and it will learn how to [properly] translate literary texts.
- (C) Human translators (HT) will always be essential (professional translators)
11. Humans have a unique ability to translate thoughts, notions, emotions and hidden messages. That cannot be done by AI.
 12. HT are irreplaceable but AI will be a very useful tool and powerful tool in this profession.

13. AI-powered translation systems lack the necessary depth and ‘gut feeling’ to properly translate certain nuances. A lot of development work is required for the AI translation systems to reach proper quality levels (if it is possible at all). This is especially true for localising art forms; literature and similar fields often require human experience to properly localise the text, something that AI will not possess no matter what the technology.
 14. Human consciousness will always be essential.
 15. The issue of AI hallucinations seems to be insurmountable, so verification will always have to be done by a human.
 16. Human creativity is irreplaceable. However, there are already instances of texts in certain fields that AI handles perfectly.
 17. AI is a machine without intelligence.
- (D) Human translators (HT) will always be essential (translation students)
18. Translation has many facets and nuances, so proper translation can only be done by HT.
 19. While AI-driven translators might become more popular, /HT have the ability to grasp the context and intent of the sentence.
 20. AI-translated texts will be used as a sort of ‘base translation’ that will later have to be checked by human translators.
 21. HT better at picking up the cultural and social cues needed for adequate translation. However, AI can be helpful in the process.
 22. While it seems plausible that AI translators might eventually replace HT, this can only concern the translation of documents, legal and medical texts, etc. However, it does not concern the translation of the works of art. No amount of data-labelling will ever be able to train AI to be more effective or efficient at being human than the actual humans.

4. Discussion

The results of the pilot survey have shown that generative AI, such as ChatGPT, has not yet become a commonplace practice among Polish professional translators and students of translation. However, the overall share (50%), and the shares of specific respondent groups (see above) are higher than the one provided in the ELIS 2024 Report (running at 10% globally). The underlying cause may stem from the fact that GenAI is still a relatively new development, it has not been fully integrated with other translator’s tools (such as CAT tools), and users have insufficient skills in using the technology. This is illustrated by a relatively wide knowledge gap (from 35% in the case of translation proper to 58% as regards terminology extraction). Indeed, the ELIS 2024 Report shows that ‘technology’ is the major training topic in all segments (=types of respondents; see ELIS, 2024, p. 48-49). The development of new translation technology has prompted the European Commission to make some revisions to the Competence

Framework (2023-2028) for the European Master's in Translation (EMT, 2022). One of the five areas of competence in technology assumes not only general MT literacy and knowledge of MT possibilities and limitations, but also a set of specific skills related to digital translation technology. And although the Competence Framework does not overtly relate to AI tools, it does point to the need for applying 'other tools in support of language and translation technology' (EMT, 2022).

Another issue is the relatively low quality output, requiring additional workload in the form of MTPE, which comes with its own problems (Farrell, 2023, p. 53–54; see above). Free answers gathered from the survey seem to confirm these observations, with hallucinations, the lack of creativity, and the inability to refer to the all-essential context listed as contributing factors. Additionally, the survey results point to the necessity of keeping the human in the translation loop, also on account of legal, data security and/or ethical requirements (sworn translation, and requirement of top quality output, such that required in the medical profession; see Patil & Davies, 2014). It also needs to be borne in mind that LLMs have been trained on large amounts of online data, which exist predominantly in English. This exacerbates bias by 'favouring' higher-resourced languages (see Łukasik, 2023).

An important element of the study was connected with the opinion on data security and work ethics. Interestingly enough, the knowledge on this matter is not universal, with 45% of professional translators having either no attitude or knowledge with respect to the matter (another 40% of professional translators claim that the use of the technology is in complete breach of confidentiality, while the remaining 15% hold the opposite view). Quite surprisingly, more than a quarter of the respondents lack the knowledge on whether the use of GenAI breaches their work ethics, with more than a half claiming that it does not breach their work ethics at all. This may indicate the lack of in-depth knowledge of the commonly-cited issues connected with GenAI tools and, most importantly, with privacy policies of individual companies behind the AI tools (Ray, 2023, pp. 134, 140–142). This calls for more discussion among professionals, possibly concluded with the drafting of a code of good practices, as well as additional trainings.

The qualitative element of this part of the survey provided invaluable insight into the respondents' opinion on the future of the translation profession in the AI era. Among the reasons for the eventual replacement of human translators by AI, the dominant ones revolve around the rapid advancements of AI, which can perform ever more difficult translation tasks, even for complex languages. This means that AI tools may finally overcome limitations, such as human-grade creativity. Currently, human creativity excels (at least when considering most creative people), although AI chatbots on average outperform humans in the

Alternate Uses Task (AUT), which is the most typical test of creativity (Koivisto & Grassini, 2023).

Additionally, according to the survey results, AI translation is cost-effective. This, however, may be illusory, since the low quality of the output and the need for the time-consuming post-editing limit its efficiency. At stake here is not only the cost-effectiveness, but also the issue of sustainability of the translation activity as a whole (not only the profession) (Moorkens et al., 2024, p. 2). This argument is also raised by the Société française des traducteurs, who warn that

Environmentally, AI's phenomenal consumption of energy and natural resources (electricity to power data centers, water to cool them, etc.) is a direct violation of both the UN sustainable development goals and the Paris Agreement on Climate Change (SFT, 2024).

Accordingly, the translation industry should strive to also evaluate the sustainability of automation technology in translation, as opposed to its performance parameters only (Moorkens et al., 2024, p. 2). These goals may be achieved through the optimisation of GenAI, for example by way of fine-tuning LLMs and the application of efficient prompt engineering techniques (Nexla, 2024).

5. Conclusion

In just a few years since the NMT revolution, the translation profession is once again at a crossroads, facing another transformative wave with the advent of GenAI. As with many transformative shifts in the past, it may take some time for the profession to fully integrate and adapt to these new technologies, particularly in navigating the evolving landscape of ethical and legal considerations, such as those related to copyright, data protection, and the inherent problems exhibited by the technology, such as bias and 'black box' phenomenon. However, this transition may occur faster than anticipated. Recent advancements in generative AI have the potential to significantly boost productivity and reliability. Its gradual integration into CAT tools has only accelerated the process.

This study has shown that the overall use of GenAI in the translation profession is rather modest. This may be due to the low quality of the output generated, but also due to a knowledge gap observed in professional translators and students of translation alike. This calls for modifications to existing study programmes in translation and a wider availability of training sessions for key stakeholders. The content of such training sessions should not only encompass the latest advancements in AI, hands-on practice, and case studies demonstrating successful integrations. They should also focus on legal and ethical issues connected with the use of AI in the translation profession, and address all other known limitations of the technology. The content should discuss general as well as specific legal

provisions, such as the EU's AI Act⁸ and the so-called AI Liability Directive⁹. Surprisingly, academics consider the implementation of GenAI in the university study programmes as the major challenge connected with the technology (ELIS, 2024, p. 27). Meanwhile, the development and testing of such programmes as well as of upskilling courses and workshops, are the aim of the international research group behind the design of the survey study.

A more general conclusion concerns the scientific discipline of translation studies, which has been affected by the recent developments. In particular, the constitutive elements of the translation system have changed: the human translator can now be replaced by a machine translation tool, and even if the translator is envisaged as part of the system, they become the agent who prepares (if at all) the text for machine translation (pre-edition), operates the translation tool, and undertakes the correction of the text produced by the translation system (post-edition). Sometimes, the translator's work is limited to post-editing, which marks a new trend on the translation market (see Beßler, 2021). It is also worth mentioning that a lot of machine translation is done beyond any professional translation setting, calling for extensive studies of this phenomenon.

Accordingly, if in the past it was the translator and the translated texts that were the central research elements of translation studies (Grucza, 1981), it can be argued that currently more and more focus is on the technology (MT, AI) and the tools (e.g. corpora, localisation tools). Also, the scope of translator's competences widens, and includes ever more advanced digital systems (see Krüger & Hackenbuchner, 2024). New research areas produce new research questions, and these often require new methods. Most probably, translation studies will become even more interdisciplinary, incorporating methods previously reserved for the technological domain.

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⁸ <https://artificialintelligenceact.eu/> (retrieved on 20 August, 2024)

⁹ https://commission.europa.eu/system/files/2022-09/1_1_197605_prop_dir_ai_en.pdf (retrieved on 20 August, 2024)

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What Can We Learn from the 21st Century Translator Pen? A Case Analysis on Comparing English-to-Chinese Rendition Differences between Human and Machine Translation

ABSTRACT

This study investigated and compared differences in the rendering from the same English source text into two versions of the target text in Chinese produced by a human and a machine translator represented by a translator pen, respectively. Using news reports as case analysis, this study found that improper segmentation of punctuation marks appeared most frequently in machine translation, followed by lexical vacancy, and inconsistency of terms. This study also identified rendition differences between human and machine translation in the handling of terms as well as in the treatment of punctuation marks. Overall, the human translator showed more flexibility in the selection of words to match the target text expression than the machine translator.

KEYWORDS

machine translation; translator pen; source text; target text

1. Introduction

Technology has become an integral part of our daily lives entering the 21st century. It has fueled the development of human civilization in many aspects such as education, communication, entertainment, socializing, and work. Among them, the one that can be said to be influenced greatly by technology is the translation community where the role of translators is being refined or even partially replaced as we speak.

Over the past seventy years, particularly since the outbreak of the Second World War, research on machine translation (MT) has yielded fruitful results, being seen as a research discipline highly relevant to artificial intelligence (AI) and natural language processing (NLP). And, after a long evolution, translation with the aid of computer has been bettered gradually and become a comparatively developed field so far that is still being debated and explored by many scholars in the field of translation (Bahar, 2001; Celik, 2003; Furstenberg et al., 2001).

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However, the scope of existing studies on MT may still be limited when it comes to providing a systematic comparison and description of how human translation can be different from MT, on the condition that rendition is perceived as the only end product of the translation process.

This study therefore aims at addressing this limitation by adopting a text-analysis approach to identifying the rendition differences between human translation and MT represented by the translator pen. With the translator pen, the translation process is time-saving and entirely automatic, i.e., without human intervention such as post-editing. The only thing the user needs to do with the translator pen is simply scan through the source text (ST) verbatim and wait for the target text (TT) to be outputted either in the screen of the pen or in a personal computer document with the internet or Bluetooth connection on.

2. A brief review of terminology and the development of MT

MT in general refers to “computerized systems responsible for the production of translations with or without human assistance” (Hutchins, 1995, p. 431). The present study holds that MT is entirely automatic and responsible for the translations it produces without any human assistance and therefore “excludes computer-based translation tools which support translators by providing access to on-line dictionaries, remote terminology databanks, transmission and reception of texts, etc.” (p. 431). Considering the notion, other terms related to MT such as machine-aided human translation (MAHT) and human-aided machine translation (HAMT) are not applicable in the present study as the core of MT should be “the automation of the full translation process” (p. 431). Although in common practice, the output of MT is usually post-edited either by human translators (e.g. the first and the second translator) or proofreaders, the ultimate and ideal goal of MT is to generate up-to-standard end product by rendering quality translation like a certified human translator.

MT has witnessed a long-winded development process, which can be divided into four periods: the sprouting period (1949–1960), the setback period (1960–1967), the recovery period (1967–1990), and the new period (1990–present) (Gao & Zhao, 2020, pp. 97–98) where the focal point of the present study lies. Although translation quality of MT has increased over the years, it would still be stretching to say that its quality is already comparable to that of quality human translation entering the 21st century (Qin & Xiang, 2022, p. 44). Some problems in its original output are unavoidable, thus making translation quality unsatisfactory.

2.1 Common problems facing MT

These common problems generally refer to 1) *inconsistency of terms*, 2) *improper segmentation of punctuation marks*, 3) *redundancy*, and 4) *lexical vacancy* (Qin & Xiang, 2022, p. 45). In the first case, it means “one term of the source language has different expressions, but the multiple expressions in the source text for the same

thing are translated into different versions in the target text by machine” (p. 45). Such difficulty for machine to analyze Chinese language accurately lies in that “the same part of speech in Chinese serves as grammatical components without morphological changes” (Guo & Wang, 2017, p. 78). Compared to its human counterpart, MT is specifically vulnerable to term inconsistency when it needs to process large texts where different collocations of the same term could appear frequently.

In the second case, a type of problem rooted in the MT punctuation system, “the punctuation marks used in Chinese are formulated based on the English punctuation system” (Qin & Xiang, 2022, p. 45). This contributes to analytical problem on the part of MT to convert the punctuation marks accurately between two languages. In others words, MT will copy them into the TT, giving rise to some translation problems.

In the third case, “redundancy refers to the functional repetition, overlapping or redundant expressions in the translation” (Cui & Li, 2015, p. 21). Since redundancy is a typical feature of the Chinese language expression, a common example of it would be “synonym with different words in the form of four-character words” (Qin & Xiang, 2022, p. 45). This feature is, nevertheless, opposite to that of the English language expression where repetition is usually avoided and replaced with pronouns and prepositions to substitute the repeated speech part.

In the last case, it “refers to the difficulty in achieving complete equivalence between the source language and the target language, resulting in lexical vacancy in translation” (Qin & Xiang, 2022, p. 45). This problem is caused primarily by cultural differences between the two languages and can be commonly observed in translating “culturally-loaded words” (p. 46). At present, as far as MT is concerned, it is not able to detect and interpret entirely accurately the precise meaning of terms rich in cultural connotation. Therefore, if lexical vacancy cannot be addressed by MT, the translation quality will for sure be compromised and will not be improved in a short period of time.

Even though all the above-mentioned problems can be solved with post-editing in the form of human intervention by using context-specific translation strategies such as replacement, omission, addition, or shift, it is not possible with the sole use of MT. Therefore, the four common problems facing MT will also serve as critical parameters for probing rendition differences between human and MT.

To identify and compare differences in rendering from the same ST produced between a human translator and the translator pen, the present study therefore proposed the following research questions for investigation: 1) Among the four common problems facing MT, how are they placed in terms of occurrence in the TT by translator pen? 2) Using the four common problems facing MT as parameters, what are the rendition differences observed in the present study? 3) Do these differences include more than the four common problems facing MT?

3. Research methodology

To answer the three research questions proposed, this study adopts a qualitative approach in the form of text analysis to compare and analyze the two renditions produced by a human translator and the translator pen separately based on the same selected ST.

3.1 Research design

The present study selected an English news report on *How the Coronavirus Steals the Sense of Smell* excerpted from New York Times as the ST to be translated by a news translator and the translator pen for text analysis. In the analysis, the four common problems facing MT will serve as parameters for identifying rendition differences between human and MT.

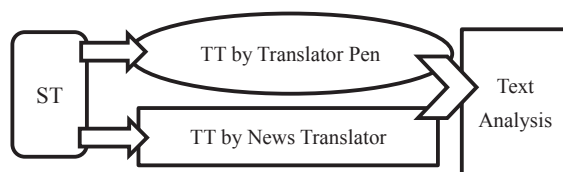


Figure 1: Research design

3.2 Instruments and data collection

In the present study, a ST, two versions of TT, and a translator pen were employed as the instruments. For the ST, it was an English news report of 362 English words excerpted from New York Times. The ST was used for outputting two versions of TT. For the two versions of TT, one was produced by a news translator, Li, a full-time UDN¹ journalist and translator who has translated more than 4,800 articles in the business to contain 668 Chinese characters. The other one was produced by the Muigic² translator pen, which is able to perform text scanning translation in English-Chinese language combination to contain 640 Chinese characters. Only the two versions of TT were collected for text analysis.



Figure 2: Translator pen

¹ It is a Taiwan-based online open access news media established in 1999.

² It is a brand that features intelligent appliances.

3.3 Data analysis

The analytical data process focused primarily on comparing the two versions of TT based on the four parameters mentioned earlier: inconsistency of terms, improper segmentation of punctuation marks, redundancy, and lexical vacancy to probe rendition differences. These differences were then presented based on categories (i.e. which parameter) and occurrences in the two renditions to address the research questions.

4. Findings

Through text analysis, the present study found that out of the four common problems facing MT, three of them appeared in the TT by translator pen. They were inconsistency of terms, improper segmentation of punctuation marks, and lexical vacancy. Redundancy was not observed.

Precisely, in the TT by translator pen, improper segmentation of punctuation marks registered more than nine occurrences, followed by lexical vacancy to register five occurrences, and by inconsistency of terms to register one occurrence as indicated in Figure 3.

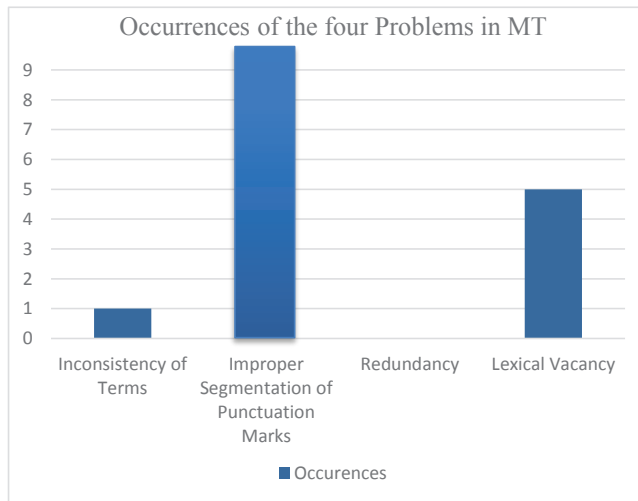


Figure 3: Occurrences of the four problems in MT

Using the four common problems facing MT as parameters for investigation, rendition differences between human translator and MT were also present in the three parameters mentioned earlier, namely, the inconsistency of terms, lexical vacancy, and the improper segmentation of punctuation marks. As shown in Table 1 where referenced Chinese translations (hence RCT) were provided for individual ST terms, the term COVID appeared four times in total and was consistently

translated in the TT by news translator either as 新冠肺炎 or as 新冠 (i.e. a shorter form for 新冠肺炎) to refer to the disease. In the case of TT by translator pen, out of the four appearances of COVID, three of them were lexically vacant (i.e. not translated) and only one of them was translated as 多科疾病, which did not suggest any propositional meaning to relate to the disease in Chinese. This would therefore be counted as one inconsistent handling of the term COVID on the part of translator pen. Another difference was spotted in the handling of the word *indirectly* in the ST – it was translated by news translator as 間接 in Chinese but was lexically vacant in the TT by translator pen. A difference was also observed in the handling of the verb *line* in the ST – it was translated by news translator as 內側 to refer to the inner side of the nasal cavity in Chinese but was lexically vacant in the TT by translator pen.

Table 1. Rendition differences in the handling of terms

ST Terms	News Translator	Translator Pen
COVID RCT: 新冠肺炎	新冠肺炎/ 新冠	1. X 2.多科疾病
Indirectly RCT: 間接	間接	X
that line the nasal cavity RCT: (貼著)內側	內側	X

Apart from differences in the handling of terms and lexical vacancy mentioned above, differences in the improper segmentation of punctuation marks were spotted between the two versions of TT as shown in Table 2.

The first difference in this category was present in converting the quotation mark in the ST. It appeared four times in the ST in total and was converted into Chinese corner brackets consistently in the TT by news translator. In the case of TT by translator pen, it remained unchanged. It should be noted that in the TT, the Chinese text, English quotation mark does not exist in the writing system.

The second difference in this category was embodied in the conversion of a colon, which appeared twice in total in the ST. For its first appearance in the ST, both TT versions treated it the same way into a Chinese colon. Yet, for its second appearance, this mark was converted into a Chinese full stop by news translator but still a Chinese colon by translator pen.

The third difference in this category lay in the treatment of a scholarly title- *Dr. Sandeep Robert Datta* in the ST. In the TT by news translator, it was translated as 塔達博士 with no punctuation marks added in the form of a Chinese last name

followed by how it is called to address a doctoral degree holder, which is a common combination in the Chinese expression without having to address a person's first and middle name. In the case of TT by translator pen, however, two hyphenation points were added to distinguish the first and the middle name. This may therefore seem awkward in the Chinese text although such treatment is context-specific.

The fourth difference was observed in the handling of a semicolon in the ST. In the TT by news translator, it was converted into a Chinese full stop whereas in the TT by translator pen a Chinese semicolon. The last difference lay in the treating of four commas in the ST. In the TT by news translator, they were converted sequentially into a Chinese full stop, a Chinese comma, a Chinese colon, and a Chinese full stop whereas in the TT by translator pen a Chinese comma, a Chinese ideographic comma, a Chinese comma, and a Chinese comma.

Table 2. Rendition differences in improper segmentation of punctuation marks

ST	News Translator	Translator Pen
“ ”	「 」	“ ”
:	。	:
Dr. Sandeep Robert Datta	X	• •
;	。	;
,	。 , : 。	， 、 ， ，

5. Discussion and conclusion

To answer the first research question, the present study discovered that improper segmentation of punctuation marks occurred most frequently in the TT by translator pen to record over nine occurrences, followed by lexical vacancy to record five occurrences and inconsistency of terms to record one occurrence. MT is still vulnerable to three of the four common problems.

To answer the second research question, the present study found that rendition differences between the two versions of TT were identified in terms of the handling of terms (lexical vacancy included) and in converting punctuation marks.

To answer the third research question, the present study found that two primary differences not listed in the four parameters were observed. The first one is the treating of word order. It was observed that compared to its human counterpart, translator pen in most cases followed the word order of the ST for conversion. This would easily lead to a situation in the TT where the agent, the doer of an

action, was not conceptually identical to the one in the ST and thus hinder TT's readability and affect the reader's understanding. The second primary difference not listed in the four parameters is word choice. It was observed that compared to the machine counterpart, human translator was more flexible in word selection to fit a specific contextual expression. Overall, the above-mentioned details were the additional differences identified between the two versions of TT.

6. Limitations of the study

The presentation of the current findings is limited by certain constraints regarding the selection and use of the research instrument. The study was mainly a qualitative and a case-based text analysis, which may not be able to contribute much to its generalizability and reliability. A possible direction for future studies could be the employment of a mixed methods approach encompassing the combination of quantitative and qualitative tools to encourage a cross-verification of the results, and thus giving potential researchers more room to look at the differences between human and MT.

Finally, it has to be pointed out that the scope of the current research is also limited due to the length of the ST selected and the number of words analyzed in the two versions of TT. The analyzed sample may not be representative enough given the many types of text that can be used for analysis. It would be advisable to investigate more texts from different genres for future studies, other than news report. Despite these limitations, the results of this study may open up possibilities and hopefully attract the attention and interests for future research.

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譯／李京倫
新冠病毒如何偷走嗅覺

Few of COVID-19's peculiarities have piqued as much interest as anosmia, the abrupt loss of smell that has become a well-known hallmark of the disease. COVID patients lose this sense even without a stuffy

Appendix A

Source Text

2022/04/08 第377期 New York Times

How the Coronavirus Steals the Sense of Smell 新冠病毒如何偷走嗅覺

文／Roni Caryn Rabin

nose; the loss can make food taste like cardboard and coffee smell noxious, occasionally persisting after other symptoms have resolved.

Scientists are now beginning to unravel the biological mechanisms, which have been something of a mystery: The neurons that detect odors lack the receptors that the coronavirus uses to enter cells, prompting a long debate about whether they can be infected at all.

Insights gleaned from new research could shed new light on how the coronavirus might affect other types of brain cells, leading to conditions like “brain fog,” and possibly help explain the biological mechanisms behind long COVID — symptoms that linger for weeks or months after the initial infection.

The new work, along with earlier studies, settles the debate over whether the coronavirus infects the nerve cells that detect odors: It does not. But the virus does attack other supporting cells that line the nasal cavity, the researchers found.

The infected cells shed virus and die, while immune cells flood the region to fight the virus. The subsequent inflammation wreaks havoc on smell receptors, proteins on the surface of the nerve cells in the nose that detect and transmit information about odors.

The process alters the sophisticated organization of genes in those neurons, essentially short-circuiting them, the researchers reported.

Their paper significantly advances the understanding of how cells critical to the sense of smell are affected by the virus, despite the fact that they are not directly infected, said Dr. Sandeep Robert Datta, an associate professor of neurobiology at Harvard Medical School, who was not involved in the study.

“It’s clear that indirectly, if you affect the support cells in the nose, lots of bad things happen,” Datta said. “The inflammation in the adjacent cells triggers changes in the sensory neurons that prevent them from working properly.”

Indeed, many complications of COVID appear to be caused by the immune system’s friendly fire as it responds to infection by flooding the bloodstream with inflammatory proteins called cytokines.

Appendix B

Target Text by News Translator Li

少有新冠肺炎的特點像嗅覺喪失一樣激起那麼多關注。嗅覺喪失是突然失去嗅覺，已成為這種疾病眾所周知的特徵。新冠肺炎患者甚至沒有經歷鼻塞就失去嗅覺。失去嗅覺會讓食物嘗起來像硬紙板，咖啡氣味難聞，這種症狀偶爾會在其他症狀消退後持續。

科學家現在開始弄懂這個向來可說是個謎的生物機制：感知氣味的神經元並無受體供新冠病毒用來進入細胞，引發關於這些神經元究竟能否被感染的長期爭論。

從新近研究收集來的洞見或許能進一步闡明，新冠病毒如何侵襲其他種類的腦細胞，導致「腦霧」等症狀出現，而且或許能解釋新冠長期症狀的生物機轉。新冠長期症狀是在最初感染後持續數周或數月的症狀。

除了稍早的研究之外，新研究也解決了關於新冠病毒會不會侵擾察覺氣味的神經細胞爭論。答案是不會。不過，研究人員發現，新冠病毒攻擊的是位在鼻腔內側的其他支持細胞。

被感染的細胞擺脫病毒後死亡，同時免疫細胞蜂擁到這個區域對抗病毒。隨後的發炎嚴重破壞嗅覺受體，即鼻內神經細胞表面能察覺並傳達氣味資訊的蛋白質。

研究人員說，這個過程改變了這些神經元基因的複雜組織，實質上使神經元基因短路。

並未參與這分研究的美國哈佛大學醫學院神經生物學副教授達塔博士說，他們的論文大幅增進了這方面的了解：對嗅覺至關重要的細胞儘管不會被新冠病毒直接感染，卻會被新冠病毒侵襲。

達塔說：「顯然，如果你攻擊鼻子的支持細胞，有很多壞事會間接發生。鄰近細胞發炎會引起感覺神經元改變，使感覺神經元無法正常工作。」

的確，許多新冠肺炎併發症似乎由免疫系統對自己人的攻擊引起，因為免疫系統應付感染的方式是讓血液中充滿名為細胞激素的發炎蛋白質。

Appendix C

Target Text by Translator Pen

19的特異性與厭食的興趣很少，嗅覺的突然喪失已經成為這個疾病的一個顯著特徵，很少有人會這樣做。

患者即使沒有鼻塞也會失去這種感覺；這種損失會使食物的味道像紙板和咖啡的氣味一樣有毒，偶爾會堅持等其他癥狀后已解決。

科學家們現在開始解開生物機制，這是一個謎：檢測氣味的神經元缺少了冠狀病毒用於進入細胞的受體，這促使人們對它們是否能被完全感染進行了長期的爭論。

從新的研究收集的洞察力可以揭示，冠狀病毒如何可能影響其他類型的腦細胞，導致諸如“腦霧”的條件，並可能有助於解釋的生物學機制背後長長的癥狀，持續幾個星期或幾個月後，最初感染。

這項新的工作，連同早期的研究，解決了關於冠狀病毒是否感染了檢測氣味的神經細胞的爭論：它沒有。研究人員發現，這種病毒確實攻擊了鼻腔的其他支持細胞。

被感染的細胞會使病毒和死亡，而免疫細胞在該地區氾濫，以對抗病毒。隨後的炎症對嗅覺受體、鼻子上的神經細胞表面的蛋白質進行了破壞，可以檢測和傳播有關氣味的信息。

研究人員報道，這一過程改變了這些神經元中複雜的基因組織，基本上是對它們的短路。

哈佛醫學院的神經生物學副教授桑迪普·羅伯特·達塔達說·他們的論文大大地了解了病毒對嗅覺影響的細胞是如何影響的，儘管事實上它們沒有直接感染。

“很明顯，如果你影響鼻子上的支撐細胞，就會產生很多不好的東西，”達塔說。相鄰細胞中的炎症會觸發感覺神經元的改變，防止它們正常工作。

事實上，多科疾病的併發症似乎是由免疫系統的友好火災，因為它回應感染的血液與炎症蛋白稱為細胞因子。

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Interpreting Studies and the Need for a Systemic Turn

ABSTRACT

The next important step in the development of Interpreting Studies appears to be its methodological consolidation, which can be achieved by drawing on the findings of systems theory. Systems theory makes it possible to grasp the complexity of interpreting and to master the resulting interdisciplinary methodological challenges. The example given in this article of the first system-dynamic model of simultaneous interpreting demonstrates the advantages of such an approach and explains that it is time for a systemic turn.

KEYWORDS

Interpreting Studies; complexity; systems theory; modelling

1. Introduction

“Systemtheoretische Konstruktionen entstehen in aller Regel erst auf einer bestimmten Entwicklungsstufe einer Wissenschaftsdisziplin“ (Salevsky, 2021, p. 84)¹. This quote and a look at the development of Interpreting Studies (IS), as shown in Figure 1, shows that our discipline has made considerable progress over the last decades.

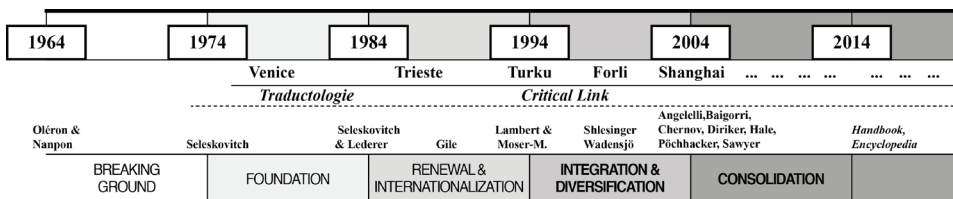


Figure 1: Decades of development in Interpreting Studies (Pöchhacker, 2016², p. 48)

¹ As a rule, systems theory constructs only emerge at a certain stage in the development of a scientific discipline.

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We can certainly agree with Pöchhacker (2016) in spotting a consolidation of IS. However, as an interdisciplinary field, IS depends on interdisciplinarity and a rigorous application of external methods. Therefore, as Figure 2 shows, IS still needs to achieve a methodological consolidation (cf. Behr, 2020, p. 13). This article explains why a systems-theoretical orientation of IS can contribute to its systematization and thus consolidation, and why the time for a systemic turn seems to be ripe. Accordingly, this article explains a) the complexity of interpreting, and b) the resulting challenges for IS with regard to its methodology, c) gives an example of what a corresponding application, i.e. a model, could look like and d) provides a brief outlook for the application of this approach.

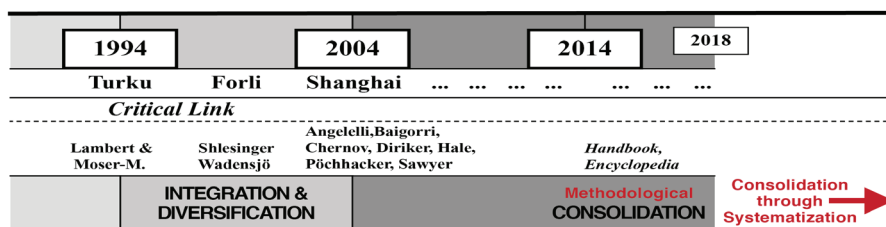


Figure 2: Current development of Interpreting Studies (Behr, 2020, p. 14)

2. Complexity of interpreting and challenges for Interpreting Studies

Undoubtedly, we can say that interpreting is ontologically highly complex, as it is made up of a large variety of factors that (can) influence each other. Interpreting is a “structure within a structure” (Pöchhacker, 1994, p. 45), “highly diverse and multi-faceted” (Pöchhacker, 2009, p. 43), and an “overall web of constraints”² (Kade, 1977, p. 35). It is also described as a chaos of factors (Vermeer, 2006, p. 302), referring to several dimensions, at least at the “factual, social, temporal, operative, cognitive” level (Salevsky, 2011, pp. 34–35). For the purposes of analysis, complex phenomena can be understood or modelled as a system using the framework of systems theory as an interdisciplinary approach. In terms of systems theory, complexity results from a) the number of elements in the system, b) the connections between those elements or their influences on each other, c) a certain dynamic, and finally d) so-called emergent properties. The latter results from the fact that individual elements (can) develop further characteristics in addition to their original characteristics when they interact. This is also often referred to as systems being over-summative; Aristotle expressed this in the now well-known saying ‘The whole is greater than the sum of its parts’ (Ropohl, 2012, p. 25 and 45). Accordingly, the interpreting system is also more than just the sum of its parts.

² Translation by Salevsky (2011, p. 25) of the original term “Gesamtbedingungsgefüge”.

For example, a too-high speaking speed alone (>120 wpm, Seeber, 2005, p. 127) is not decisive for the question of whether a speech can be interpreted perfectly in terms of completeness. It is only the interaction with other factors such as information density, degree of technicality and structuring, intonation on the part of the speech/the speaker and preparation (dedicated time, provided material, etc.), alertness, motivation, competence, etc. on the part of the interpreter, that defines the prerequisites for a fully complete interpretation. And as the elements of a system influence each other, systems are also considered dynamic. Finally, Lotfi Zadeh's fuzzy logic is relevant for systems theory modelling. System elements can be vague or 'fuzzy', i.e. they cannot be captured statistically. The integration of such elements into a model makes it possible to model a reflection of reality despite the lack of exact data (cf. Vester, 2011, pp. 179–181). If, for example, interpreting is modelled so as to better understand this phenomenon, fuzzy components such as the interpreter's concentration or the speaker's intonation can also be integrated into the model according to systems theory principles.

3. Complexity of (research perspectives in) Interpreting Studies

The complexity of interpreting is also reflected in the diversity of interpreting research approaches, and this leads to a variety of scientific perspectives depending on the (paradigmatic) approach that is chosen, for example linguistic, cognitive, neurophysiological, discourse-analytical, socio-psychological, sociological, anthropological, historical, ethical, etc.

A look at the development of IS shows the challenges this complexity leads to. The science of interpreting began with prescientific work in the Kuhnian sense (e.g. Herbert, 1952) and was subsequently characterised by interpreting being researched by so-called "practisearchers" (Gile, 1994, p. 156) where intuitive approaches prevailed, strengthened by the Paris School around Danica Seleskovitch. It was not until the conference of Trieste in 1986 that the empirical turn was heralded, and interpreting research took on a scientific orientation. The natural science community, which was conducting research along these lines, was soon confronted with the liberal arts community, and thus two supposedly opposing methods began to coexist (Moser-Mercer, 1994, p. 19): empirical-quantitative research on the one hand and hermeneutic-qualitative research on the other. Overcoming the intuitive approach led to emphasizing the latter and neglecting the former. But, as a result, the methods of other disciplines had to be applied, and it also led to a discussion on and search for the appropriate methodology (cf. Angelelli & Baer, 2016; Hale & Napier, 2013). However, the resulting and necessary interdisciplinary approach presents a difficulty: "A lack of deep knowledge in a field from which the methodology is adopted may become an obstacle in producing good research work in translation and interpreting studies" (Liu, 2011, p. 104). Furthermore, interdisciplinary research

projects appear to be limited to individual and temporary projects, and the desirable reciprocity (Kaindl, 2004, p. 71) has still to be found. Consolidating the methodology outlined in the present article and the quest for reciprocal interdisciplinarity it advocates would thus be the next decisive step in the further development of IS.

Until now, we mainly see two types of research in IS: on the one hand, empirical studies of a more atomistic nature, in which one variable is investigated in isolation (even though, often, the other variables are not or cannot be rigorously controlled)³ and, on the other hand, more holistic studies of a phenomenological nature. The latter also includes attempts to grasp the complexity of interpreting. However, even in holistic models, the reductionist characteristic inherent in all models comes into play (cf. Stachowiak, 1973, p. 208), since they focus only on a certain aspect of the whole, e.g. the interaction (e.g. Alexieva, 1997; Poyatos, 1987/2002; Stenzl, 1983), the process (without a real situational embedding) (e.g. Kalina, 1998; Moser, 1978; Seleskovitch & Lederer, 1984; Setton, 1999) or, even more specifically, the cognitive process on the part of the interpreter (e.g. Darò & Fabbro, 1994; Mizuno, 2005; Seeber & Kerzel, 2011) or certain settings such as media interpreting (Katan & Straniero-Sergio, 2003). A truly holistic model of interpreting as a complex phenomenon is still lacking. To grasp the whole, the correlation between the multiple factors involved in interpreting needs, in particular, to be identified and depicted (Salevsky, 1986, p. 12), but this has not been done sufficiently so far (Salevsky & Müller, 2011, p. 194).

The dichotomy between the humanities and the natural sciences in interpreting research and, therefore, the sometimes very different perspectives on the common subject of interpreting still make it difficult for IS to be recognised by other disciplines, and for cooperation across disciplinary boundaries to take place. It should be emphasised that neither one scientific orientation nor the other should be given priority. Table 1 (partially taken from Hale & Napier, 2013, p. 15; Monacelli, 2015, p. 258; Schummer, 2014, p. 12) shows the different perspectives from which research or a subject of research can be seen. The overview also makes it clear that both approaches are equally justified. While analytical approaches focus on verifiable details, hermeneutic approaches are centred on understanding the parts through the whole and the whole through its parts (Leibbrand, 2011, pp. 100–101).

Table 1 also shows that theory does not arise from the direct derivation of empirical data, but is also a prerequisite for empiricism (cf. Kaindl, 2004, p. 71). Accordingly, both columns of the table must be seen as complementary strands of research. If, following Vermeer, translation (or interpreting) is understood

³ Here, too, the principle of fuzzy logic (cf. section 2) provides an answer.

Table 1. Complementary characteristics of the research approaches

dimension	natural sciences approach	humanities/liberal arts approach
epistemology	analytical	hermeneutical
aim	explanation of causes	understanding of contexts
focus	replicability, regularities	no replicability, singularities
methodology	positivist, verification of details	phenomenological, looking at the whole
scope	atomistic	holistic
	↓	↓
ontology	Facts and data are objectively real.	Reality is a social construct.
research method	quantitative, empirical	qualitative, theoretical
researcher's stance	(more) objective, descriptive, statistical	(more) subjective, interpretive
data collection	e.g. survey, experiment	e.g. qualitative interview, case study
logic	deductive, hypothesis testing	inductive, hypothesis generation
	↓	↓
focus of analysis	data collection, individual phenomena	interpretation of data, overall context
variables	can be isolated and measured	complex, interdependent, and difficult to measure, the term 'variable' is rarely used
quality criteria	high reliability	high validity
	↓	
	knowledge gain	

as (system-theoretical) action, its regularities must be further (empirically) researched. It must also be (hermeneutically) taken into account that such action remains somewhat probabilistic (Vermeer, 2006, p. 24). It is the complementarity of both perspectives that leads to a comprehensive gain in knowledge. In other words:

It is fascinating to speculate about the mental processes involved in interpretation, but speculation can do no more than raise questions. If we want answers to those questions they will have to be based on facts rather than mere assumptions. Before we can develop solid models of the whole process of interpretation we will need empirically validated models [...]. (Stenzl, 1983, pp. 47–48)

4. Systems theory in Interpreting (and Translation) Studies

Connecting and complementing the different approaches can solve the above-mentioned dilemma of IS, especially if it is done in a systematised way. If the holistic approaches fail due to the large number of variables, and the atomistic

approaches lack a framework within which they can be better considered, replicated, and anchored, the benefits of complementation become evident. An appropriate framework, in which the complexity of interpreting can be mapped and where, in the long term, this mapping is increasingly based on all the single empirical studies, should help to answer the questions posed by IS, thanks to the combination of overarching assumptions with concrete data.

Such a framework can be found in a systems theory approach. For the field of translation Klaus Kaindl already stated that, instead of importing methods from other individual sciences, the so-called ‘systems disciplines’ such as systems theory should be considered. This is because, based on the complexity of translation, its elements could be understood not only as individual components but also in their interactional context (Kaindl, 2004, p. 68).

In addition to Kaindl, some other works point out the added value of systems theory for Translation Studies (cf. Hermans, 1999; Poltermann, 1992; Tyulenev, 2012; Vermeer, 2006). But these approaches, referring to Luhmann’s systems theory (see section 6), are far from being fully developed theories (Siever, 2015, p. 208). Interpreting, in turn, is modelled by Hella Kirchhoff (1976, p. 22) as a bilingual, tripartite communication system in which the indication of relationships between some of the elements of the system is included. Heidemarie Salevsky (1986) emphasises the systemic nature of simultaneous interpreting early on and ultimately bases her development of a general theory for translation and interpreting on Parsons’ system theory principle (Salevsky, 2011). She thus provides a comprehensive basis for a systems theory approach. However, it has not yet led to a reorientation of IS. Also, it took almost 10 years for her theoretical proposal – which Müller (2011) applied to translation – to result in a system-dynamic modelling of simultaneous interpreting (see section 5; Behr, 2020). This modelling is, with the help of an online accessible software tool, a first attempt to create a system-theoretical framework that both captures interpreting in its entirety and can be used to structure and improve IS as a discipline.

The idea of systems theory dates back to the times of Aristotle (Ropohl, 2012, p. 25). Since the middle of the 20th century various trends have developed, above all Norbert Wiener’s cybernetics, Ludwig von Bertalanffy’s general systems theory and Niklas Luhmann’s sociological systems theory as a continuation of Talcott Parsons’ systems functionalism (to which Salevsky, 2011, pp. 38–40 also refers). In addition to terms such as ‘chaos theory’, the system dynamics developed by Jay W. Forrester (see section 5) have been established since the 1950s for researching complex adaptive systems (DGSD, n.d.; Ropohl, 2012, pp. 29–37).

The basic idea of systems theory arises, among other things, from the history of the development of knowledge and the associated increase in scientific disciplines, together with the growing complexity of our world. Against this

background, the philosopher Günter Ropohl (2012) explains the advantage of thinking in systems:

Es gibt [...] zwei Tendenzen der neuzeitlichen Wissenschaft, gegen die das Systemdenken Einspruch einlegt. Zum einen ist es die elementarisierend-analytische Sichtweise, die auf Galilei und Descartes zurückgeht und den Erkenntnisgegenstand in immer kleinere Teile zerlegt, damit diese dann mit „bewährter“ Methodik exakt erfasst werden können. Das läuft auf eine Atomisierung der Welt und des Wissens hinaus, die sich in der Sektoralisierung der Disziplinen widerspiegelt und nur noch schmale Ausschnitte der Erfahrungswirklichkeit in den Blick nimmt. Zum anderen kritisiert das Systemdenken die weitgehende Unfähigkeit der Disziplinen, die dynamische Entwicklung komplexer Ganzheiten angemessen zu thematisieren, weil sie mit ihrer Sektoralisierungsstrategie die vielfältigen Verflechtungen und Wechselwirkungen zwischen den abgegrenzten Ausschnitten aus dem Auge verlieren. Gegen die Atomisierung der Welt und des Wissens plädiert das Systemdenken dafür, die ganzheitlichen Zusammenhänge in den Vordergrund zu stellen. (p. 20)⁴

5. Benefits of a systemic model of simultaneous interpreting

Our discipline can make a great leap forward in its development if the two tendencies mentioned above can be overcome with the help of the systems theory approach. Insights gained from the first system-theoretical model of simultaneous interpreting, the so-called *i-Model of SI* (Behr, 2020) provide the first proof of the benefits of this approach. The *i-Model* was created based on the so-called system dynamics approach. Simply put, system dynamics represents the method that results from systems theory as a way of thinking. It is primarily used in the fields of business administration and economics. System dynamics is used to create a qualitative model, to identify and analyse cause-and-effect relationships, to map system relationships within the framework of a quantitative model, if applicable to run a simulation of the model and thus to understand a system. The system dynamics method became known in 1972 when Dennis Meadows used it to model a scenario of the future global economy and published it in the report “The Limits to Growth” (DMP, 2013).

⁴ There are two tendencies in modern science to which systems thinking objects. The first is the elementarising-analytical view, which goes back to Galileo and Descartes and breaks down the object of knowledge into ever smaller parts so that these can then be precisely recorded using ‘proven’ methodology. This amounts to an atomisation of the world and of knowledge, which is reflected in the sectoralisation of disciplines and only focuses on narrow sections of the reality of experience. On the other hand, systems thinking criticises the extensive inability of disciplines to adequately address the dynamic development of complex wholes because their sectoralisation strategy causes them to lose sight of the diverse interrelationships and interactions between the delimited sections. Against the atomisation of the world and of knowledge, systems thinking advocates placing the holistic interrelationships in the foreground.

The *i-Model* was created by using free software, i.e. the *i-Modeler* by *Consideo* (Consideo). Figure 3 is a screenshot of this model that can be accessed online⁵ and gives an impression of the fact that the complexity, i.e. all the elements of simultaneous interpreting and the relationships between them, can be captured and represented. The software makes it possible to define and weigh all the system's factors and their relationships without losing the overview.

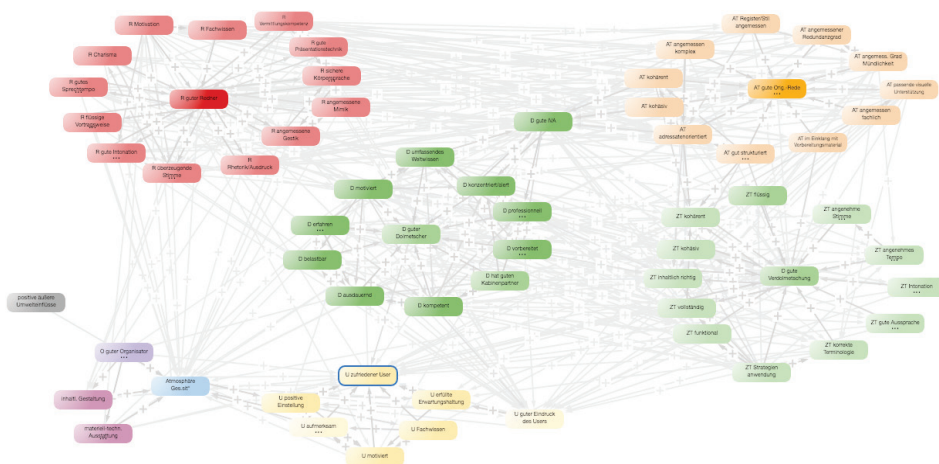


Figure 3: Impression of complexity – the *i-Model* of simultaneous interpreting (Behr, 2020, p. 220)

The *i-Model* is made up of subsystems (in our case the speech, the speaker, the interpreter, the interpretation, the interpreter's cognitive process, the listeners, and the situation subsystems), each of which being defined by specifying the associated sub-factors. The software also enables the definition (and weighting, if necessary) of all relations between the factors and helps the user maintain an overview despite the large number of elements. The overall model consists of 63 factors and 491 connections, which are saved by the software and can be displayed as required. The underlying algorithms, including effect loops, calculate the influences of every factor on every other factor. The impact of each influence can be displayed in relation to any other factors selected, e.g. 'How much influence does factor xy have on factor z compared to factors a-g?'. Thanks to the principle of networked thinking (cf. Vester, 2011), the software makes it possible to create a holistic model of interpreting, including complexity, fuzziness, and dynamics.

⁵ http://www.know-why.net/ro?key=CE0Q6rFLMd2mbgSzXtj_BOQ (retrieved on March 10, 2024).

The *i-Model* shows that a systems theory approach makes it possible to combine the atomistic approaches with the holistic approaches by placing the necessarily small-scale research of the individual elements in the all-determining overall context and relating the individual variables to each other. Individual factors within the model, which were, to begin with, determined hermeneutically and are qualitative in nature and fuzzy, can be singled out and operationalised for empirical studies. The quantitative findings can then be integrated into the model so that both research trends complement each other; hermeneutic procedures are used to formulate hypotheses, which are then empirically tested and can, in turn, contribute to further theorising.

The *i-Model* can be of practical use as a place for systematizing interpreting research. Information on individual factors can be stored in the corresponding boxes (e.g. literature lists⁶, study designs to increase the number of replication studies (Gile, 1990, 2005), proven methods for measuring cognitive load in interpreting, etc.). Areas in which there is still a particular need for research can be highlighted in colour (cf. Behr, 2023, p. 228). Such a use of a model should help to further deepen research in IS and to foster greater comparability of studies and perhaps even more intensive cooperation between different researchers (cf. Lonsdale, 1997, pp. 103–104).

Apart from these advantages for IS as a whole and a possible pedagogical use (cf. Behr, 2023) the *i-Model* confirms, to a certain extent at least, some (intuitive) assumptions or findings in our field. According to the *i-Model*, factors on the part of the speaker have a comparatively strong influence on the user. This supports the postulate of relative quality (Behr, 2020, p. 236; Riccardi, 2002, 2007). When asking the software to display the intensity of influence of content vs. formal criteria for quality in interpreting, we find proof of the difference between expected vs. perceived quality (Behr, 2020, p. 238; Collados Aís, 1998/2002, p. 336). For example, after calculating all relations and causal relationships within the model, the content criterion of correctness has over 16 times less influence on the listener's satisfaction than the interpreter's speech rate (Behr, 2020, p. 240). This also shows how much research still needs to be done.

6. Conclusion

Some difficulties in IS can be overcome using a systems theory approach. Although the idea of referring to systems theory has been around since the 1980s (Salevsky, 1986), it is still not considered to any great extent. This article has explained its

⁶ The AI-based tool Connected Papers (<https://www.connectedpapers.com>, retrieved on March 10, 2024) can now also offer this advantage quite well. In the long term, it would be conceivable to integrate such tools into the corresponding modelling, provided that cooperation with computer science can be implemented.

advantages for IS by applying the systems theory approach and shown why the time is ripe for a systemic turn in our discipline. The *i-Model* provides initial evidence of the systemic approach's benefits by indicating a concrete application of this approach. However, this should not hide the fact that, for a rigorous implementation, some discussions still need to be held. We have to discuss, for example, which system-theoretical orientation is the right one (see section 4, and for the discussion about deductive vs. inductive approaches see Salevsky, 2021, pp. 83–84). We have to agree on whether subsystems need to be expanded or added to, e.g. to take account of the socio-cultural background (cf. Salevsky, 2021, p. 87 referring to Müller, 2008). In particular, the choice of software needs to be discussed. In contrast to almost all other providers, the software by *Consideo* offers sufficient functions in its free version, but has shortcomings that do not stand up to scientific use in the long term (cf. Behr, 2020, pp. 235–240). The software recommended by Salevsky, the *Sensitivity Model Prof. Vester*© or its successor *System Logics* (System Logics), entails high costs. Such costs seem justified given the scientific use but impede the use of the model as an online tool accessible to all for the systematisation of IS. Nevertheless, systems theory can bring great benefits when it comes to the next step in the development of our discipline. Should we not now at least start the discussion and finally embark on the path towards a systemic turn?

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Polyphony as a Transformative Factor in Solopreneurship Education of Language Specialists

ABSTRACT

This article aims to demonstrate that the notion of multiple voices (polyphony) is a powerful educational idea that can bring value to translator education programmes. Based on a class dedicated to the entrepreneurial functioning of MA students in translation, the article strives to show how polyphony can be entrenched in class content and classroom dynamics. It is argued that polyphony can empower students' informed approach to career choices. The empirical part discusses the responses from the class participants in 2023 concerning their perception of the modes of work they find most attractive. Conclusions outline areas for enhancements in class content and classroom dynamics.

KEYWORDS

multiple voices; polyphony; transformative learning; entrepreneurial attitudes; modes of work

1. Introduction

This article aims to demonstrate that the notion of polyphony, that is an alignment of multiple voices in the translation classroom – as proposed by González Davies (2004) – represents a powerful educational metaphor, helping to construe translator education in terms of shared spaces (Klimkowski, 2015), necessary to empowering transformative learning (Mezirow, 2003). The case in point is a class dedicated to entrepreneurial (solopreneurial) functioning of MA students in translation (as a professional education profile in the 2-year MA course in applied linguistics) held at the Department of Applied Linguistics, Maria Curie-Skłodowska University in Lublin. In its initial part, the article outlines the notions of multiple voices and polyphony. Then, polyphony is characterised as conducive to transformative learning. What follows is the analysis of the class elements and classroom interaction in search for the polyphonic elements. Transformative aspects of class polyphony are identified. With these categories in mind, the article discusses how the participants of the first edition of the class in 2023 perceive pros and cons of three modes of work as language specialists: in-housing, hybrid

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and freelancing/solopreneurship. Research results bring insight into the degree of polyphony students can experience in-class (input polyphony). Of equal significance is to see how much polyphony can be found in the students' reflection on career functioning. The latter is of particular value for enhancing the quality of the participants' educational (developmental) experience.

2. Polyphony in Translator Education

The notion of polyphony as we adopt in this article draws upon the concept of multiple voices, introduced to translator education by González Davies (2004). In her characterisation of the concept, González Davies states as follows:

Multiple voices should be heard in the classroom: those of the teachers and the students, as well as those of different theorists and researchers, and those of the practitioners and initiators. New paths should be explored instead of keeping to one approach to translation or to its teaching. At this point, it is not only a question of encouraging the translators' visibility, but also of giving support to these other voices. (pp. 4–5)

González Davies outlines a translator pedagogy based on *hearing the multiple voices*, which can be interpreted in terms of *giving support to the voices* – the power to decide to stakeholders, whose presence is necessary for a *re-construction* of the translation classroom: from the enclosed space for a unidirectional flow of knowledge and power distribution towards a space *shared* (cf. Klimkowski, 2015) by *voices* (agents with power to decide). Neither the knowledge, nor its sources are taken for granted on the sole premise of teachers' expertise, but are a subject to reiterative negotiations between the stakeholders (Király, 2019). Polyphony critically relies on sources of knowledge, its legitimacy and credibility reaching beyond the classical classroom. The polyphonic classroom is governed by the efforts to align voices of all the stakeholders, with their right to pursue distinctive, autonomous learning trajectories.

Under the interpretation adopted in this article, the following basic types of *voice alignment* can be – based on González Davies (2004) – distinguished:

1. *Voices of teachers and (facilitators, negotiators, moderators of classroom dynamics) and students (explorers, negotiators, peer learners/teachers etc.)*

This appears to be a core type of polyphony that conditions the others. For González Davies (2004), the teacher's role is that of a “guide, counsellor, informer and evaluator” (p. 17). Their role is to scaffold the classroom environment to inspire “learning through negotiation and experimentally” (p. 17), which necessitates that the classroom becomes “a discussion forum and a hands-on workshop” (p. 18). For the sake of simplicity, in what follows we refer to this type of voice alignment in terms of *level 1 polyphony*.

2. *Voices resultant from different learning styles and ways of functioning*

The relations between the teachers and students in level 1 polyphony need to take into account the diversity of learning needs, allowing all sorts of individual

learning trajectories. This type of polyphony covers respect to diverse “learner styles, teacher styles and translator styles,” allowing them to develop learner autonomy, and mobilising students’ potential (pp. 17–18). This type of voice alignment is *level 2 polyphony*. It can be a challenge in learning contexts suffering from excessive formalization of the learning process, often accompanied with a bureaucratic and positivist belief that competences (learning outcomes) should mean the same to everyone in the classroom.

3. *Voices of the other participants of the learning ecosystem: education and translation theorists, industry practitioners*

Successful construction of polyphony at the two prior levels allows inviting voices from outside the academia, “[e]stablishing contact with the outside world by means of projects which involve professional translators” to learn through meaningful engagement in real life tasks enabling authentic professional experience (p. 18).

Polyphony as outlined here – and derived directly from González Davies (2004)’s idea of multiple voices in translation classroom – is not a static phenomenon. Voices come, continue or go. One polyphony needs to empower other polyphonies. For the purposes of this study, we are going to distinguish between *input polyphonies* and *output polyphonies*. Input polyphonies are those planned by the teacher in the class content and foreseen in the classroom dynamics. Output polyphonies are derivative from the stakeholders’ interaction with input polyphonies.

3. Polyphony as a Transformative Factor

In the simplest terms, progress from input to output polyphonies is a form of learning. Taking into account the complex voice alignment processes and meaning negotiations that are part of polyphonic classroom dynamics, one can claim that learning through polyphony is highly likely to be transformative.

In fact, the transformative powers of multiple voices approach are highlighted by (González Davies, 2004, pp. 15–16), where she makes an overt reference to the conception of transformative learning, as introduced to translator education by Kiraly (2000). In his seminal work, Kiraly builds the main argument on a dichotomy between transmissionist and social constructivist views of how people learn. Advocating for the latter, Kiraly quotes Miller & Seller (1985), who explore a dichotomy between transmissionist and transformation perspectives in educational thought.

The dichotomies listed above illustrate a stark contrast between the transmissionist and the transformational epistemologies, irrespective of the fact that some statements in the table can be problematic even if approached from a radical (social-)constructivist angle (for discussion on radical constructivism and the transformative views held by Kiraly, 2000 and Miller & Seller, 1985, see

Table 1. The transmission vs. transformation perspective in education – based on Miller and Seller (1985), quoted after (Kiraly, 2000, p. 22)

Transmission Perspective	Transformation Perspective
Knowledge is transferred	Knowledge is constructed
Learner is a student and client	Learner is a whole person
Teacher should be in control	Student should be in control
Knowledge is public	Knowledge is private
Motivation is extrinsic	Motivation is intrinsic
Learning is molecular	Learning is holistic
Learning characteristics are shared	Every learner is unique
Learning is individual	Learning is social
Knowledge is content	Knowledge is process

e.g. Klimkowski, 2015). In the optics adopted in this article, the transformative power of polyphony can perhaps be even better illustrated by reference to Mezirow (2003) – the author of the concept of transformative learning. In one of his later works, he explains that learning has the potential to transform “problematic frames of reference – sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets) – to make them more inclusive, discriminating, open, reflective, and emotionally able to change” (Mezirow, 2003, p. 58). When transformed, “such frames of reference are better than others because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action” (pp. 58–59). According to Mezirow (2003), the mechanism to inspire transformative learning is dialogue:

Discourse here refers to dialogue involving the assessment of beliefs, feelings and values. Discourse involves topics referred to from the point of view of a particular frame of reference. Justification of a proposition must be assessed in relation to the particular frames of reference applied. To take the perspective of another involves and intrapersonal process, drawing on the information one has about the speaker to form a mode of the other. Perspective taking also involves an interpersonal dimension, using feedback to adapt messages to the other’s perspective. (pp. 59–60)

It stands to reason to assume that aligning multiple voices in (translator) education critically depends on this type of dialogical interaction. Dialogue is crucial to Mezirow’s concept as it underlies his view of communicative learning:

Communicative learning refers to understanding what someone means when they communicate with you. This understanding includes becoming aware of the assumptions, intentions and qualifications of the person communicating [...]. (p. 59)

In his understanding of communicative learning, Mezirow (2003) depends on Habermas (1984) and his claim that communicative learning is in a dialectical relation to instrumental learning:

The distinction between instrumental and communicative learning is fundamental. In instrumental learning, the developmental logic is hypothetical-deductive, and empirical methods are more often appropriate for research. For communicative learning, the developmental logic involves analogic-abductive inference. Abductive reasoning is reasoning from concrete instances to an abstract conceptualization. To understand communicative learning, qualitative research methods are often more appropriate. (p. 59)

In what follows, we attempt to show how the concept of voice alignment or polyphony can benefit all the stakeholders in the educational process. Our case in point is education of MA students of translation as regards entrepreneurship and language service provision.

4. Solopreneur Academy: Class Outline

Subject to this study is a class dedicated to Translation Service Provision Competence (EMT, 2009, 2022; Klimkowska & Klimkowski, 2015; Kujamäki, 2020, 2021). Other concepts addressing this broad thematic area include entrepreneurship training (Galán-Mañas et al., 2020; Klimkowska, 2014; Klimkowska & Klimkowski, 2020); entrepreneurial competence (Lackéus, 2015); professional competence(s) (Eskelinen & Pakkala-Weckström, 2016; Koskinen, 2020) or business and people skills (Koskinen, 2020). Though they can classify under diverse umbrella terms, skills and competences of this kind are a regular part of academic translator education. The class offered at the Department of Applied Linguistics at the Maria Curie-Skłodowska University in Lublin covers four main thematic components, which relate best to the language service provision (LSP) market in Poland. The components pursue the following educational objective•

learning to construct one's own service portfolio as based on one's service strategy;

- adopting an optimal business model to pursue one's strategy;
- launching and managing one's business; assessing and reviewing its objectives;
- attracting and retaining clients, developing a branding and a communication strategy.

The class consists of 10 regular workshops devoted to a wide selection of issues within the above content areas. The remaining 5 meetings are workshops held by class partners: industry experts, solopreneurs or representatives of organisations functioning on the LSP market.

Apart from these two main lines of activity, students can (optionally) accept two kinds of teamwork tasks:

- social media tasks: students provide LinkedIn coverage of class activities (research, post preparation, review, post publication). The class is branded as *Solopreneur Academy* and has its dedicated group on *LinkedIn* ([linkedin.com/groups/9316130](https://www.linkedin.com/groups/9316130));
- study tasks: students prepare and deliver in-class presentations devoted to a topic they pick from the list. The list contains topics that delve deeper into issues discussed at the regular classroom workshops, though often in a rudimentary way. For example, the diversification of tax schemes in Poland is only briefly sketched in the classroom, and a dedicated study task allows students to seek more information about diverse criteria for tax reduction or exemption in the case of individually run businesses.

The class ends with an examination featuring two main components:

- the theoretical part, where knowledge is evaluated through an oral presentation of three topics that students pick at random. The list of topics is made available to students at the beginning of the semester. In fact, the list covers issues that are similar to the ones used for the study tasks and presentations. Students are exempt from the theoretical exam if they engage in either of the tasks specified above;
- the practical part is an individual portfolio, in which students complete 5 tasks corresponding to the four content components. The tasks are available to students at the beginning of the semester, and are explained at the concluding meetings for each content component. This allows students to choose whether to complete the portfolio systematically, step by step, or treat it as one task. The tasks are open-ended – there are no key words, hints or close-ended items included. In other words, students get empty tables to fill in information completely on their own. The only specification is the mode of work for each table. Each table has two main columns: for advantages and disadvantages of a given mode. Below the tables, there is an instruction for students to mark their most favourable mode of work.

5. Solopreneur Academy: Transformative Polyphonies

In the author's opinion, the framework of the class discussed in the previous section features at least four markers of transformative polyphony:

1. Task diversification: as can be inferred from the class outline above, the class design allows for task diversification as concerns main class components and the examination procedure. This caters for different student learning styles, allowing individualisation and autonomy. The latter qualities are of particular import for a course aspiring to empower transformative learning to facilitate students' emergence as professionals.
2. Task reality: although *Solopreneurship Academy* is a curricular, academic subject, the tasks it poses to stakeholders are out of the ivory tower. Firstly,

the portfolio task is intended to be a preliminary business plan. Secondly, the study tasks are to give students valid know-how to browse through the legal and economic environment of LSP provision in Poland. Thirdly, the *LinkedIn* task gives students a first-hand experience of how social media marketing works. Students are encouraged to repost or otherwise leverage the *Solopreneur Academy* material to start building their own brands.

3. Evaluation as dialogue: as discussed briefly above, the adopted exam evaluation procedure relies on a constructive interaction of instrumental learning (in that students complete the particular tasks) with communicative learning (when the students and the teacher enter into dialogic investigation, evaluation and operationalisation of the portfolios).
4. Guest input: the final polyphonic element are the voices of the Academy Partners. Their role is to expand the classroom polyphonic spectrum to cover industry narratives. The role of the students is to decide which of the voices, and to what extent, need to be aligned with their frames of reference, which of the voices are to be rejected, and which are an impulse for a learning transformation.

6. Modes of Work in Language Industry: Students' Perceptions

In its 2023 edition, the class gathered 33 participants. As mentioned above, one of the examination tasks was to submit and discuss personal portfolios. They contained tasks correlated with the main thematic components of the class. One of the tasks (Task 3) asked students to explore their individual perceptions of advantages and drawbacks of each working mode discussed in-class: in-housing, hybrid and freelancing (solopreneurial) mode:

Task 3: Assess your favourite modes of work: in-housing, hybrid and freelancing/solopreneurship

The students were to explore all three options, but they were also told to indicate the mode they found most attractive. Out of 33 respondents, 21 expressed their preference for the hybrid mode, 10 for in-housing and 2 for freelancing/solopreneurship. Below, we present an analysis of how the respondents perceive the pros and cons of their preferred mode of work – as recorded in the portfolios they submitted. Since the hybrid mode was the most often reported choice, it begins data presentation. The data are anonymised, published on written consent from each student, issued prior to portfolio submission. The data are organised in three tables: each for one mode of work.

Table 2. Results for the hybrid mode as favourite

HYBRID		TOTAL RESPONSES	21
PROS		CONS	
income/work stability and flexibility	21	work load issues	19
project diversity	10	management issues	15
part-time related employee benefits and growth opportunities (promotion, pay rise)	10	conflict of interest between part-time job and service provision	15
greater autonomy	7	coordination, cooperation and communication issues	8
greater client network (relations)	7	work-life balance issues	7
reduced social security and tax burden	7	risk of burnout	5
skill development in both part-time and LSP	6	limited social interaction	3
options for client/ domain specialization	5	technology issues	3
limited risk of unemployment (discontinuity of work)	4	competition issues	2
reduced business risks (in contrast to freelancing / solopreneurship)	3	limited options for income increase or career change	1
more options for distant/hybrid work	3	sense of uncertainty	1
greater work-life balance	2	limited options for tasks and clients (in contrast to freelancing / solopreneurship)	1
full pension rights	2	lack of legal regulation	1
time management flexibility	2	limited flexibility (in contrast to freelancing / solopreneurship)	1
reduced operational and fixed costs (in contrast to freelancing / solopreneurship)	2	limited autonomy (in contrast to freelancing / solopreneurship)	1
better informed budget management	1	stress	1
higher bank credibility	1		
good test for the freelancing option	1		
diversified income	1		
more interest driven than in-housing	1		
professional recognition	1		
productivity increase	1		

21 respondents out of 33 pinpoint the hybrid mode of work as their first choice, and all of them signal that the main advantage is *income and work stability mixed with flexibility*. 10 students point out the advantage of *project diversity*, and an equal number is likely to enjoy *part-time employee benefits and growth*

opportunities. The list of all advantages mentioned by at least one student reaches 22, but the above mentioned 4 categories outnumber the others significantly.

The list of disadvantages, or weaknesses, acknowledged by the students in the hybrid mode covers 16 items. *Workload issues* are indicated as the strongest disadvantage (risk factor). It is chosen by 19 out of 21 students. 15 respondents indicate that *management issues* can be an operational problem for them, and an equal number of responses is recorded for *conflict of interest between part-time job and service provision*. The remaining 13 categories attract a smaller portion of voices than these main 3 ones.

Table 3. Results for the in-housing mode as favourite

IN-HOUSING		TOTAL RESPONSES	10
PROS		CONS	
financial stability	10	working environment issues (supervisors, co-workers)	8
employee benefits	9	limited autonomy, creativity	8
employment stability	6	boring tasks, monotony	6
weekends and holidays	6	risk of underpayment	4
promotion opportunities / pay rises	6	inflexible working hours	4
formalities managed by employer	5	flat income ceiling	3
social security covered	4	obligatory office work	2
social interaction, social skills, teamwork, collaboration	3	risk of being used	1
no need to seek clients	2	task preference is limited	1
flexible working hours	2	limited or no contact with clients	1
no business risks	2	need to identify with the company	1
access to jobs	2	limited time management options	1
labour law protection	2	growth/promotion opportunities depend on employer policies	1
development and training opportunities	2		
reduced costs	1		
no need to seek alternative sources of income	1		
predictable workload	1		
fewer duties and lower responsibility (in contrast to the other forms)	1		
predictable working hours	1		

Out of 33 respondents, 10 indicate that their preferred mode of work is in-housing. They list 19 advantages. *Financial stability* is perceived the superior advantage: it is highlighted by all 10 respondents. *Employee benefits* occurs 9

times. *Employment stability, weekends and holidays* as well as *promotion and pay rise opportunities* were noted by 6 students.

The list of perceived disadvantages of in-housing contains 13 items. The most problematic item for the respondents is *working environment issues*, with some students explicitly mentioning working under supervision, while others also addressing other workplace relations. *Limited autonomy* and *limited creativity* are listed in the category of disadvantages by 8 students. Other perceived problems were *boring tasks and monotony*, *risk of underpayment* or *inflexible working hours* (4 responses each).

Table 4. Results for the freelancing/solopreneurship mode as favourite

FREELANCING/SOLOPRENEURSHIP		TOTAL RESPONSES	
PROS		CONS	
professional autonomy	2	income uncertainty/irregularity	2
flexibility (place, time, workload)	2	management issues	2
project/client diversification	2	self-motivation issues	1
unconstrained income progression	2	no employee benefits	1
building entrepreneurial expertise	2	limited social interaction	1
building a brand	2	client management	1
skill diversification	1	workload issues	1
		stress	1
		pressure to develop	1

Only 2 responses opt for freelancing as their favourite. In both cases, the advantages include autonomy, flexibility, diversification, income progression, entrepreneurial expertise and branding. The disadvantages concern income instability and management issues. One student mentioned self-motivation as a potential disadvantage of freelancing.

7. Discussion

The analysis of the data outlined above focuses on tracing the output polyphonies in the responses collected from Task 3 in the student portfolios in 2023. The main marker of polyphony is the students' ability to opt for one out of three modes of work, accompanied with their ability to pinpoint advantages and disadvantages of their choice. Completing the task required an alignment of the narratives about the options recognized in the market environment with the voices respecting and empowering students' personal preferences and views.

Although each category of advantages and disadvantages has its typical, most frequent representatives, the list of all options that the students are able to acknowledge is fairly comprehensive. There was no option signalled in the

students' responses that was off to the topic. This can imply that the students were able to approach the topic from multiple angles and with numerous narratives (polyphony) that coincided in their thinking about the task. This latter observation is further supported by the fact that some students found it difficult to decide on one mode of work only. One student admitted finding hybrid and in-housing modes equally attractive. Two students were contemplating both hybrid and freelancing. One student chose in-housing as a step in their way towards the hybrid mode, while yet another chose the exactly opposite trajectory.

8. Conclusions

In face of the results presented and discussed above, a claim is put forward that the class devoted to solopreneurial education of language specialists empowers multiplicity of voices both as input and output polyphonies. The input polyphonies result from the content and classroom dynamics factors planned by the teacher (thematic workshops, discussions and tasks; learning trajectory personalisation; expert guest voices). The output polyphonies record how the class is able to empower a transformed view of options, relations, conditions and limitations in thinking, talking about and planning language service careers.

The portfolio proves an optimal tool for inspiring polyphony. First, it provides a space for individual work for each student and for aligning narratives necessary to complete the tasks (level 2). The narratives come from the classroom activities, but also from the guest input (level 3). Second, thanks to the dialogical formula of the examination, the portfolio empowers student - teacher polyphony (level 1), giving each stakeholder a chance to transform their viewpoints.

Another advantage of the portfolio method is that it provides quality material for research and reflexive teaching. Getting to know students' responses helps the teacher determine if the main assumptions of the class are met. More importantly, the research offers suggestions for improvements. For example, the following improvements are introduced in the 2024 edition of the class:

- more comprehensive in-class coverage of the portfolio tasks to make its completion more meaningful to students;
- the social media tasks are structured in a more detailed way. Student teams work in turns. The social media tasks will become obligatory from the 2025 edition onwards, with the task array reaching beyond LinkedIn posting;
- portfolio examination dialogue requires a more efficient structuration to improve its communicative effectiveness: Lackéus (2015)'s list of entrepreneurial competences will be used as *key performance indicators* and narrative anchors at the examination.

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The Evolution of Students' Ability to Identify and Solve Different Types of Translation Problems: Insights From a Longitudinal Process and Product Study

ABSTRACT

Problem-solving is a multi-faceted activity, which lies at the very heart of the translation process and requires the effective operation of translation competence (TC). This article investigates how a group of undergraduate students who participated in a comprehensive longitudinal study into the development of TC approached three different types of prototypical translation problems before and after receiving 7.5 months of translator education. The study examines 315 problem-solving paths, focusing in particular on verbal (but also non-verbal) evidence confirming students' awareness of the nature of the problems, the strategicness of the problem-solving process, and the plausibility of the final solutions provided.

KEYWORDS

translation problem; translation competence; translation process research; translation competence acquisition; translator education

1. Translation problems: conceptualisation and findings from translation process research

Translation problems have for years been an important area of interest for translation scholars and in particular researchers who have investigated the behaviour of novice and experienced translators, designed models of translation competence (TC) and translation competence acquisition (TCA), and sought to optimise translator education.

In research investigating cognitive processes in translation, problems have been associated with non-automatic processing, which leads to the activation of strategies. Strategies, which are traditionally viewed as potentially conscious procedures making it possible to solve problems (Krings, 1986; Lörscher, 1991), in turn, give insight into the level of development and interaction of different elements of TC. Micro-level or "local" problems (Jääskeläinen, 1993) have been categorised for instance by the Process of Acquisition of Translation Competence

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and Evaluation research group (PACTE)¹ (2011a) as problems of comprehension and/or re-expression that are cultural, linguistic, intentional, textual (involving style, coherence, text type, etc.), extralinguistic, and related to the translation brief and target-text (TT) readers. The TransComp TC study analysed comprehension, production, and combined problems (Göpferich, 2010), though the source texts (STs) posed “lexical, syntactic, pragmatic, text-linguistic, culture-specific, creativity-demanding and comprehensibility-related problems” (Göpferich, 2009, p. 26). Nord (1991), on the other hand, classified translation problems as pragmatic, cultural, linguistic, and text-specific. It is also Nord (1991, p. 151) who first made the important conceptual distinction between *problems* and *difficulties*; the former are viewed as “objective or at least intersubjective” and should continue to be seen as problems even if a translator is able to solve them efficiently, whereas the latter are subjective in nature and can be due to deficiencies in a particular translator’s TC. This distinction is reflected in the methodologies of process studies, which took into account either the former (e.g., PACTE, 2005) or the latter (e.g., Göpferich, 2010).

Translation process research has delivered several findings concerning problem-solving and decision-making in translation. Although few of the studies conducted to date are longitudinal in nature in the strictest sense of the term (some notable exceptions are mentioned in the next paragraph), many of them have examined the performance of translators with various degrees of TC, making it possible to formulate assumptions regarding this feature of TC and the process of its acquisition (e.g., Ehrensberger-Dow & Massey, 2013; Göpferich, 2010, 2011; Jääskeläinen, 1993; Lörscher, 1992; PACTE, 2011b). Well aware of their role as intercultural mediators, experienced translators tend to have a dynamic/functional approach towards translation, which is focused on the TT readers and meaning. This is visible in the macro-strategies they adopt based on the translation situation and refer to when solving local problems. When dealing with these problems, they consistently take the criteria for producing an adequate TT version into account, considering multiple concerns and the interests of different participants of the translation process, and thus creating complex problem representations. In contrast, translation novices have a tendency to proceed in a sign-oriented manner, ignoring important elements of the translation situation and context and resorting to guessing. Regarding the ability to identify translation problems, which should be associated with the effectiveness of the processes of solving them and the quality of the end product, PACTE (2011a), for example, found that foreign language (FL) teachers tended to describe their problems as linguistic, whereas translators perceived their problems as functional, intentional, and textual in nature. However, the characterisation of translation problems as such was not

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associated with more acceptable solutions and was concluded not to necessarily be a feature of TC based on the findings (PACTE, 2011a). As for the relationship between the approach towards translation and the quality of translation problem solutions, it is worth mentioning that the research by PACTE (2011b) showed that translation professionals' dynamic approach towards translation was associated with more acceptable translation decisions than was the case for teachers. On the other hand, in the TransComp study, in contrast to other research, professionals' strategic behaviour informed by this approach did not necessarily translate into a higher number of acceptable solutions than was the case for *advanced* translation students (Göpferich, 2010).

Longitudinal research looking into the above aspects of translation has delivered somewhat mixed findings. For instance, some of the results of the TransComp study did not confirm an increase in the strategicness of student problem-solving behaviour after 4 semesters of training, strategic behaviour being marked by an awareness of “the criteria that a specific target text (TT) section has to fulfil in order to be an adequate correspondent for the respective ST [source text] unit” (Göpferich, 2011, p. 8). This raises, among others, the important issue of the non-linear, recursive, and individual nature of the process of TCA, during which particular sub-competences that form part of a dynamic system may not develop in parallel (see especially Göpferich, 2013; Kiraly, 2013; PACTE, 2000). On the other hand, Cintrão (2011, pp. 96–98) found greater improvement in giving priority to functional appropriateness and in solution quality in language and literature students who had received 4 months of function- and problem-focused instruction in translation than in the control group, both for a text the participants had already translated and one they had not. Piotrowska's (2002) 3.5-month-long pedagogical intervention carried out on a group of 35 students training to become EFL teachers found that owing to targeted training, the students (who initially exhibited poor competence) adopted an adequate macro-strategy, effectively used a range of micro-strategies, had a functional approach towards translation, and were more acutely aware of the nature of the problems rather than seeing all of them as linguistic in nature. Furthermore, Fernández and Zabalbeascoa (2012) observed growth – as a result of training with the use of metacognitive questionnaires, among others – in students' strategic (sub-) competence as well as their ability to identify translation problems, especially strategically relevant ones, and justify the solutions chosen. It is also worth mentioning that in their simulated longitudinal TCA study, PACTE (2015, 2020) observed that the students displayed a more dynamic approach towards the translation of both the entire text and particular problems and that translation acceptability increased, rising consistently over 5 years of training for all Rich Points examined, except for one that posed a textual and intentionality-related problem. Problem identification, on the other hand, did not improve consistently in the study.

2. Aim of the current study

In light of the findings of previous research regarding problem-solving and decision-making, which lie at the very heart of the translation process, and the non-linear and individual nature of TCA, the primary aim of the current study was to investigate how a group of undergraduate translation students approached three different types of prototypical translation problems before and after receiving 7.5 months of translator education. Drawing on data collected in a longitudinal multiple-case study of TC², I have analysed 315 problem-solving/decision-making paths, focusing in particular on three key variables. These are: (1) students' awareness of the nature of these problems, (2) the strategicness of the process of solving them, and (3) the plausibility of the solutions provided. The data were examined for three different types of problems (Rich Points) represented in the STs. It was expected that students' results would improve for all the variables analysed, for each problem category (hypotheses H1, H2, and H3, respectively). The results for the first variable were analysed based on verbal data for individual students and based on both verbal data and non-verbal data (evidence based exclusively on the translation product) for the entire group of students.

3. Methodology of the study

This section describes the methodology of the study, including its participants and setting as well as data collection, processing, and analysis.

3.1 Participants and setting

The study involved eight second-year Polish students of a BA programme in Applied Linguistics, who took parallel subjects in two foreign languages, the principal one being English. Students with stronger and weaker foreign language skills ($n = 8$) with no previous experience in translation were selected for the study. During the course of the study, the students took three strictly translation-related classes. These were courses in the fundamentals of (non-specialised) translation, sight translation, and translation theory (lecture). The first course³ specifically was to help students develop a functional, strategic approach towards translation. It focused on adopting a suitable macro-strategy based on an analysis of the translation situation, designing adequate micro-strategies for making local decisions, evaluating alternative translation problem solutions, as well as collaborating with the client and using external resources effectively.

² Detailed information on the methodology applied in the entire study and its other results can be found in Chodkiewicz (2020).

³ For a detailed description of the course see Chodkiewicz (2014).

3.2 Data collection

A combination of product- and process-oriented methods and a range of instruments of data collection were applied, including adaptations of those used in the PACTE and TransComp studies. Bearing in mind that L2 translation is a necessity and reality of the market in the Polish context, the STs were in the L2 and L1. Both STs were accompanied by briefs. The texts posed a range of different translation problems (see Section 3.3) and were comparable in terms of readability (Gunning-Fog index) and lexical variety (type-token ratio). L1 and L2 translation processes were recorded using screen-recording (Camtasia Studio) and keylogging (Translog) software. The participants then engaged in cue-based retrospective verbalisation, during which the recordings of the translation processes were replayed to them and they were to describe how they had dealt with any problems or difficulties they had experienced. Next, the participants completed a series of questionnaires, including a Retrospective questionnaire (adapted from PACTE, 2011a), which regarded, i.a., the five greatest problems experienced when translating the text and required a description of the nature of the problem, priorities adopted when solving it, and actions taken to solve it.

3.3 Data processing

The quality of the translation products was evaluated using a specially designed error-based assessment system, which largely drew (in terms of the error categories used and their definitions) on the typologies developed by Göpferich (2010), the ATA (Koby & Champe, 2013), and the ITI (2015). Errors were classified according to type as having to do with function, lexico-grammar, coherence, punctuation, or formal aspects (spelling and spacing) and according to severity, as minor (0.5- or 1-point), major (2.5-point), and critical (5-point) errors.

When it comes to describing and evaluating the translation process, so-called “Prominent Attention Unit protocols” (inspired by Göpferich, 2010, 2011) were compiled, containing the verbal and non-verbal data collected in the study. *Prominent Attention Units (PAUs)* (term created based on Jääskeläinen’s, 1993, attention units) were ST segments that the subjects devoted most of their attention to in the study and that triggered effortful, conscious, and/or goal-oriented (strategic) behaviour, aimed at making decisions or solving problems (see Lörcher, 1991; Jääskeläinen, 1993). They represented individual, subjective problems and were identified based on several primary and secondary indicators that were mostly similar to the ones used in TransComp, with some modifications (cf. Göpferich, 2010; see Chodkiewicz, 2020). Each step the subjects took (reflection or action) with regard to a given PAU was evaluated in terms of strategicness as strategic, neutral, or non-strategic. The level of strategicness of the entire decision-making/problem-solving path for a given PAU was assessed as well, as strategic, semi-strategic, neutral, or non-strategic, depending on the

combination of the strategicness of the steps taken and plausibility of the final solution (see Chodkiewicz, 2020). The final solutions were also included in the protocols with a quantitative assessment in the form of a negative score calculated by adding up the error points received for a given PAU in the product quality assessment and a qualitative assessment according to whether the solution was plausible (no errors), semi-plausible (0.5-point error), or implausible (errors amounting to 1 point or more).⁴

Some of the PAUs were then tagged as *Rich Points*, or *RPs* (see PACTE, 2003, 2005), that is predetermined units representing prototypical translation problems that were objective or inter-subjective in nature, considering the level of participants' bilingual (sub-)competence. Twenty-four RPs (12 in each ST) were tentatively selected pre-assessment and verified post-assessment. The RPs fell into the following three categories: RAs – encyclopaedic, cultural, and/or translation reader- and brief-related problems (n = 8); RBs – re-expression problems related to ST deficiencies or contrastive language features (issues with language correctness and coherence could be caused in TT; n = 7); and RCs – re-expression and also potential comprehension problems (issues with meaning could be caused in TT; n = 9).

3.4 Data analysis

For the sake of simplicity, the current discussion addresses the strategicness of the translation process by looking at strategicness scores (SS), which were calculated by subtracting the percentage scores for non-strategic processes from those for strategic ones (neutral and semi-strategic processes were ignored). The quality of translation solutions is represented by plausibility scores (PS), obtained by subtracting the percentage scores for implausible solutions from those for plausible ones (semi-plausible solutions were disregarded).

The study also analyses verbalised and non-verbalised awareness of the nature of the translation problems. The former refers to situations when the participants provided verbal data (oral and/or written) indicating their awareness of the key aspects of the problems discussed. This means that the students focused and reflected on them, voiced concern about them, and/or included them in the priorities/rationale for their translation decisions. Non-verbalised awareness of the nature of the translation problems was identified based on the translation product only. This pertains to situations where there were no pertinent verbal data, but the final solution was correct, which means that the nature of the problem was indeed properly addressed by the students.

⁴ The final solution assessment system was inspired by the those used in the TransComp (Göpferich, 2011) and PACTE (2011a) studies.

Finally, it is worth noting that since only one student paid prominent attention to RB3 in test 2, the results for this RP have been disregarded for all parameters except PAU percentage.

4. Results of the study and discussion

The current section discusses the results of the study with respect to the aims outlined in Section 2.

4.1 Group results

The results obtained by the entire group for attention paid to the problems and verbalised and non-verbalised awareness of their nature with respect to the three categories of RPs are shown in Table 1.

Table 1. Focus of attention (percentages of students with PAUs) and verbalised and non-verbalised awareness of problem nature (for PAUs) for three types of Rich Points for entire group in tests 1 and 2.

Rich Point type	Test	Focus of attention (Prominent Attention Unit, %)	Verbalised awareness of problem nature for PAUs (%)	Non-verbalised awareness of problem nature (based on product only) for PAUs (%)
RAs	T1	84.4	33.3	1.9
	T2	84.4	72.2	5.6
RBs	T1	67.9	42.1	0.0
	T2	64.3	55.6	16.7
RCs	T1	95.8	46.4	7.2
	T2	88.9	64.1	4.7

When it comes to the extent to which the study participants focused on the prototypical translation problems represented in the RPs (Table 1), students gave the most attention to RCs (T1 = 95.8% and T2 = 88.9%). These were followed by RAs, for which the results were identical in both phases of the study (T1 and T2 = 84.4%); in test 2, the results for this category were thus very similar to those for RCs. The problems which were definitely focused on the least in both phases of the study were RBs (T1 = 67.9% and T2 = 64.3%). Thus, the extent to which students paid attention to particular types of problems either did not change or decreased across tests, but not considerably. This means that H1 was rejected.

It is now worth looking at how strategically the students who focused on the problems proceeded when making decisions regarding the three categories of RPs and how plausible their solutions were (Figures 1 and 2, respectively). Bearing in mind that solution plausibility was an element of the assessment of the strategicness of problem-solving (see Section 3.3), the rankings for the problem types were the same for the two variables in both tests. In test 1, the students

proceeded the most strategically and provided the best solutions for RBs (SS = -31.6%; PS = -39.5%), followed by RCs (SS = -39.1%; PS = -55.1%), the results for RAs being much poorer (SS = -55.6%; PS = -64.8%). The students' performance in test 2 was different, since their processes and products were the most successful for RAs (SS = 11.1%; PS = -7.4%), followed by RBs (SS = 0.0%; PS = -16.7%), whereas the results for RCs were less satisfactory than for the other two categories (SS = -20.3%; PS = -32.8%), and RCs remained the only category for which non-strategic processes still dominated over strategic processes. Therefore, H2 and H3 were confirmed on a group level. The changes for the two variables across tests were definitely the greatest for RAs, followed by RBs, and they were the smallest for RCs, indicating that the training received was most effective in helping students deal with RAs.

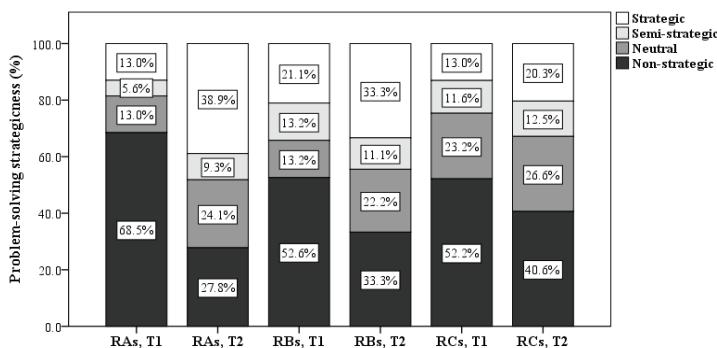


Figure 1: Strategicalness of problem-solving processes for three types of Rich Points in entire group in tests 1 and 2.

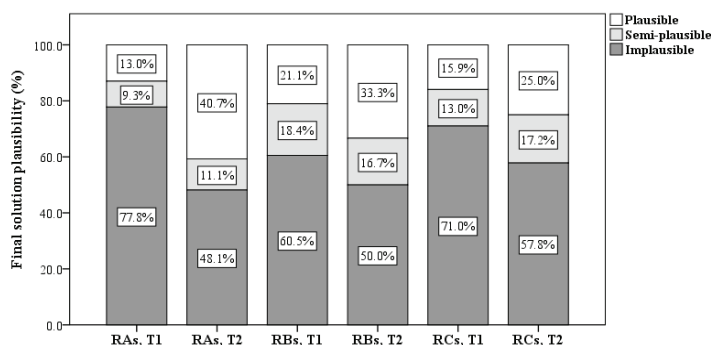


Figure 2: Plausibility of final solutions to three types of Rich Points in entire group in tests 1 and 2.

4.2 Individual results

The results for the three categories of RPs for individual study participants are shown in Figure 3.

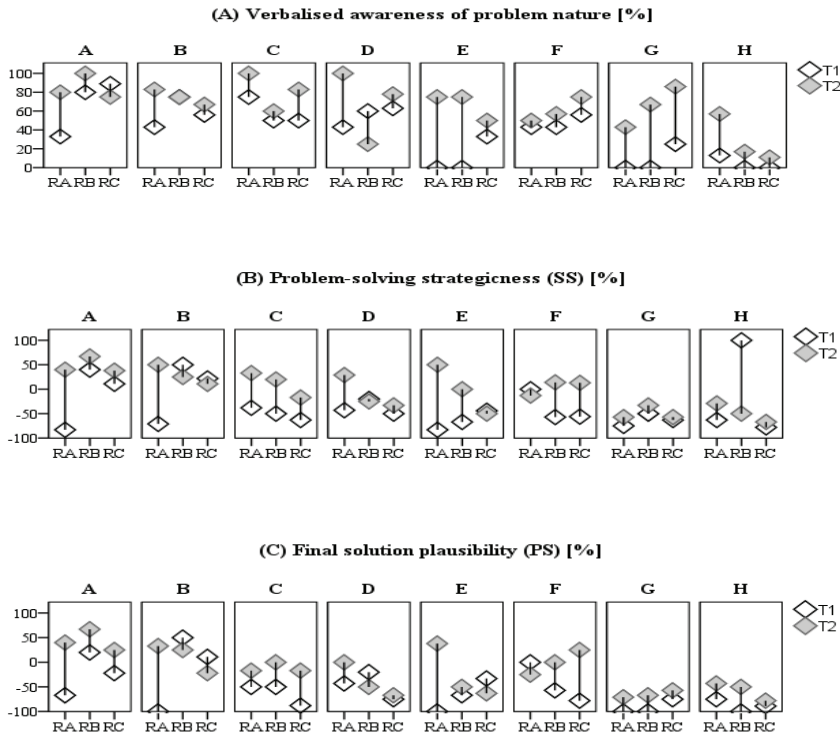


Figure 3: Verbalised awareness of problem nature, problem-solving strateginess and final solution plausibility for individual students (A-H) for three types of Rich Points in tests 1 (T1) and 2 (T2).

As shown in Figure 3, some students were unable to maintain their – often high – performances from test 1 in test 2. This was found for process strateginess and final solution plausibility (Figures 3b and c) for student B for RBs and RCs, student F for RAs, student D for RBs, and student E for RCs, as well as in verbalised awareness of problem nature (Figure 3a) for students A for RCs and D for RBs. The results of the study are thus indicative, among others, of the volatility of the translation performance and competence of novice translators; in contrast, experts consistently “exhibit superior performance for representative tasks in a domain” (Ericsson, 2006, p. 3). However, as noted by Chodkiewicz (2020), observing decreases in the scores should not lead to the conclusion that the students’ TC did not develop whatsoever for the pertinent variables.

5. Concluding remarks

The following conclusions can be formulated based on the results of the study.

1. The study revealed growth in the entire group across all three problem types for the strategicness of the problem-solving process and final solution plausibility (cf. Section 1). This can be seen as evidence of the development of the elements of the students' TC related to problem-solving, primarily of the strategic and knowledge about translation sub-competences but also the instrumental (i.e., tools- and research-related) and possibly bilingual sub-competences (see Göpferich, 2009; PACTE, 2003).
2. The training received by the students had the greatest effect on how they dealt with problems that were encyclopaedic, cultural, and/or reader- and brief-related (RAs), showing that students became much more conscious of their role as intercultural mediators, followed by re-expression problems related to ST deficiencies or contrastive language features (RBs). The training had the smallest impact on helping students proceed strategically when solving re-expression problems that often involved comprehension issues and for which implausible solutions could affect TT meaning (RCs; similarly as in the PACTE, 2020, study). The reason for this might be that this involved making good use of one's reading skills and bilingual (sub-) competence, which are not trained as easily as the skills needed to solve the types of problems represented by RAs and RBs. Also, very often the final product for RCs could not be based directly on the results of searches in external sources, requiring heavier use of internal, cognitive resources and deep processing of situational factors.
3. The study did not unequivocally confirm that the group of students paid greater attention to the problem types examined in the study (similarly as was the case in the PACTE, 2020, study), though increases were found in the entire group across all three problem types for verbalised awareness of the nature of the problems.
4. Though few, the decreases observed for process strategicness and final solution plausibility for some individual students for the variables investigated in the study can be considered indicative of the instability of incipient translation competence and performance, but not necessarily as evidence that no growth took place in their TC.

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An Investigation of Rater Effects on L2 Translation Performance Scores

ABSTRACT

This study examines the impact of L2 translation quality and rating experience on raters' scoring behaviours and the reliability and variability of scores. It also investigates frequently used decision-making strategies applied by raters assigning scores to different qualities of translation papers produced by Turkish EFL students. In total, 80 translation papers (40 low-quality and 40 high-quality) obtained from the participants were given to 10 raters to score using a translation scoring rubric. Results revealed that less experienced raters were more positive while scoring the students' translation performances and assigned higher and more consistent scores to the papers.

KEYWORDS

translation assessment; decision-making strategies; rating experience; translation quality; think-aloud protocols

1. Introduction

The use of translation as a writing assessment tool in language testing has gained increased popularity and has become an applicable method in teaching foreign languages to students (Cook, 2010). Translation can be evaluated as a writing performance since scorers grade a translation text according to features such as linguistics, content, style, organization, and various technical aspects (Marais, 2013). Assessing second language (L2) learners' translation performance, however, can also be a problematic and rigorous task when, for instance, the effect of the different social contexts on writing processes (Baker, 2010), and the impact of L2 learners' background knowledge, language proficiency level and judgmental ability on the writing performance (Heaton, 2003), are taken into account.

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When raters judge the quality of translated texts by students, several factors can affect the scoring procedure found in the assessment of L2 writing performance. The first of these factors is related to the characteristics of the raters. The background language knowledge (Chang, 2002; Pöchhacker, 1994), decision-making strategies (Baker, 2010), preferred scoring methods (Barkaoui, 2007), the tendency of severity or leniency (Huang, 2008), and the previous rating experience of the raters (Pöchhacker, 1994; Şahan, 2018), are among the factors that impact how a translated text is judged. The second factor that impacts the scoring process is the type of rubric (e.g., holistic or analytic) used by the raters (Barkaoui, 2007; Yıldız, 2020) and preferences for different rating procedures may affect the variance of scoring (Chang, 2002). The other factors that affect scoring are the quality of the translated texts produced by the students and their L1 proficiency (Şahan, 2018)

2. Literature

In the field of writing assessment, some studies have attempted to determine the impact of text quality on the reliability of raters' scores (Brown, 1991; Ferris, 1994; Han, 2017; Huang, 2008; Şahan, 2018). For example, using Generalizability Theory (G-theory), Han (2017) compared scores assigned to three different qualities of essays (low, medium, and high) by raters with different previous rating experiences. The results of the study showed that while the raters were similar in the scores they assigned to high-quality papers, they were significantly different in the scores they gave to low-quality papers. Finally, yet another factor is related to the test-takers (i.e., students). L2 students generally receive lower writing performance scores than native English students when they are asked to write essays on a topic (Huang, 2008). Students' background knowledge and target language proficiency impact their understanding and interpretation of the writing tasks (Han, 2017). Similarly, in cases where students are asked to translate from the target language to the native language, or in reverse, the competencies of the students in both languages may affect the quality of the written products. According to Baba (2009), the ability to appropriately express words, phrases, and idioms in an L2 contributes to students' writing performances and the scores assigned to them by the raters.

The presence of human (teacher) interference in the process of scoring translation tests makes it highly subjective which is indicative of unreliability (Lado, 1964). When a person carries out the scoring of a translation performance, several factors impact the process of translation performance assessment, causing a potentially subjective and inconsistent assessment. Rater subjectivity (American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education [AERA, APA, and the NCME], 2014) is one of the sources of unreliability, as it is well known that raters may assign

different scores to the same essay (i.e., inter-rater reliability), or that the same rater may assign different scores to essays which are of the same quality (i.e., intra-rater reliability), which may threaten the reliability of the scores (Brown, 2004; Homburg, 1984). A higher degree of reliability should be ensured when the test scores are used to make high-stakes decisions that are not easily reversed (AERA, APA, and the NCME, 2014). Thus, it is assumed that any difference between an individual's scores obtained at different times regarding the same measurement situation may have resulted from one or multiple sources of error rather than from the individual's maturation or learning (Güler et al., 2012). A reliable and objective measurement of translation quality is therefore essential in an academic setting in educational programs for formative evaluation. This may include eliminating applicants during procedures of admission, giving feedback on learner progress and performance, and testing what they have acquired at the end of a program (Angelelli, 2009).

3. Empirical studies on translation assessment

In the 1990s and early 2000s, some scholars claimed that there was a scarcity of empirical research in the field of L2 translation assessment studies (e.g., Hatim & Mason, 1997; Melis & Albir, 2001; Pym, 1992). They indicated that although a few studies had been carried out on translation assessment, they had been conducted neither objectively nor in a regimented fashion (Melis & Albir, 2001, p. 273). A theoretical and descriptive approach has been applied to the issue of translation assessment, even in the latest publications. This situation clearly exposes the absence of empirical studies in the area of translation assessment. From the 1990s to the present time, the amount of empirical research carried out in the field of L2 translation quality assessment is very limited. Some studies have investigated the use of translation as an assessment toolkit in academic settings (e.g., Calis & Dikilitas, 2012; Källkvist, 1998; Laufer & Girsai, 2008; Lee, 2013; Prince, 1996), whilst others have focused on determining the impact of translation on L2 learners' accuracy (e.g., Berggren, 1972; Ghaiyoomian & Zarei, 2015; Källkvist, 2008; Mundt & Groves, 2016; Soleimani & Heidarikia, 2017; Stapleton & Kin, 2019; Uzawa, 1996; Vaezi & Mirzaei, 2007). Studies searching for an objective method to assess translated works are even scarcer in the existing literature, primarily focusing on the examination of the reliability and validity of developed translation tests (e.g., Colina, 2008; El-Banna, 1993; Eyckmans et al., 2009; Ghonsooly, 1993; Han & Shang, 2023; Ito, 2004; Neves, 2002; Orozco, 2000; Tavakoli et al., 2012).

In the literature, to the best knowledge of the authors, no research has yet been conducted to examine the impact of rating experience on L2 translation score variability and the issue of the reliability of scores in L2 translation assessments. This study aims to fill this gap by examining issues of rater reliability in L2

translation assessment in the context of higher education. Furthermore, no research has used G-theory to determine sources of score variability, and the use of thinking-aloud protocols (TAPs) has not been widely preferred by researchers since it is a challenging task to collect, prepare (transcription) and analyse verbal data. Therefore, this study is assumed to contribute to the translation assessment literature by investigating rater cognition through verbal protocols.

4. Research questions

The following research questions have guided this study: 1) What are the sources of score variation that contribute to the score variability of the scores assigned to high- and low-quality translation papers? 2) Are there any significant differences between the scores assigned to low- and high-quality translations? 3) Does rating experience have an impact on the variability and reliability of the scores assigned to high- and low-quality translation papers? 4) How do raters make decisions while assigning scores to translation papers of different quality?

5. Method

5.1. Design of the study

Following a mixed-methods research design, the data was collected both quantitatively and qualitatively. Quantitative data was obtained from the comparison of the variability of the scores assigned by the raters to the translation texts (papers). The qualitative data was obtained from the recordings of think-aloud protocols (TAPs). Official permission was also obtained from the Dean's Office of the Faculty, where the students were enrolled.

5.2. Selection of raters

A total of ten raters (four females and six males) participated in the study voluntarily. The raters had more than one year of experience in teaching and evaluating English language and were professionals in the field of interdisciplinary English language teaching, learning, and assessment. Prior to the main data collection, an adapted rater profile form (Barkaoui, 2007; Cumming et al., 2002) was given to the raters to obtain information about their personal, educational, and professional backgrounds. Five participant raters reported five years or less experience in rating translation papers of EFL students and were categorized as less experienced raters. The other five participant raters declared they have seven years or more of grading experience and were categorized as more experienced raters.

5.3. Selection of EFL students

In selecting the students, the researchers followed a purposive sampling method. The students who participated in the study were majoring at the English Language and Literature Department at a state university in Türkiye. Among 115 sophomore

students, 40 volunteers (thirty females and ten males) were included in the study. Before their first year, all of these students had received foundational courses for one year in the department. On completion, they were administered a language proficiency level exam which they all successfully completed. For this reason, they were all assumed to have a minimum level of B2 language competency. For the treatment, necessary permission was obtained from Kafkas University (E.1900066389). A written informed consent form was also provided to the students affirming that they had the right to discontinue their participation at any time should they so wish.

5.4. Data collection instruments

The quantitative data was collected through scores given to translated texts, and the qualitative data was collected through a background questionnaire and TAPs.

5.4.1. Translation passages

In this study, four informative newspaper articles obtained from an online British magazine (The Daily Star Online) were selected to be translated by the students in four different sessions, controlled by the first author of this paper. The Flesch-Kincaid Test showed that the chosen texts had scores between 62.5 and 69.96 for Flesch Reading Ease, indicating that the selected texts were suitable for the language proficiency level of the students. In each translation session, all 40 students were asked to translate a newspaper article from English to Turkish. According to Dickins et al., (2016), training translators with a focus on translation into a native language results in a higher quality translation compared to a translation from a native language into the target language. The students were given 90 minutes to complete each translation task, which were performed by hand with pen and paper.

Overall, 160 translation papers were obtained from the students who participated in the study. The authors of this study and an expert rater carefully divided the collected translation papers in accordance with quality (e.g., high and low), following the criteria of the 10-point rating scale described below. While the papers graded over five were categorized as high quality, the ones that were graded under five were categorized as low quality. At the end of this procedure, 40 high-quality and 40 low-quality translation papers were randomly selected for analysis.

5.4.2. The 10-point rating scale

The 10-point rating scale used in this study was developed by Marais (2013) for the purpose of evaluating student translation products in educational settings. Although the developer of the rubric labelled the rubric as holistic, it presents features of an analytic rubric in that it consists of six sections structured hierarchically: 1)

suitability of translation for the general purpose, 2) culture and target reader, 3) text, 4) design, 5) content and finally, 6) language assessment. In this hierarchy, the sections are not ranked in order of importance: the principal objective is to reflect the decisions taken by the students during their translation process. Performance scores were assigned to the subcategories of rubric sections as follows: suitability of translation for the general purpose (1 pt.), culture and target reader (2 pts.), text (1.5 pts.), design (1.5 pts.), content (1.5 pts.) and language (2.5 pts). The internal consistency of the evaluation rubric was established as 0.89. In the current study, this scoring rubric was preferred for its simplicity and assumed to be used as a scoring system. Table 1 displays the score weight distribution of the six components of the rubric used in the study.

Table 1. The score weights of six categories in the 10-point rating scale

Category	Weight Percentage
Purpose	10 %
Culture	20 %
Text	15 %
Technical Aspects	15 %
Content	15 %
Language	25

5.4.3. The Think-Aloud protocols (TAPs)

By including TAPs in this study, the researchers aimed to investigate the raters' internal decision-making process while they evaluated the translation papers. Studies including TAPs specifically emphasize that affective factors significantly impact translation assessment (Laukkanen, 1996). In this study, the raters were asked to use TAPs while scoring pre-determined (randomly) 32 of the 80 translation texts that were in their translation paper pack with a voice-recording device. Raters were asked to provide an accurate, clear, and consistent report of this cognitive process through the application of the introspection method in the evaluation process. These recordings were then transcribed, and raters' evaluation-based utterances were centred upon this information. In the analysis of this data, the researchers made the coding and categorization. In order to ensure that the raters fully understood the think-aloud procedure, the researchers followed a TAP training process which included a training session for the raters, focusing on the application of this method as well as the rubric.

5.4.4. Data analysis

Descriptive and inferential analyses were conducted on both the total scores assigned to the translation papers and on the sub-scores given to six components of the papers. In addition, descriptive statistics were applied to the codes obtained

from the TAPs' analysis. The G-theory framework was used to determine independent variation sources and identify score variation due to experience. While descriptive and inferential statistical analyses were performed using SPSS, the G-study analyses were performed with the computer program EDUG. Analysis of the data obtained from the TAPs was carried out by application of a coding scheme adapted from Cumming, Kantor, and Powers (2002). The qualitative data set was composed of the TAPs the raters recorded for 32 randomly selected translation papers while evaluating them. Following a top-down approach, the TAPs were divided into meaningful units according to three criteria a) by the rater reading aloud a section of the translation paper, b) by the rater commenting about how the translation of a sentence should be and c) when the rater stated a clear idea/thought about the translation paper by adopting a holistic manner. After the segmentation of the data procedure had been completed, a discussion session was held with two field experts regarding each item included in the coding scheme. Then, by consulting another field expert, the sub-categories that the coding frame included were reevaluated and modified by the researcher. To ensure the inter-rater reliability of the coding system, another expert who had knowledge of qualitative data analysis was asked to code a randomly chosen sample of 15% of the protocols. The analysis carried out to determine the similarity between the coding procedures indicated an agreement of .82.

5.4.5. G-theory framework

In the literature, three different theoretical frameworks have been applied in the research of L2 performance assessment to examine measurement reliability: Classical Testing Theory (CTT), Generalizability Theory (G-theory), and IRT (Brennan, 2011). Among these performance assessment frameworks, G-theory (developed by Cronbach et al., 1972) arose due to the limitations of CTT, back in 1972. In comparison to CTT, which centres on estimating only a single error of measurement at a time (e.g., item, rater, form, etc.), G-theory enables researchers to analyse multiple sources of error variance simultaneously (e.g., raters, tasks, topics) (Brennan, 2001). In the examination of the reliability of behavioural measurements, G-theory ensures a very practical and flexible framework (Shavelson et al., 1989). It determines every source of systematic and unsystematic error, distinguishes them, and estimates each one of them (Webb & Shavelson, 2005).

For these reasons, G-theory was applied as a methodological framework in the current study. Within the G-theory framework, further data analyses were conducted using the following three steps:

- 1) A paper-by-rater-by-quality ($p \times r \times q$) random effects G-study was employed in order to determine independent sources of variation such as papers (p), raters (r), quality (q), paper-by-rater ($p \times r$), paper-by-

quality ($p \times q$), rater-by-quality ($r \times q$), and paper-by-rater-by-quality ($p \times r \times q$) for 80 translation papers evaluated by holistic scoring methods. Also, calculations of generalizability and dependability coefficients were performed to determine the reliability of the data set.

- 2) In order to attain variance component estimates, a paper-by-rater ($p \times r$) random effects G-studies were employed separately; papers (p), rater (r), paper-by-rater ($p \times r$) for 40 low-quality and 40 high-quality translation papers scored by holistic evaluation methods. Also, calculations of generalizability and dependability coefficients were performed to determine the reliability of the data set.
- 3) Since raters were categorized into two groups with respect to their previous rating experience as less experienced and more experienced, the scores they assigned to the translation papers were compared in terms of their generalizability and dependability coefficients. Thus, a paper-by-rater-by-quality ($p \times r \times q$) random effects G-study was performed on all translation papers, and a paper-by-experience ($p \times r$) random effects G-study was conducted on high- and low-quality translation papers.

6. Results

6.1. Results for the first research question

What are the sources of score variation that contribute to the score variability of the scores assigned to high- and low-quality translation papers?

Table 2. Variance components for random effects P X R X Q design

Variance source	df	σ^2	%
P	39	4.84	61.8
R	9	-0.33	0.0
Q	1	-0.03	0.0
PR	351	0.98	12.6
PQ	39	0.10	1.4
RQ	9	0.94	12.1
PRQ	351	0.95	12.1
Total	799	-	100

In order to identify the sources of the variance, a paper-by-rater-by-quality ($p \times r \times q$) random effects G-study was carried out. Components of the variance and their relative contribution to the variability of scores are presented in Table 2.

Table 2 indicates that the largest variance component was papers (61.8%), indicating that students had considerably different translation performances. The second greatest variance that contributed to the score variability was the interaction between papers and raters (12.6%), indicating that raters differed largely from one to another in terms of scoring the students' translation. The third greatest variance

was attributable to the residual (12.1%), indicating that the variability is due to the interaction between raters, translation quality, paper, and other unexplained systematic and unsystematic sources of error. The fourth greatest variance contributing to the score variability was the interaction between the raters and translation quality (12.1%), indicating considerable consistency in raters' ratings across paper quality. The remaining sources of variance such as rater, translation quality, and paper by quality were determined to contribute relatively little to the variability of the scores (0%, 0%, and 1.4% respectively).

To identify the sources of variance that contribute to the variability of scores assigned to high-quality translation papers, a paper-by-rater (p x r) random effects G-study was carried out. Table 3 displays the components of variance and their relative contribution to the ratings assigned to high-quality translation papers.

Table 3. Variance components for random effects P X R design (high-quality translation papers)

Variance source	df	σ^2	%
P	39	0.38	13.1
R	9	1.72	58.5
PR	351	0.83	28.4
Total	399	-	100

Table 3 shows that the greatest variance component was attributable to raters (58.5%), indicating that 80 L2 translation papers were substantially different in terms of quality. The second largest variance component was determined to be the residual (28.4%). Papers yielded the smallest variance component (13.1%), indicating that the papers are somewhat different in terms of translation quality.

A paper-by-rater (p x r) random effects G-study was carried out to identify the sources of variance contributing to the scores assigned to low-quality translation papers. Table 4 shows the components of variance and their relative contribution to the variability of scores assigned to low-quality translation papers.

Table 4. Variance components for random effects P X R design (low-quality translation papers)

Variance source	df	σ^2	%
P	39	0.17	6.2
R	9	1.63	59.1
PR	351	0.95	34.7
Total	399	-	100

Table 4 shows that the greatest variance component was due to raters (59.1%), indicating that raters differed largely from one to another in terms of scoring the students' translations. The second largest variance component followed by the rater facet was the residual (34.7%). Papers yielded the smallest variance component (6.2%).

Calculations of generalizability and dependability coefficients were performed with the application of a paper-by-rater-by-quality ($p \times r \times q$) random effects G-study design for all translation papers, and a paper-by-rater ($p \times r$) random effects G-study design for low- and high-quality translation papers separately. Table 5 illustrates these results.

Table 5. Generalizability and dependability coefficients for translation paper ratings

Translation papers	Number of papers	Number of raters	Ep ²	Φ
All papers	80	10	.96	.95
High-quality	40	10	.82	.60
Low-quality	40	10	.64	.40

Table 5 shows that the generalizability and dependability coefficients of all translation papers (Ep²=.96 and Φ=.95) were higher than those of high- and low-quality translation papers (Ep² =.82, Φ=.60 and Ep² =.64, Φ=.40, respectively). The results revealed that although Ep² and Φ coefficients obtained for high-quality translation papers were higher than those obtained for low-quality ones, coefficients obtained for both quality of papers were far below the ones obtained for all papers.

6.2. Results for the second research question

Are there any significant differences among the scores assigned to low- and high-quality translation papers?

Mann-Whitney U test results for differences between low- and high-quality translation papers are given in Table 6.

Table 6. Mann-Whitney U test results for differences between low- and high-quality translations

Categories	U	p	High Quality (Mdn)	Low Quality (Mdn)
Purpose total	9383.000	0.000	0.8	0.4
Culture total	7628.000	0.000	1.6	0.6
Text total	8624.500	0.000	1.2	0.6
Technical aspects total	24614.500	0.000	1.2	0.7
Content total	7767.500	0.000	1.3	0.5
Lang total	7673.000	0.000	2.0	0.8
Grand total	6875.000	0.000	8.4	3.8

According to Table 6, the total purpose median was 0.8 in high quality texts, and 0.4 in low quality texts with statistically significant differences (U=9383.000; $p < 0.05$).

The Purpose scores of high-quality texts were significantly higher than low-quality texts. The Culture score median was 1.6 in high-quality texts, and 0.6 in low-quality texts with statistically significant differences ($U=7628.000$; $p<0.05$). The Text score median was 1.2 in high-quality texts, and 0.6 in low-quality texts with statistically significant differences ($U=8624.500$; $p<0.05$). The Technical aspects score median was 1.2 in high-quality texts, and 0.7 in low-quality texts with statistically significant differences ($U=24614.500$; $p<0.05$). The Content score median was 1.3 in high-quality texts, and 0.5 in low-quality texts with statistically significant differences ($U=7767.500$; $p<0.05$). The Language score median was 2.0 in high-quality texts, and 0.8 in low-quality texts with statistically significant differences ($U=7673.000$; $p<0.05$). In total, the median of high-quality texts was 8.4, higher than low-quality texts (3.8) with statistically significant differences ($U=6875.000$; $p<0.05$). Thus, it might be argued that the evaluation of low-quality texts had higher variation than high-quality translation papers.

6.3. Results for the third research question

Does rating experience have an impact on the variability and reliability of the scores assigned to high- and low-quality translation papers?

The scores assigned to each component of the rubric were analysed to understand whether there were statistically significant differences between the scorings of experienced and inexperienced raters. Mann-Whitney U test results for differences between experienced and inexperienced raters were given in Table 7.

Table 7. Mann-Whitney U test results for differences between more experienced and less experienced raters

Categories	U	p	More Experienced (Mdn)	Less Experienced (Mdn)
Purpose total	77563.500	0.452	0.60	0.60
Culture total	71509.000	0.009	0.50	0.60
Text total	72406.500	0.019	0.30	0.30
Technical aspects total	71128.500	0.006	0.40	0.30
Content total	69638.000	0.001	0.30	0.40
Lang total	69479.500	0.001	0.30	0.30
Grand total	70131.000	0.003	1.30	1.60

According to Table 7, the total score median was 1.3 in more experienced raters, and 1.6 in less experienced raters with statistically significant differences ($U=70131.000$; $p<0.05$). In general, results showed that less experienced raters assigned higher scores to all papers than more experienced raters. Also, calculations of generalizability coefficients were performed for high- and low-

quality translation papers to determine differences between less experienced and more experienced raters. The results are given in Table 8.

Table 8. G-theory analysis results for differences between more experienced and less experienced raters

Translation papers	Number of papers	Number of raters	Ep ² for more experienced	Ep ² for less experienced	ϕ for more experienced	ϕ for less experienced
High-quality	40	5	.46	.80	.25	.52
Low-quality	40	5	.13	.55	.05	.32

As seen in Table 8, G-study analysis yielded higher Ep² and ϕ coefficients for both high- and low-quality translation papers (Ep²: .80 and .55, and ϕ: .52 and .32, respectively) rated by less experienced raters. These results show that less experienced raters were more consistent in the scores they assigned to the papers than more experienced raters.

6.4. Results for the fourth research question

How do raters make decisions while assigning scores to translation papers of different quality?

Data obtained from the TAPs that were recorded by eight graders (2 of the raters failed to complete the TAPs task during their assessment) were analysed. In the presentation of the qualitative data, a cumulative approach was followed regarding translation quality. The most commonly employed strategies by all raters were identified for each translation quality. Table 9 shows the ranking orders of the decision-making behaviours.

Table 9. The most frequently employed decision-making behaviours by all raters to high- and low-quality translation papers

High-quality Translation Papers		Low-quality Translation Papers	
Decision-making Behaviours	%	Decision-making Behaviours	%
Read or reread text	32,60	Read or reread text	28,24
Consider spelling or punctuation	6,45	Consider spelling or punctuation	5,83
Articulate general impression	4,95	Assess comprehensibility	5,83
Consider syntax or morphology	4,72	Consider syntax or morphology	5,48
Consider own personal response, expectations, or biases	4,26	Interpret ambiguous or unclear phrases	4,46
Identify redundancies	3,46	Assess coherence	4,42
Read or interpret scoring scale	3,40	Consider own personal response, expectations, or biases	4,42
Assess comprehensibility	3,23	Envision personal situation of writer	3,71
Assess coherence	3,05	Summarize judgements collectively	3,36

Assess task completion or relevance	2,71	Identify redundancies	2,92
Assess style, register, or genre	2,71	Read or interpret scoring scale	2,61
Consider lexis	2,59	Consider lexis	2,61
Articulate or revise scoring	2,36	Assess task completion or relevance	2,34
Edit phrases for interpretation	2,36	Assess reasoning, logic, or topic development	2,12
Assess text organization	2,30	Articulate general impression	2,03
Assess reasoning, logic, or topic development	2,30	Rate language overall	1,94
Summarize judgements collectively	2,19	Edit phrases for interpretation	1,94
Interpret ambiguous or unclear phrases	2,07	Assess text organization	1,94
Rate language overall	1,96	Assess originality	1,86
Define or revise own criteria	1,73	Assess style, register, or genre	1,72
Assess originality	1,67	Scan or skim text	1,68
Scan or skim text	1,61	Consider gravity of errors	1,41
Consider gravity of errors	1,44	Classify errors into types	1,37
Assess fluency	1,32	Consider error frequency	1,37
Consider error frequency	0,92	Articulate or revise scoring	1,28
Classify errors into types	0,52	Assess fluency	1,24
Envision personal situation of writer	0,46	Compare with other compositions	0,75
Observe layout	0,35	Define or revise own criteria	0,71
Compare with other compositions	0,29	Rate ideas or rhetoric	0,27
Summarize ideas or propositions	0,00	Discern rhetorical structure	0,09
Rate ideas or rhetoric	0,00	Summarize ideas or propositions	0,04
Discern rhetorical structure	0,00	Assess quantity	0,00
Assess quantity	0,00	Decide on macro-strategy	0,00
Read prompt	0,00	Read prompt	0,00
Decide on macro-strategy	0,00	Observe layout	0,00
Total	100	Total	100

As seen in Table 9, across the two quality translation papers, seven of the top ten decision-making behaviours (with a different ranking order) employed by the raters were the same. All of the raters employed the same top two strategies (“read or reread text” and “consider spelling or punctuation”) when assessing both the low- and high-quality translation papers and seemed to focus on language use by relying on the strategies of “consider syntax or morphology” and “consider spelling or punctuation”. “Consider syntax or morphology” was another commonly preferred strategy with a ranking of 4th for both qualities of papers. Although the strategy of “assess comprehensibility” ranked 3rd for low-quality

translation papers, it ranked 8th for high-quality translation papers. Similarly, while the strategy of “assess coherence” ranked 6th for low-quality translation papers, it ranked 9th for high-quality translation papers. While the strategies of “consider own personal response, expectations or biases” and “identify redundancies” ranked 5th and 6th accordingly for high-quality translation papers, they ranked 7th and 10th respectively for low-quality translation papers.

Other strategies that appeared among the top ten most frequently used for high-quality translation papers were “articulate general impression” ranked 3rd, “read or interpret scoring scale”, ranked 7th and “assess task completion or relevance” ranked 10th, but these strategies were ranked 15th, 11th and 13th respectively for low-quality translation papers. Similarly, the strategies “interpret ambiguous or unclear phrases”, “envision personal situation of the writer,” and “summarize judgments collectively” were more frequently employed for low-quality translation papers than high-quality translation papers. Although these strategies appeared in the top ten for low-quality translation papers, they were ranked 18th, 27th and 17th respectively for high-quality translation papers. Considered collectively, these decision-making trends suggest that when assigning scores to low-quality translation papers, raters mostly centred on grammar, coherence, and comprehensibility of the texts. However, they focused more on identifying redundancies and on the general impression of the texts while rating high-quality translation papers.

7. Discussion

The first research question examined sources of score variation contributing to the score variability of the holistic scores assigned to high- and low-quality translation papers. Results revealed that the largest variance (61.8%) was attributable to papers (p). This indicates that students, as predicted, displayed different translation performances as measured by the translation task. On the other hand, when the generalizability analyses were performed on high- and low-quality translation papers, the facet of papers explained a relatively small portion of variance for low-quality papers in comparison to the variance observed in high-quality papers. Since there were more homogeneous student groups in each of the designs (high- and low-quality), variance due to the papers facet was expected to be small in these two groups. In this context, it can be said that students in the higher proficiency group performed more dissimilar translation abilities from each other when compared to the ones in the lower proficiency group. Also, this might have been due to the fact that some raters assigned lower scores to some of the high-quality papers than they deserved.

Generalizability analysis in the p x r x q design revealed that the second largest variance was due to the interaction between papers and raters (12.6%), indicating that some raters were inconsistent in their judgments while assigning scores to

certain translation papers. Following the interaction between raters and papers, the third greatest variance component in the same design was the residual (12.1%). This amount was relatively smaller when compared to the residual facet scorings in high-quality and low-quality translation papers (28.4% and 34.7%, respectively). These results indicate that some other factors such as gender, expectations, biases, methods of scoring, rating experience, educational background of the raters, etc., might have contributed to the score variation (Brennan, 2001; Huang et al., 2014; Şahan, 2018). Since these measurement designs included a limited number of facets, the residual facet was expected to have a high impact on the score variability.

Considering the impact of the rater facet on holistic score variability in three measurement designs, raters performed similar trends in terms of severity and leniency when assigning scores to high- and low-quality papers (58.5% and 59.1%, respectively). However, in the $p \times r \times q$ design (when quality is included), the rater facet was determined to have no impact on the score variability (0.0%). These results show that raters follow more consistent rating trends while assigning scores to papers with different proficiency levels than while assigning scores to homogeneous groups of papers. That is to say, more consistent scores are likely to be obtained in large-scale assessment contexts where students' proficiency levels vary (Şahan, 2018). Regarding the other components of variance for the collective scorings of the papers, 12.1% of the total variance was attributable to the interaction between raters and paper quality. This revealed that raters varied considerably in the scores they assigned to high- and low-quality papers. These findings are parallel to what Şahan (2018) found in his thesis study. Furthermore, large variances were determined from the rater facet and the residual. This result might be related to the number of raters in that when the number of raters is increased, higher dependability coefficients are likely to be obtained (Brennan, 2001; Güler et al., 2012; Şahan, 2018).

The second research question was posited to determine whether there were any significant differences among the holistic scores assigned to low- and high-quality translations. Although the raters were not informed about the quality division in the translation paper pack, they could assign different scores to two different qualities of translation papers. However, the score range for the papers was found to be high, which might result from the contrast effect in that after assigning scores to a better or worse translation paper, the raters might show a tendency to rate another paper as higher or lower (Freedman, 1981). Furthermore, since raters were aware that EFL students had translated the texts, they may have had higher expectations regarding their performance. In light of this, the raters may have assigned lower scores to low-quality translation papers and to some of the high-quality translation papers. In a study by Baker (2010), raters were found to distinguish between high- and low-quality papers. However, they showed a tendency to give different scores to the same papers under different conditions

(either authentic or research conditions). Furthermore, the raters were found to be more consistent while scoring high-quality translation papers, while the variation was greater in the low-quality translation papers. While this finding coincides with the results of some of the previously held research (Han, 2017; Huang et al., 2014), it contradicts the findings of a study conducted by Şahan (2018), in which the raters were determined to be more consistent while assigning scores to low-quality papers. These results suggest that the quality of the paper is a variable impacting the score reliability. However, variation of scores between and among raters based on the quality of the paper might yield contradictory results in accordance with the raters' background and study context.

The third research question investigated the impact of the rating experience on the variability and reliability of the scores assigned to high- and low-quality translation papers. When previous rating experience was considered, it was determined that more experienced raters assigned lower scores to the translation papers than the less experienced raters. This finding indicates that while less experienced raters assessed the translation papers more leniently, more experienced raters assessed them more severely. The findings of this study coincide with the results of some previous research in that inexperienced raters tend to assign higher scores (Rinnert & Kobayashi, 2001), and they assess papers more leniently (Barkaoui, 2011; Sweedler-Brown, 1985). However, some of the previous research indicated that although raters with different rating experiences performed more similar analytic scorings, more experienced raters tended to assign higher holistic scorings (Song & Caruso, 1996). Also, some additional studies have found that more experienced raters tend to be more lenient than inexperienced raters when assigning scores to students' papers (Şahan, 2018; Weigle, 1999). However, in a study carried out by Shirazi (2019), both experienced and novice raters were determined to perform alike in terms of leniency and severity. Thus, previous research suggests that the way raters interpret the given rubric and to which criteria they afford priority may be a determinant of the dissimilarity of the ratings. In this study, low- and high-quality papers scored by less experienced raters yielded higher reliability coefficients than more experienced raters. These results suggest that in the scoring of both high- and low-quality translation papers, less experienced raters were more consistent than more experienced raters. This might be due to the fact that more experienced raters complied less with the criteria specified in the scoring scale and were more reliant on their own expectations (Eckes, 2008).

The final research question focused on identifying raters' decision-making behaviours while assigning scores to different quality of translation papers holistically. The three most commonly used strategies for all translation papers were "read or reread text," followed by "consider spelling or punctuation" and "consider syntax or morphology." The "Read or reread text" strategy was

expected to be employed frequently by the raters since they all were required to read both the source text and the translated versions of it at least once. This finding coincides with the findings of the previously held research (Barkaoui, 2010; Şahan, 2018). The fact that the writing task was translation may have caused the raters to concentrate on the appropriate use of syntax and morphology in the translation papers and whether the spelling and punctuation were in accordance with the target language. When decision-making behaviours used for low- and high-quality translation papers were compared, similarities were observed in the rating strategies of the raters. Across the two quality of translation papers, seven of the top ten decision-making behaviours (with a different ranking order) employed by the raters were the same.

In conclusion, the employed statistical analyses showed that raters differed substantially in the scores they gave to low-quality and high-quality translation papers, indicating that they could distinguish between low-proficient and high-proficient translation papers. Also, when compared to the high-quality translation papers, more variance was determined in the median scores of the low-quality translation papers, suggesting that raters were more consistent while rating high-quality translation papers. Considering the impact of the rater facet on holistic score variability in three measurement designs, raters performed similarly in terms of severity and leniency when assigning scores to high- and low-quality papers. However, the rater facet was determined to have no collective impact on the score variability. This revealed that raters varied considerably in the scores they assigned to high- and low-quality papers, and they displayed great differences regarding severity and leniency within each translation paper quality. Regarding the impact of previous experience on the reliability and variability of scores, it was determined that more experienced raters assigned considerably lower scores to the translation papers than the less experienced raters. Regarding the use of decision-making strategies, raters were found to apply mostly strategies pertaining to self-monitoring focus, followed by language focus and rhetorical/ideational focus, respectively.

This study is not without limitations. First, the lack of a thorough rater training procedure may have caused variations in scores among raters. Although necessary information was provided regarding the criteria included in the holistic rubric prior to the scoring process, it was observed that the rater training provided was insufficient to obtain fairer ratings. Second, performing verbal protocols on a translation assessment task might have led raters to be biased while making decisions about the papers (Şahan, 2018). Additionally, raters might have experienced pressure while thinking aloud, which might have introduced variables in regard to the quality of the verbal protocols (Barkaoui, 2010).

8. Conclusion

In light of the limitations and findings of this research, some pedagogical implications are suggested. First, although scoring training was provided to the raters prior to the assessment procedure of the students' translation papers, variations between the scorings of the raters were significant. For this reason, this study illustrates that even raters with a broad experience of rating should be given detailed and consistent rater training to make them more reliable markers. In this way, variations between the scorings can be considerably reduced or eliminated, and more fair judgments can be attained. Secondly, it is suggested that in-house scoring protocols and thorough rater training may be helpful for instructors to achieve more fair judgments.

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Übersetzungen polnischer Lyrik und translatorisches Handeln: Anthologie, Tandem, Interlinearversion

Translations of Polish Poetry and Translational Action: Anthology, Tandem, Interlinear Version

ZUSAMMENFASSUNG

Der Beitrag nimmt zum einen als Verfahren translatorischen Handelns das Tandem-Übersetzen und die Interlinearübersetzung in den Blick, die sich in der Lyrikübersetzung des 21. Jahrhunderts – zumindest gilt dies für die Übersetzung polnischer Lyrik ins Deutsche – etabliert haben. Ziel der Betrachtungen ist es, das Interagieren von Übersetzer*innen und Lyriker*innen als Akteur*innen translatorischen Handelns sichtbar zu machen. Zum anderen wird in diesem Beitrag mit dem Publikationsformat der Anthologie, die nach wie vor eine populäre Form der Lyrikpublikation darstellt, ein Wandel von der Übersetzungsanthologie zur fast ausschließlich zweisprachigen Anthologie markiert. Im Konnex von Übersetzer*innen und Lyriker*innen sowie von Original und Übersetzung korrespondiert die Anthologie mit den benannten Verfahren im Wandel translatorischen Handelns von polnisch-deutscher Lyrikübersetzung im 21. Jahrhundert.

SCHLÜSSELWÖRTER

Lyrikübersetzung; Tandem-Übersetzen; Interlinearübersetzung; Anthologie

ABSTRACT

The article examined two methods of translational action: tandem translation and interlinear translation, both of which have become established in 21st century poetry translation, at least in the case of translating Polish poetry into German. The goal of this analysis is to make visible the interaction between translators and poets as actors in translational practice.

The publication format of the anthology, which still remains a popular form of poetry publication, marks a shift from translation anthologies to almost exclusively bilingual anthologies. In the context of translators and poets, as well as original and translated works, the anthology corresponds with the mentioned processes in the changing landscape of Polish-German poetry translation in the 21st century.

KEYWORDS

poetry translation; tandem translation; interlinear translation; anthology

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1. Einführung

Im Sommer 2009 schmuggelten Lyriker*innen aus Polen und Deutschland Verse über sprachliche Grenzen. In einem mehrtägigen Übersetzungsworkshop während des *poesiefestival Berlin* arbeiteten acht polnisch- und acht deutschsprachige Dichter*innen in Zweiergruppen¹ und übersetzten gegenseitig ihre lyrischen Texte². Sprachkenntnisse in der jeweils anderen Sprache waren mitunter kaum oder gar nicht vorhanden. Die Grundlage für die Übersetzung hör- und lesbarer Texte³ in die jeweils andere Sprache bildete neben vorbereiteten Interlinearübersetzungen vor allem der Austausch mithilfe von Dolmetscher*innen. Das Besondere des Versschmuggel-Projekts fasst rückblickend die deutsche Lyrikerin Uljana Wolf (und in dem Band zugleich Übersetzerin der Texte von Marta Podgórnik) so zusammen: „[...] kollektives Arbeiten, ein sozialer Raum, ein Gesprächsraum, Übersetzen als mehrsprachige Aktivität, die auch über Bande laufen kann und das Wahrnehmen der eigenen Sprache im Spiegel der anderen“⁴.

In dem folgenden Beitrag geht es nicht darum, übersetzte lyrische Texte einer übersetzungskritischen Analyse zu unterziehen, vielmehr gilt es, Verfahren translatorischen Handelns in den Blick zu nehmen, die seit den frühen 2000er Jahren zunehmend im Bereich von Lyrikübersetzung praktiziert werden und zeitgenössische polnische Lyrik einem deutschsprachigen Lesepublikum zugänglich machen. Der Wandel im Übersetzen lyrischer Texte ist in den vergangenen zwei Jahrzehnten bemerkenswert – Tandem-Übersetzen und das Arbeiten mit Interlinearübersetzungen gewinnen in der Lyrikübersetzung unübersehbar an Relevanz und ermöglichen das Übersetzen häufig als schwer zugänglich postulierter Lyrik. Zugleich lenkt diese Veränderung das Interesse der Translationswissenschaft auf die (Literatur-)Übersetzer*innen „als Mensch[en] aus Fleisch und Blut, die [...] einen merklichen Einfluss auf den Kulturtransfer haben“ (Kita-Huber & Makarska 2020, S. 6). Übersetzer*innen werden zunehmend als Akteur*innen des Kulturtransfers in den Betrachtungen zum translatorischen Handeln sichtbar. In diesem Beitrag wird zudem punktuell immer wieder auf das Interagieren von Übersetzer*innen und Lyriker*innen bei der Vermittlung von Gegenwartslyrik verwiesen. Nicht zuletzt sollte die veränderte und vor allem erweiterte Perspektive in den Untersuchungen zum translatorischen Handeln die Aufmerksamkeit auf die im interkulturellen Vermittlungsprozess beteiligten Institutionen wie Verlage, Preise für Übersetzer:innen, Förderinitiativen usw. sowie auf Publikations- und Präsentationsformate (Kelletat, 2011, S. 236) lenken.

¹ Aus Polen nahmen u. a. Piotr Sommer, Marta Podgórnik, Eugeniusz Tkaczyszyn-Dycki, Jacek Podiadlo und aus Deutschland u. a. Ilma Rakusa, Uljana Wolf, Peter Waterhouse und Ulf Stolterfoht an dem Workshop teil.

² Alle Texte erschienen in Wohlfahrt (2010).

³ Das Buch enthält auch eine CD mit allen Texten.

⁴ <https://www.tralalit.de/2022/05/11/uljana-wolf-interview/> (abgerufen am 12.03.2024).

Was Letzteres betrifft, so erfreut sich die Anthologie als Publikationsformat polnischer Lyrik in deutscher Übersetzung auch im 21. Jahrhundert ungebrochener Popularität. Wenn allgemein über Anthologien als geeigneter Untersuchungsgegenstand festgehalten wird, dass sie aufgrund von „meist erkennbaren Herausgeber-Intentionen und ihres eruierbaren situativen Rezeptionskontextes verlässliche Auskünfte über die Interdependenz zwischen Texten, Verlegern und Lesern bieten“ (Häntzschel, 2007, S. 100), ist diese Konstellation bei der Übersetzungsanthologie um die wichtige Position des Übersetzenden zu erweitern. Ausführungen zu Anthologien polnischer Lyrik in deutscher Übersetzung werden deshalb hier an den Anfang der Betrachtungen zum Wandel translatorischen Handelns gestellt.

2. Übersetzte polnische Lyrik in Anthologien

Anthologien polnischer Lyrik in deutscher Übersetzung finden sich in der zweiten Hälfte des 20. Jahrhunderts in beiden Teilen Deutschlands und sie sind auch nach 1989 eine populäre Form der Veröffentlichung lyrischer Texte.

Die erste Anthologie übersetzter polnischer Gedichte nach dem Zweiten Weltkrieg in der BRD gab Karl Dedecius im Jahr 1959 unter dem Titel *Lektion der Stille* heraus⁵. Auf 70 Seiten präsentiert Dedecius Texte von 36 polnischen Lyriker*innen. Das Bändchen enthält ausschließlich Übersetzungen, also keine originalsprachlichen Texte, und das gilt auch für das Gros der folgenden Anthologien in der BRD und in der DDR (also bis 1989). Während Dedecius in *Lektion der Stille* neue, ab 1945 entstandene polnische Poesie präsentiert, bietet er mit den folgenden Anthologien zumeist einen Querschnitt des 20. Jahrhunderts mit einer deutlichen Akzentuierung der Gegenwartslyrik. Die Anthologien von Karl Dedecius unterscheiden sich allerdings in einem Punkt gravierend von anderen Anthologien polnischer Lyrik. Angefangen mit *Lektion der Stille* über *Polnische Poesie des 20. Jahrhunderts* (1964) bis hin zu den zwei Bänden *Poesie in der insgesamt siebenbändigen Ausgabe von Panorama der polnischen Literatur des 20. Jahrhunderts* (1996) ist jeweils auf dem Titelblatt „herausgegeben und übertragen von Karl Dedecius“ zu lesen (anstelle von „herausgegeben“ ist mitunter auch „ausgewählt“ gesetzt). Dedecius fungierte als engagierter Wegbereiter der Vermittlung polnischer Literatur im westlichen Nachkriegsdeutschland⁶ und er

⁵ In der DDR und in Österreich waren bereits 1953 Anthologien polnischer Lyrik erschienen und Dedecius veröffentlichte 1958 in der Zweimonatszeitschrift „Lyrische Blätter“ (Nr. 13) 17 lyrische Texte von 17 Gegenwartslyriker*innen.

⁶ Dedecius hat in seinen Erinnerungen zur Entstehung der Anthologie die Schwierigkeiten, überhaupt Informationen zur Gegenwartslyrik zu finden, festgehalten: „Sie zu besorgen schwierig, hatte mich damals viel Mühe gekostet. Eiserner Vorhang, Antipathie gegen Deutsche, ausleibende Antworten, Mißtrauen deutscher und polnischer Offizieller“. Und offizielle Kontakte zwischen den beiden Ländern gab es kaum: „Man pflegte grundsätzlich keine Kontakte. Ich aber suchte welche“ (Dedecius, 2006, S. 213).

sah in Übersetzungen Brücken der Verständigung. Mit seinen Übersetzungs-Anthologien schuf er aber indessen auch seinen „privaten Kanon“ (Chojnowski, 2005, S. 9), denn er wählte aus – was häufig ein Aushandeln mit Verlegern, Lektoren, Literaturagenten und Autor*innen⁷ bedeutete –, er übersetzte und er verfasste die Nachworte. Diese Paratexte widersprechen in gewissem Sinne gängigen Verallgemeinerungen in der intensiv geführten Sichtbarkeits-Unsichtbarkeits-Diskussion, die bis ins 21. Jahrhundert die Unsichtbarkeit von Übersetzenden und Übersetzungen beklagen. Gleichwohl Dedecius sich in seiner übersetzerischen Tätigkeit eher einer „Poetik der Einbürgerung“⁸ verschrieb, einer Übertragung von Fremden in Eigenes, und damit die Übersetzung philologisch auf den Text bezogen möglichst nicht als Übersetzung sichtbar machte, wird er als Vermittler, als „Brückenbauer“ – dieses Bild prägte er selbst (Dedecius, 2002, S. 11) – und als Übersetzer durchaus sichtbar. Die Sichtbarkeit ist einerseits Indiz und Ergebnis eines klugen und zugleich entschlossenen Agierens innerhalb des Literaturbetriebs sowie kulturpolitischer Einflussnahme und führte andererseits aber auch zu einer gewissen Autorität, die sich nicht zuletzt in einem Alleinvertretungsanspruch bei Übersetzungen bestimmter Autor*innen äußerte⁹. Über das *Panorama der polnischen Literatur des 20. Jahrhunderts* ist auf der Seite des Deutschen Polen-Instituts, dessen Gründung auf Karl Dedecius zurückgeht, zu lesen: „Insgesamt zehn Personen waren an der Fertigstellung des Werks beteiligt. Damit kam Dedecius auch einer Anregung der Mitbegründer und Förderer des Instituts nach, junge Polonisten in die Redaktionspraxis einzuführen und auf die Fortsetzung seines Lebenswerks vorzubereiten“¹⁰. Im Impressum der Panorama-Bände erschienen weitere Beteiligte an Redaktion und Anmerkungen der Bände. Impulse, sich als Übersetzende zu betätigen, gingen jedoch auch schon früher von Dedecius aus, allerdings galt das Interesse von Übersetzenden wie Olaf Kühl oder Esther Kinsky dann eher polnischer Prosa¹¹.

In der DDR erschien nur eine einzige repräsentative Anthologie polnischer Lyrik des 20. Jahrhunderts¹². Den beiden Herausgebern, dem renommiertesten

⁷ Hier wurde der historischen Situation entsprechend nur das Wort „Autor*innen“ gegendert. Alle anderen Personen, mit denen Dedecius zu tun hatte, waren meines Wissens männlich.

⁸ Begriff übernommen von Buschmann (2021, S. 56).

⁹ Über Vollmachten versuchte Dedecius sich das Monopol an Übersetzungen zu sichern, beispielsweise bei Wisława Szymborska. Siehe dazu Hartmann (2021, S. 77).

¹⁰ <https://www.deutsches-polen-institut.de/publikationen/panorama-der-polnischen-literatur-des-20-jahrhunderts/> (abgerufen am 2.04.2024).

¹¹ Zudem unterstützte Dedecius bereits seit 1981 die Vergabe eines Übersetzungspreises für polnische Übersetzungen aus dem Deutschen; 2003 mündete dieses Projekt im Karl-Dedecius-Preis, den das Deutsche Polen-Institut alle zwei Jahre als Doppelpreis für die Übersetzer*innen der Literatur im deutsch-polnischen Sprachraum vergibt.

¹² In den 1940er und 1950er Jahren wurden in der DDR wesentlich mehr Titel polnischer Literatur in deutscher Übersetzung publiziert als in der BRD. Olschowsky spricht von 135 in der DDR und 26 in der BRD (Olschowsky, 1990, S. 30). Doch bereits mit der Errichtung der Berliner

Übersetzer polnischer Lyrik in der DDR Henryk Bereska und dem damaligen wissenschaftlichen Mitarbeiter in der Akademie der Wissenschaften der DDR Heinrich Olschowsky, gelang es, durch geschicktes Agieren gegenüber der Zensur eine Auswahl lyrischer Texte von 62 polnischen Lyriker*innen in der Anthologie *Polnische Lyrik aus fünf Jahrzehnten* (1975) zu präsentieren. Das Inhaltsverzeichnis weist weit mehr als ein Dutzend „Nachdichter“ auf, unter denen sich renommierte DDR-Lyrik*innen wie Sarah Kirsch und Günter Kunert befinden, während Bereska selbst nur wenige Übersetzungen beisteuerte. Einige Gedichte wurden auch in der Übersetzung von Karl Dedecius in diese Anthologie übernommen.

Ein ebenfalls breites Spektrum an Namen von Übersetzer*innen bietet die von Peter Lachmann und Renate Lachmann 1987 in Berlin (West) in der Reihe *Poesie der Welt* herausgegebene Anthologie mit lyrischen Texten der polnischen Literatur vom 16. bis 20. Jahrhundert. Einige der Übersetzungen wurden aus der DDR-Anthologie übernommen. Das Gros der Übersetzungen stammt jedoch von Peter Lachmann und Karl Dedecius. Gegenüber den bisher genannten Anthologien gibt es zwei wesentliche Unterschiede: Zum einen präsentiert sie die lyrischen Texte durchgängig zweisprachig und markiert damit eine Abkehr von der Übersetzungsanthologie. Zudem hat Peter Lachmann zu jedem Gedicht, das im Original und in einer Übersetzung/Nachdichtung abgedruckt ist, eine „Prosaübersetzung“ erstellt. Über deren Funktion ist im Nachwort zu lesen: „Die jeweils dem Gedicht beigegebene Prosa-Übersetzung, ein schattenhaftes Bindeglied zwischen Original und deutscher Nachdichtung, soll als Lesehilfe dienen“ (Lachmann & Lachmann, 1987, S. 414). Es handelt sich um einen flüssig lesbaren Text, der in seiner Struktur einem modernen Typus der Interlinearübersetzung durchaus nahekommt, jedoch mit gänzlich anderer Funktion versehen wurde. Ob die Verwandlung von Lyrik in Prosa als Impuls der Herausgeber*innen auf die Wahrnehmung generell erschwerter Rezeption von Lyrik zu interpretieren ist oder speziell erschwerter Rezeption polnischer Lyrik¹³ oder auch beides, lässt sich nicht eindeutig benennen.

Während das Experiment Prosaübersetzung von Lyrik als Lesehilfe keine Fortsetzung gefunden hat, ist die zweisprachige Anthologie hingegen zur gängigen Präsentationsform neuer und neuester polnischer Lyrik seit den 1990er Jahren geworden. Die 1998 erschienene zweisprachige Anthologie *Kochać to, co*

Mauer, später dann mit der Ausbürgerung von Wolf Biermann und schließlich mit der Solidarność-Bewegung in Polen veränderte sich dieses Bild. Autor*innen, die noch in den 1950er publiziert wurden, strich man in den 1960er Jahren aus Neuauflagen (z. B. Jerzy Lec). Es wurde seitens der staatlichen Zensur immer rigider in die Verlagsprogramme eingegriffen. In den 1970er Jahren gab es eine kurze Zeit der Lockerung.

¹³ Chojnowski (2005, S. 27) geht explizit auf Schwierigkeiten der Rezeption polnischer Lyrik in Deutschland ein.

niewidzialne/Das Unsichtbare lieben (herausgegeben von Dorota Danielewicz-Kerski) enthält Lyrik von Autor*innen, die „nach 1945 geboren und noch nicht mit einer Einzelveröffentlichung im deutschsprachigen Raum in Erscheinung getreten sind“ (Prinz, 1998, S. 7), und Übersetzungen von vier namentlich genannten Übersetzer*innen (Henryk Bereska, Renate Schmidgall, Roswitha Matwin-Buschmann, Joanna Manc) sowie ein Vorwort von Adam Zagajewski. Betont wird in der Einleitung zu diesem Band: „Auch sollen Lyrikerinnen und Lyriker in möglichst gleicher Zahl präsent sein.“ Gleichwohl dieses Ziel mit 12 Lyrikerinnen und 19 Lyrikern nicht ganz erreicht wurde, stellt das genannte Verhältnis in der Anthologie-Welt polnischer Lyrikübersetzung ins Deutsche ein absolutes Novum dar. In den nur zwei Jahre zuvor von Dedecius publizierten zwei Poesie-Bänden im *Panorama der polnischen Literatur des 20. Jahrhunderts* sind unter den 100 Autor*innen lediglich 16 Lyrikerinnen zu finden, in der DDR-Anthologie gibt es Übersetzungen von nur drei polnischen Lyrikerinnen. Doch auch spätere Anthologien zeichnen das Bild einer deutlich von Autoren dominierten polnischen Gegenwartslyrik. So erschien 2008 basierend auf einem studentischen Projekt die zweisprachige Anthologie *Poezja po przelomie – Pokolenie '89/Polnische Poesie nach der Wende – Generation '89* mit Texten von insgesamt 26 Autor*innen, darunter wiederum nur drei Lyrikerinnen. Ähnlich ist das Verhältnis in der 2021 in Wrocław und Dresden erschienenen Anthologie *Na ulicach wyobrażeń. 115 wierszy polskich/Auf den Straßen des Imaginären. 115 polnische Gedichte*.

Doch auch die beiden zweisprachigen Anthologien *VERSSchmuggel/WERSszmugiel* und *Stilleben mit Crash* (2014) sind noch nicht bei der oben postulierten „möglichst gleiche[n] Zahl“ angekommen. Hingegen hat sich die gemeinsame Publikation von Original und Übersetzung sowohl in Anthologien als auch in Einzelveröffentlichungen polnischer Lyrik im 21. Jahrhundert durchgesetzt. Original und Übersetzung rücken in der Wahrnehmung der Rezipierenden näher aneinander, begegnen sich nunmehr auf „Augenhöhe“ wie auch Autor*innen und Übersetzer*innen.

3. Übersetzen im Tandem

Die Verwendung des Begriffs *Tandem* in Bezug auf translatorisches Handeln ist keineswegs einheitlich. In dem bereits erwähnten Beispiel einer Tandemübersetzung in dem Band *VERSSchmuggel/WERSszmugiel* bilden – ähnlich einem Sprachtandem – zwei Personen mit unterschiedlichen Herkunftssprachen ein Tandem. Das Besondere ist hier das gegenseitige Übersetzen von Lyriker*innen, wie es in dem Übersetzungsworkshop des Hauses für Poesie praktiziert wird. Es stellt jedoch eher eine Ausnahme, ein kreatives Experiment dar. Eine intensive Zusammenarbeit von Übersetzer*innen und Autor*innen fördern indessen auch andere Projekte. So treffen sich seit 2019 jährlich für 10 Tage drei Tandems zu einer „deutsch-französisch-polnischen Tandem-Residenz“, veranstaltet von der

Stiftung Genshagen. Die polnische Theaterautorin Małgorzata Sikorska-Miszczuk und der deutsche Übersetzer Andreas Volk bildeten beispielsweise 2020 ein Tandem. Projekte wie dieses stärken den interkulturellen Austausch und machen Autor*in und Übersetzer*in gleichermaßen sichtbar.

Das gemeinsame Arbeiten von Autor*innen und Übersetzer*innen gab es indes zweifelsfrei auch in der Vergangenheit. So etwa übersetzte der Lyriker Stefan George Anfang des 20. Jahrhunderts Gedichte von Waclaw Rolicz-Lieder ins Deutsche. Dass die beiden Dichter während ihres Aufenthalts in Paris freundschaftlichen Umgang pflegten, war bekannt, dass sie jedoch an den Übersetzungen gemeinsam arbeiteten, wurde erst mit der Veröffentlichung des Briefwechsels 1996 evident. Die Forschung nahm über Jahrzehnte an, George habe aus französischen Übersetzungen ins Deutsche übertragen, und die polnische Germanistik vertrat zudem recht vehement die Ansicht, George habe das Original verbessert und aufgewertet (Rduch, 2018, S. 58). Abgesehen von inzwischen vorliegenden differenzierteren übersetzungskritischen Einschätzungen konnte Rduch die gemeinsame Arbeit an den Übersetzungen nicht zuletzt durch Sichtung umfangreichen Archivmaterials nachweisen. Rolicz-Lieder fertigte für den nicht oder kaum des Polnischen mächtigen George Interlinearübersetzungen an und sie tauschten sich in Briefen aus. „Poesie-Übersetzung im Tandem“ (so der Titel des oben erwähnten Beitrags) konnte als Zusammenarbeit von Autor und Dichter erst mit einer Untersuchung translatorischen Handelns über den einzelnen übersetzten lyrischen Text hinaus sichtbar gemacht werden. Rduch (2018) sieht in ihnen „Pioniere einer Übersetzungsmethode“ (S. 67), die sich weltweit in der Literaturübersetzung später in der 2. Hälfte des 20. Jahrhunderts verbreitete.

Zu Beginn des 21. Jahrhunderts etabliert sich indes eine weitere Form des Übersetzungstandems für das *gemeinsame* Übersetzen von Texten. Lisa Palmes und Lothar Quinkenstein übersetzten beispielsweise den Roman *Die Jakobsbücher* (2019) von Olga Tokarczuk (*Księgi Jakubowe*, 2014). Übersetzungstandems dieser Art entstehen aber vor allem für die Übersetzung längerer, also narrativer Texte¹⁴. Bei Lyrik-Übersetzungen sind häufig in die Übersetzungsteams deutschsprachige Lyriker*innen involviert, die nicht oder nur eingeschränkt die Sprache des Originals beherrschen. In diesem Sinne spricht auch Kelletat (2011) vom Tandemübersetzen und hebt hervor, dass dieses Verfahren „besonders für periphere bzw. marginalisierte Literaturen“ (S. 236) wichtig sei. Er erwähnt Durs Grünbeins Übersetzungen von Tomas Venclova¹⁵. Der deutsche Lyriker Durs

¹⁴ Als weitere Beispiele können hier u.a. Katharina Schmidt und Barbara Neeb genannt werden, die bereits seit 2008 gemeinsam aus dem Italienischen Erzählliteratur (darunter auch Krimis und Thriller) übersetzen, oder Hanna Fliedner und Christel Kröning, die schon mehrere Jahre gemeinsam aus dem Englischen übersetzen.

¹⁵ Der Lyrikband *Gespräch im Winter* mit Gedichten von Tomas Venclova erschien 2007 bei Suhrkamp, 2018 folgte eine Taschenbuchausgabe.

Grünbein übersetzte die Gedichte gemeinsam mit der Litauisch-Übersetzerin Claudia Sinnig.

Als ebenfalls erfolgreiches Tandem agierten Uljana Wolf¹⁶ und Michael Zgodzay¹⁷ bei der Übersetzung lyrischer Texte von Eugeniusz Tkaczyszyn-Dycki aus dem Polnischen ins Deutsche. Zunächst erschien 2015 der Lyrikband *Tumor linguae*, vier Jahre später dann *Norwids Geliebte*. Für diese zweisprachige Ausgabe erhielten sie gemeinsam mit dem Autor den Poesiepreis der Stadt Münster 2021/2022. In der Begründung der Jury heißt es: „Die Leistung der beiden Übersetzer [...] verdient besondere Wertschätzung. Verlustlos und sprachsicher, mit untrüglichem Sinn für Gestus, Rhythmus und Klangfarbe der Originale trägt ihre Übersetzung die Gedichte Eugeniusz Tkaczyszyn-Dyckis ans deutsche Ufer“ (Maurin & Stolterfoht, 2022, S. 76). Interessant ist an dieser Preisverleihung, dass an die beiden Übersetzer*innen kein Übersetzungspreis verliehen wurde, sondern ihre Übersetzungen als Poesie wie auch die Originale selbst prämiert wurden.

Uljana Wolf debütierte 2005 mit dem Gedichtband *kochanie ich habe brot gekauft* und markiert Mehrsprachigkeit oder Sprachmischung als eines ihrer poetischen Verfahren. Inzwischen übersetzt sie auch aus anderen Sprachen wie aus dem Englischen oder Belarussischen und fast immer im Tandem – sowohl mit Dichter*innen als auch Übersetzer*innen, wobei die Grenzen fließend sind, so wie in ihrem Übersetzen und Schreiben: „Das ist die größte Chance von Lyrikübersetzung, dass man die Übersetzung als zweites Original sieht, als Neuschöpfung, als Update, als Weiterschreiben“¹⁸.

Das Tandem-Übersetzen lyrischer Texte lässt ein emanzipatorisches Moment aufscheinen, bei dem es um die „Gleichstellung“ von Original und Übersetzung als Kunst ebenso geht wie um die von Dichter*innen und Übersetzer*innen als Künstler*innen. In diesem Zusammenhang fällt auf, dass der Begriff der Nachdichtung häufiger als noch vor ein paar Jahren benutzt wird und wohl gerade das Spezifikum der Übersetzung lyrischer Texte betont. Und mit der Nachdichtung kommt häufig auch die Interlinearübersetzung ins Spiel. So ist es für Uljana Wolf durchaus denkbar, eine Nachdichtung aus einer Sprache, die sie nicht spricht, auf

¹⁶ Uljana Wolf studierte Germanistik, Kulturwissenschaft und Anglistik in Berlin und Krakau. Die Lyrikerin, Übersetzerin und Essayistin hat bereits mehrere Gedichtbände veröffentlicht; als Essayistin erhielt sie für ihren Band *Etymologischer Gossip* den Preis der Leipziger Buchmesse 2022 in der Kategorie Sachbuch.

¹⁷ Michael Zgodzay studierte Polonistik, Philosophie und Theologie in Frankfurt am Main und Berlin.

¹⁸ <https://uepo.de/2013/01/17/uljana-wolf-ubersetzen-ist-die-intensivste-form-des-lesens-und-fur-die-eigene-sprache-wichtig/> (abgerufen am 2.04.2024).

der Grundlage einer Interlinearübersetzung und im Gespräch mit einer Person, die der Sprache mächtig ist, eventuell auch dem Autor, anzufertigen¹⁹.

4. Interlinearübersetzung

Das Nachdichten und die Interlinearübersetzung²⁰ hatten im geteilten Deutschland im Spektrum des Übersetzens lyrischer Texte laut Kelletat (2011) ein sehr unterschiedliches Renommee: „In der DDR wurde das Nachdichten auf der Basis von Interlinearversionen in großem Umfang und mit großer Sorgfalt praktiziert. [...] In Westdeutschland scheint das Nachdichten aus zweiter Hand eher verpönt gewesen zu sein“ (S.235). Was hier allgemein für die Übersetzungen ins Deutsche konstatiert wird, trifft auch auf das Übersetzen polnischer Lyrik zu. In der bereits vorgestellten DDR-Anthologie polnischer Lyrik lagen eine Reihe von Nachdichtungen zweifelsfrei Interlinearübersetzungen zugrunde. Die Verlage ließen sie anfertigen und beauftragten dann Lyriker und Lyrikerinnen mit Nachdichtungen. Einige Nachdichtungen von Texten Miron Białoszewskis und Tymoteusz Karpowiczs stammen beispielsweise von dem Lyriker Richard Pietraß, der Nachdichtungen zu lyrischen Texten aus über einem Dutzend Sprachen schuf (Kelletat, 2020, S. 238). Wer die Interlinearübersetzungen für die Anthologie anfertigte, ist in dem Band nicht vermerkt. Häufig war das jedoch der Fall²¹. Der Lyriker Rainer Kirsch dichtete ebenfalls auf der Grundlage von Interlinearversionen nach, u. a. auch Texte polnischer Lyriker wie Zbigniew Herberts *Ścieżka/Der Pfad* (Herbert, 1974). In seinem Büchlein *Das Wort und seine Strahlung. Über Poesie und ihre Übersetzung* gab Kirsch (1976) interessante Einblicke in die Interlinearübersetzung, die er wie folgt definiert:

Die Interlinearversion übersetzt das Gedicht Zeile für Zeile, als ob es sich um gewöhnliche Rede handelte: sie gibt die Prosamitteilung des Textes. Ihr Ziel ist höchste semantische Genauigkeit. Besonderheiten werden gewöhnlich in Anmerkungen erklärt: die stilistische Färbung durch Wortwahl (Lexik) und Wortstellung (Syntax); lexikalische und syntaktische Mehrdeutigkeiten; Nebenbedeutungen von Wörtern; historische, mythologische, literarische Anspielungen usw. (S. 33)

Gleichwohl die „Prosamitteilung“ der Prosaübersetzung von Peter Lachmann recht nahekommt, unterscheidet sie sich funktional von dieser. Interlinearübersetzungen für Lyrikübersetzungen werden für die Nachdichtenden und nicht für die Lesenden angefertigt und sind deshalb in der Regel nicht Teil der Veröffentlichung.

¹⁹ <https://uepo.de/2013/01/17/uljana-wolf-ubersetzen-ist-die-intensivste-form-des-lesens-und-fur-die-eigene-sprache-wichtig/> (abgerufen am 2.04.2024).

²⁰ Interlinearübersetzung und Interlinearversion werden in der wissenschaftlichen Literatur ohne erkennbare Bedeutungsunterscheidung synonym verwendet.

²¹ Die Weiße Reihe (Verlag Volk und Welt) mit Übersetzungen internationaler Lyrik war eine der bedeutendsten Lyrikreihen der DDR. In ihr wurde akribisch angegeben, wer die Interlinearübersetzungen für welche Nachdichtungen angefertigt hat.

Kirschs Definition weicht allerdings von anderen übersetzungstheoretischen Begriffsbestimmungen ab. Die Entstehung der Interlinearversion ist im Kontext spätantiker Bibelübersetzungen zu verorten und „ist eine zwischen die Zeilen geschriebene Wort-für-Wort-Übersetzung“ (Stolze, 2018, S. 19).

An diese Auffassung der Interlinearversion knüpft hingegen ein neueres Übersetzungsprojekt polnischer Gegenwartslyrik an. *Stilleben mit Crash* erschien mit dem Untertitel „Gedichte aus Polen“ im Jahr 2014. Die hier veröffentlichten Übersetzungen von sechs polnischen Lyriker*innen (Justyna Bargielska, Jacek Dehnel, Katarzyna Fetlińska, Jacek Podsiadło, Tomasz Różycki, Krzysztof Śliwka) haben mehrere Urheber*innen: Im Sommersemester 2013 fertigten drei Masterstudierende der Universität Mainz in einem translationswissenschaftlichen Seminar unter Leitung von Tomasz Rozmysłowicz Interlinearübersetzungen für die Dichterwerkstatt *Poesie der Nachbarn* in Edenkoben an²². In seinem Nachwort geht Rozmysłowicz (2014) auf die Interlinearübersetzung ein und definiert sie als Wort-Wort-Übersetzung, die zwischen den Zeilen eines Originals steht. Sie tritt nur zusammen mit dem Original auf und „gilt aufgrund ihrer Wörtlichkeit oft als ‚unverständlich‘ und nicht ‚leserfreundlich‘“ (S. 166–167). Dieses Verständnis scheint dem der Prosaversion sehr fern und die „Unverständlichkeit“ könnte zudem in Bezug auf die Übersetzungshilfe problematisch werden. In bewusster Differenz zum Ziel der semantischen Genauigkeit lenkt Rozmysłowicz die Aufmerksamkeit auf das unterschiedliche Schriftbild von Original und Interlinearübersetzung (Klein-Großschreibung, Wortlänge u.a.) und schreibt der „sinnlichen, materiellen, körperlichen Dimension“ eine „fundamentale Bedeutung“ zu, wird doch über suggerierte Nähe zum Original in der Interlinearübersetzung „eine letztlich unüberbrückbare Ferne“ sichtbar (S. 167, 170). Mit der Fokussierung auf Schrift korrespondiert diese Diskussion der Interlinearübersetzung mit literaturwissenschaftlichen Studien der letzten Jahre, in denen Lyrik als graphische Repräsentation untersucht wird²³. Die Interlinearübersetzungen sind nicht Teil der Publikation. Diese umfasst jeweils das polnischsprachige Original und die Nachdichtung, mitunter auch mehrere (bis zu drei) Nachdichtungen. Da „die Übersetzung nicht mit dem Originaltext identisch sein kann“, was nicht nur an den Unterschieden der Sprachen liegt, „sondern auch daran, dass sie von der Subjektivität des Übersetzers und von seiner bestimmten einmaligen Beziehung zum Werk geprägt ist“ (Stroińska, 2015, S. 152), unterstreicht dies nicht nur, dass das Übersetzen eine eigene künstlerische Leistung ist (so Stroińska, 2015),

²² Seit 1988 werden jedes Jahr für knapp eine Woche Lyriker und Lyrikerinnen eines Gastlandes gemeinsam mit deutschsprachigen Lyriker*innen zur Übersetzungsarbeit in das Künstlerhaus Edenkoben eingeladen, in deren Ergebnis deutsche Nachdichtungen entstehen. 2013 war Polen Gastland und es entstand ein zweisprachiger Lyrikband.

²³ Siehe u.a. Trilcke (2021) und Zymner (2009).

sondern lässt die Schlussfolgerung zu, dass mehrere Nachdichtungen das Original bereichern und den Lesenden dessen Fülle vermitteln.

Eine der bemerkenswertesten Übersetzerinnen experimenteller polnischer Lyrik ist die in Wrocław geborene deutsche Lyrikerin Dagmara Kraus. Sie übersetzte Joanna Mueller (*Mistyczne masthewy/Mystische musthaves*, 2016) und Miron Białoszewski (*Wir Seesterne*, 2012; *M'ironien*, 2021). Erst dank ihrer Übersetzungen liegen selbständige Lyrikpublikationen der lange wegen ihrer durchlöchernten Syntax, ihrer wortspielerischen Vielfalt, unauflösbarer referentieller Bezüge und reichlicher intertextueller Referenzen als unübersetzbar befundenen Texte Białoszewskis vor. Im Kontext von Nachdichtung und Interlinearübersetzung kommt jedoch einer anderen Publikation, die Dagmara Kraus herausgegeben hat, besondere Relevanz zu. *Vom Eischlupf* (2015) enthält Nachdichtungen zu sechs kurzen lyrischen Texten (zwischen vier und acht Versen) Białoszewskis, die ebenfalls im Original abgedruckt wurden. Kraus hatte zuvor die ausgewählten Texte interlinearübersetzerisch aufgearbeitet – jedes Wort des Originals versah sie mit einer Fußnote, die neben der wörtlichen Übersetzung zahlreiche Anmerkungen zu (neologistischen) Wortbildungen, zu grammatischen und syntaktischen sowie klanglichen und rhythmischen Besonderheiten enthielt – und an über ein Dutzend Übersetzende mit der Bitte um Nachdichtung gegeben. Im Ergebnis entstand ein faszinierendes knapp sechzigseitiges Bändchen, das im Zusammenspiel von wahrnehmbarem Original und Nachdichtungen die Außergewöhnlichkeit von Białoszewskis Lyrik spürbar macht. Die Interlinearversionen wurden nicht publiziert, ermöglichten jedoch eine Beteiligung von Mitwirkenden ohne Kenntnisse des Polnischen an der Vermittlung der *künstlerischen Fülle* des Textes²⁴.

5. Fazit

Die Interlinearübersetzung wie auch das Tandem-Übersetzen haben sich als wichtige Verfahren translatorischen Handelns in der Lyrikübersetzung im 21. Jahrhundert etabliert, zumindest lässt sich das für die Übersetzung polnischer Lyrik ins Deutsche konstatieren. Sie basieren auf dem gemeinsamen Agieren mehrerer Akteur*innen, das in verschiedenen Projekten auch Übersetzer*innen und Lyriker*innen eng – bis zum Rollentausch – zusammenarbeiten lässt. Mit der Betrachtung der Verfahren translatorischen Handelns über die übersetzten Texte hinaus werden die Übersetzenden und ihr „Mitdichten“, ihr interkulturelles Mitgestalten bei der Übersetzung neuer und neuester innovativer polnischer Lyrik sichtbar. Unstreitig konnten in diesem Beitrag nur einige Aspekte des

²⁴ In einem Workshop mit Studierenden eines polonistischen Übersetzungsstudiengangs der Universität Potsdam sprach Dagmara Kraus über dieses Übersetzungsprojekt und zeigte ein Beispiel ihrer Textbearbeitung.

Wandels translatorischen Handelns in den Blick genommen werden. Neben den benannten Verfahren richtete sich die Aufmerksamkeit auf das nach wie vor verbreitete Publikationsformat der Lyrik-Anthologie. Die Veränderung von der Übersetzungsanthologie zur zweisprachigen Anthologie markiert auch hier einen Wandel, der auf Sichtbarkeit der Übersetzenden und auf die künstlerische Gleichwertigkeit von Original und Übersetzung abhebt. Ziel des Beitrags war es, in den Verfahren translatorischen Handelns bei der Übersetzung von polnischer Lyrik auf aktuelle, z. T. erneuerte Formen aufmerksam und hier das Interagieren von Übersetzenden sowie von Übersetzer*innen und Lyriker*innen wahrnehmbar zu machen. Vorangestellt wurde diesen Ausführungen die Beschreibung translatorischen Handelns innerhalb des Publikationsformats Anthologie, was nicht nur eine punktuelle Ergänzung im vielfältigen Spektrum der Untersuchung übersetzerischer Vermittlung bilden sollte, sondern als nunmehr überwiegend zweisprachiges Publikationsformat polnischer Gegenwartslyrik im Konnex von Übersetzer*innen und Lyriker*innen sowie von Original und Übersetzung auch mit den vorgestellten Verfahren korrespondiert.

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The Translation of Nature Terminology in Literary Texts: A Case Study

ABSTRACT

This paper investigates the way nature-related terms are rendered in literary texts, highlighting possible explanations for the translation decisions. The discussion will be illustrated with examples of terms related to wetland and to the vegetation specific for this area, extracted from the novel *Where the crawdads sing* (2018) by Delia Owens and its Romanian translation. The conclusions show that there are several reasons why the translator may opt for a less accurate rendering of nature terminology, including the translator's perception of the aim of the target text, e.g. entertainment rather than information, or the translator's (limited) knowledge of the field.

KEYWORDS

nature terminology; literary text; equivalence; wetland; vegetation

1. Introduction

This paper will focus on the place of nature terminology in the translation of literary texts. Its aim is to examine the translators' attitudes towards such elements as reflected by their treatment of these lexical items. The analysis will be based on examples extracted from the novel *Where the crawdads sing* by Delia Owens, first published in 2018. It will not discuss specific translation strategies, but rather tendencies observed in the case of several related terms selected from the novel and its Romanian translation by Bodgan Perdivară, *Acolo unde cântă racii* (2019). The paper's starting point is the assumption that in literary translation the accurate rendering of nature terminology is not a high priority, the story is more important, so the translator tends to (over)simplify the terminology.

The novel presents the story of Kya Clark, also called the Marsh Girl, who is abandoned by her family as a child, and grows up virtually alone in the swampy area south of Barkley Cove, a quiet town on the North Carolina Coast of the

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United States. The action of the novel is placed in a marsh, natural setting which is at times treated as a character in the novel, because for Kya her natural surroundings are as important as the other human characters, and sometimes even more important.

As far as the structure of the paper is concerned, the second section provides some theoretical insights into the translation of nature terminology, while the third looks at the Romanian translation of examples of nature terms extracted from the above mentioned novel. The final section revisits the initial assumption, attempting to draw some possible conclusions.

2. Nature terminology in translation

Starting from Kasprzak's (2011, p. 17) opinion that "lexical items which function as terms, be it folk or scientific, behave in quite a complex fashion in translation and hence deserve attention", several observations can be made on the translation of such items in literary texts. First, nature terms help construct the imagery of the literary text, and this "imagery is closely connected with the environment the two languages and cultures have evolved in" (p. 75), i.e. the "environmental and cultural background" (p. 79) in which the nature terminology (English and Romanian in our case) are immersed. Considering the relationship between the two languages in contact, a successful translation of terms and names depends on the translator consulting credible and relevant resources (p. 28). This may place additional pressure on the literary translator, who most often is not a specialist in another professional field.

Second, it should be noted that:

terms label conceptual structures and, like grammar, can be said to be more or less conventional in a given language. Their conventionalisation involves gestalt perception and unequivocal imagery behind them. Items visualised with effort or as a batch of not quite uniform possible images are less conventional. (Kasprzak, 2011, p. 17)

This, in turn, may deter the translator from being as accurate as the author in rendering the terminological dimension of the text, prompting him/her to simplify the lexical level, by generalization or even by omission, although this may change both the style of the text and its lexical density.

Generalization can be viewed as a tendency in translation (some consider it universal), but also as a translation strategy or technique. The latter is explained as the replacement of a specific (or concrete) term by a more general (or abstract) one (Vinay & Darbelnet, 1972, p. 9). When discussing non-equivalence at the word level, Baker (2011) suggests translation by a more general word (superordinate), which can also be interpreted as a form of generalization. For Pym (2016), generalization and specification represent the ends of the same continuum, changes in degrees of generalization and specification reflect the way "the translator is

zooming in to show greater detail, or zooming out so as to grasp the basic outline” (p. 226).

When discussing simplification at the lexical level, which is of interest here, as a universal tendency in the translated text, Laviosa-Braithwaite (2001, p. 288) quotes several principles according to which it may operate, including, among others, the use of superordinate terms when there are no equivalent hyponyms in the target language, approximation of the concepts expressed in the source language text, or use of ‘common-level’ or ‘familiar’ synonyms.

As for the effects generalization can have in translation, Popovič (1974, as cited in Kubáčková, 2009, p. 45) believes that “no shift, be it generalization, specification, or even a zero shift, should be a priori qualified as negative, undesirable, or positive”, because “generalization may deprive the translation of some colour [...], but specification can also have a negative effect by offering an almost ready-made interpretation” (p. 45).

In view of the above, it can be concluded that almost any translation decision taken in respect to terminology can have a plausible justification, for example, to ease the reading process for the readers interested in entertainment, not in scientific accuracy (Kasprzak, 2011, p. 13).

Thus, the treatment of nature terminology in a literary text is ultimately determined by the translators’ (general and specific) knowledge and their attitude towards the target text and readers. They may be sensitive to nature terminology and want to preserve it as part of the flavour of the original text, or they may reduce the terminology in order not to distract the readers from the story. They may feel it is their task to expose readers to a different world, and use the translation “to ‘teach’ new concepts or new categorisations of concepts to representatives of a foreign culture by applying correct lexical labels” (Kasprzak, 2011, p. xvi), or they may attempt to reduce the differences considering that readers want to recognize the natural world in the text.

3. About wetlands and vegetation

As a zoologist and conservationist, Owens is very attentive to the details of the natural world depicted and, at the same time, she can describe the areas with the terminological accuracy of a professional. For the translator, however, the relevant question is how important this accuracy is in depicting the action. On the one hand, generalization flattens the imagery of the text and may affect its credibility if the readers are aware of the author’s background. On the other hand, it may facilitate the reader’s interaction with the text, especially for those who are not accustomed with the ecosystems described in the novel, and, thus, keep them focused on the story. It should be mentioned that some of the translation decisions might be motivated by the differences between the wetland landscape in North Carolina (USA) and in Romania.

We will be looking at two series of related terms: the first refers to wetland, the second refers to vegetation from this area. The sources used for information about the items and their translations include general dictionaries (paper and online) and various websites accessible to non-specialist, considering that the Romanian translator himself is not a specialist in the natural world.

3.1. Wetland

As the plot of the novel unfolds in the marsh, the author employs a series of related terms to refer to the natural landscape, namely *marsh*, *swamp*, *bog*, *mire* and *quagmire*. Before discussing their Romanian translation, it is useful to distinguish their meanings and stylistic marking. Thus, *mire* (“boggy or marshy area; dirt or mud”) is marked as literary in *Collins Dictionary* online, it is also considered more literary and figurative than the other terms by Kasprzak (2011, p. 80). It occurs only once in the novel (see Example 1a). The related term *quagmire*, defined as “a soft wet area of land that gives way under the feet; bog” (*Collins Dictionary*), is also found only once (see Example 1b). As illustrated in Example 1, both are translated in Romanian as *smârc* (see definition in Table 3 below).

Example 1a¹

EN: She'd always found the muscle and heart to pull herself from the *mire* (p. 145)

RO: Mereu găsisse tăria să se tragă din *smârc* (p. 159)

Back translation: She had always found the strength to pull herself from the mire

Example 1b

EN: She knew his favorite lagoons and paths through difficult *quagmires* (p. 354)

RO: Îi știa lagunele favorite și cărările prin *smârcuri* greu de străbătut (p. 368)

Back translation: She knew his favorite lagoons and paths through quagmires difficult to cross

The most frequent term is *marsh* (199 occurrences), followed (at a distance) by *swamp* (37 occurrences) and *bog* (10 occurrences); their features are described in Table 1 below based on the information provided by general language dictionaries. For Kasprzak (2011, p. 80), marsh “has the lowest degree of specification”, while “swamp and bog are in all likelihood seen as concealing underwater fathomless liquid mud deposits, hence as more treacherous than marsh”. In addition, there are also two instances of *marshy* (p. 7), in Romanian *băltit* (p. 15) and *mlăștinoasă* (swampy, p. 272), and one instance of *marshland* (p. 165), translated as *ținuturile mlăștinoase* (swampy lands, p. 179). In the case of *swamp*, the author uses *swampy areas* (p. 71), in Romanian *peticelor de*

¹ All emphases are added.

smârc (p. 83), and *swamped-out woods* (p. 321), rendered in Romanian literally as *codri mlăștinoși* (p. 335).

Table 1. Features of the terms *marsh*, *swamp* and *bog*

MARSH	- low, wet land - low poorly drained land - covered with tall grasses, characterized by aquatic, grasslike vegetation - often treeless - located near a lake, a river, or the sea
SWAMP	- very wet, soft land - permanently or periodically covered with water - with wild plants growing in it - usually overgrown and sometimes partly forested - characterized by growths of shrubs and trees
BOG	- an area of land which is wet and muddy, soft ground - composed mainly of decayed vegetable matter

It is interesting to note that Owens mentions these three terms from the *Prologue*, where she attempts to make a clear distinction between *marsh* (title of Part I) and *swamp* (title of Part II). She describes *marsh* as a “space of light” (p. 3), filled with sun and life, whereas *swamp*, made up of “low-lying bogs”, is “still and dark, having swallowed the light in its muddy throat” (p. 3); it is represented as a place of decay and decomposition.

In the *Prologue*, the translator chooses to render *marsh* as *baltă*, *swamp* as *mocirlă*, and *bog* as *limbi joase de pământ* (low land patches). He preserves the same distinction *balta* vs. *mocirlă* for *marsh* vs. *swamp* in the titles of the two parts of the book, which mark the development of the story from Kya’s childhood and adolescence (Part I) to her youth, the murder charge brought against her and the ensuing trial and verdict (Part II). However, this distinction is not preserved throughout all the chapters of the novel, as indicated by the fact that, for example, the term *marsh* – which occurs in all of the chapters of the book – was translated as *baltă* 98 times, and as *mlaștină* 94 times², whereas *swamp* was translated as *mlaștină* 16 times, and as *mocirlă*, 10 times. Although *mlaștină* is not used at all in the *Prologue*, it appears to be treated as some kind of superordinate in the Romanian translation, because *marsh*, *swamp* and *bog* are all translated as *mlaștină* at least once in the novel, as illustrated in Table 2 below.

Looking at the features of the Romanian terms illustrated in Table 3 below (again based on general Romanian language dictionaries, whose definitions were translated into English), we can notice that, unlike the English terms in Table 1 above, which refer to land, *baltă* and *mocirlă* are described as bodies of water, whereas *mlaștină* and *smârc* refer to land covered by water or mud. Also, *mocirlă* and *mlaștină* are used figuratively with similar meanings, *baltă* has no figurative meaning recorded in the dictionary, but it has a certain pragmatic load deriving

² For a quantitative and qualitative analysis of the translation of *marsh*, see Sinu (2024).

from its use in various idiomatic expressions³, while *smârc* is used in fairy tales, so some of its connotations might be transferred by users to its denotative meaning.

Table 2. Translation variants for the terms *marsh*, *swamp*, *bog*, *mire* and *quagmire*

English term	Romanian translations				
marsh	baltă	mlaștină	zone inundate (flooded areas)	pajiști inundate (flooded meadows)	zonă mlaștinoasă (swampy area)
swamp	mocirlă	mlaștină	smârc	baltă	Swamp Guinea
bog	smârc	mlaștină	sărătură (salty land/ mud)	limbile (joase) de pământ (low patches of land)	teren (inundat și) nedestelenit (virgin land)
mire	smârc	-	-	-	-
quagmire	smârc	-	-	-	-

Table 3. Features of the Romanian terms *mlaștină*, *baltă*, *mocirlă*, *smârc* (see *dexonline*)

MLAȘTINĂ	- natural land depression, which collects the water from precipitations, floods or the underground water which cannot be drained - on whose bottom mud accumulates facilitating the growth of reed and other aquatic plants Also used figuratively: <i>corrupt/vitiated social environment</i>
BALTĂ	- permanent still water, with its own sources and from overflowing nearby streams or rivers - usually not very deep and with rich aquatic vegetation Used in several idiomatic expressions.
MOCIRLĂ	- still water (of small size) resulting from rain, floods, etc. - full of slime, mud; slimy, muddy place Also used figuratively: moral decay, corruption, environment of moral decay
SMÂRC	- swampy area, covered in vegetation, where spring water cannot flow away - (in fairy tales) faraway and dangerous land where the sea has its source or when sea water flows

It is also worth mentioning that the translator seems to have taken into consideration the distinction made by the author in the Prologue between *marsh*, on the one hand, and *swamp* and *bog*, on the other, because *smârc* is never used to translate *marsh*. However, the translations of the three English terms overlap when they are rendered as *mlaștină*, and in three distinct cases *swamp* is translated as *baltă* (see Example 2), which seems to contradict the author's comments in the Prologue.

³ E.g. *A rămâne (sau a sta, a zăcea) baltă* = to languish, to come to a halt. *A lăsa baltă (ceva)* = to abandon someone or something. *A da cu bâta în baltă* = to spoil something or offend someone. *Are balta pește* = There is plenty of fish in the sea.

Example 2a

EN: Where's yo' hat, swamp rat? (p. 30)

RO: La popa la poartă, șobolan de baltă! (p. 39)

Back translation: [the first part is the beginning of the children's rhyme in Romanian, literally] *At the gate of the priest's house*, here followed by *marsh rat*, instead of the usual Romanian rhyme.

Example 2b

EN: Through the swamp to the Swamp Guinea (p. 51)

RO: prin bălți până la Swamp Guinea (p. 61)

Back translation: through marshes up to Swamp Guinea

Example 2c

EN: As likely as snow fallin' in the swamp (p. 69)

RO: Mai degrabă o să ningă în baltă (p. 80)

Back translation: More likely there will snow on the marsh.

In Example 2a the decision is motivated by the translator's attempt to recreate the rhyme in the original, using Romanian material and preserving the word *rat* rendered accurately as *șobolan*. The three syllables in the word *mlaștină* would have made it impossible to preserve the rhyme. However, in Examples 2b and 2c, there is no apparent reason to translate *swamp* as *baltă* instead of *mlaștină*.

Mocirlă is only used to translate *swamp*, although it is listed as an equivalent for all the three terms under discussion in two of the largest general English-Romanian dictionaries available. However, in the case of *swamp*, *mocirlă* occurs as a translation for the adjective *swampy*, as illustrated in Table 4 below.

Table 4. Equivalents listed in general English-Romanian dictionaries

Term	Levițchi and Bantaș (2004)	Academia Română. Dicționar Englez-Român
marsh	ținut sau pământ mlaștinos; mocirlă, mlaștină	1. teren mlaștinos; mlaștină, mocirlă, baltă, brahnă. 2. Atr. Mlaștinos, cu mlaștini
swamp	mlaștină, baltă; băltoacă, smârc	mlaștină, baltă
swampy	mlaștinos, mocirlos	mlaștinos, mocirlos
bog	mlaștină, mocirlă	mlaștină, mocirlă, băltoacă

The other translation variants listed in Table 2 above were not discussed because they occur very rarely and they are very general, e.g. *flooded areas*, *flooded meadows*, *virgin land*, etc.

3.2. Wetland vegetation

This section looks at the translation of different types of vegetation which occur in the novel. Only five of the terms in this series will be examined, i.e. *grass*,

brambles, reeds, weeds and *palmetto(s)*, as illustrated in Table 5 below, although more can be found in the text.

Table 5. Translation variants for the terms *grass, weeds, reeds, brambles,* and *palmetto(s)*

English terms	Romanian translations				
grass	iarbă	buruieni			
cord grass	stufăriș	ierburi			
saw grass	păpuriș	ierburi/ iarbă înaltă		bălării	
eelgrass	tufe de iarbă				
salt grass	ierburile de apă sărată				
swamp grass	buruieni din smârc				
marsh grasses	ierburile din baltă				
wild grasses	buruieni				
tall grass	iarbă înaltă	plaur			
blade grass	buruieni				
weeds	bălării	buruieni			
seaweed(s)	alge	ierburi de mare			
sour weed	măcriș				
duckweed	mătasea-broaștei				
reeds	păpuriș	stufăriș		stuf	
brambles	tufișuri	bălării	rugi de mure	desiș	tufe
palmetto(s)	palmieri pitici	palmieri-evantai		palmieri	

The word *grass* occurs 52 times in the novel (plus three times as the adjective *grassy*) either with modifiers (e.g. *swamp grass, marsh grass, wild grass, tall grass, blade grass, green grass*) or without them, but also as part of the names of different species of grass (spelt as one word or two words⁴). In the case of the latter category, Table 6 below offers possible translations for the Romanian terms, mostly based on the Latin names of the family and species. It partially validates the data illustrated in Table 5, which show that the most frequent Romanian equivalents employed are *iarbă* (grass) and *buruieni* (weeds), both generic terms for various plants belonging to the family *Gramineae* (now known as *Poaceae*), plants which are not (at least usually) cultivated, while the former represent a source of food for animals.

Only two specific terms occur in translation, namely *păpuriș* and *stufăriș*, referring to groups of the plants *papură* and *stuf*. The Latin name of the families to which they belong appears to indicate that they are, in fact, types of reeds, i.e.

⁴ For example, *cordgrass* and *cord grass*, the latter is the spelling encountered in the novel. Also, *sawgrass* and *saw grass*, with the latter occurring in the text.

papură (*Typha*) – cat tail (*Typha latifolia*), reed mace (*Typha angustifolia*); *stuf* (*Phragmites*) – reed (*Phragmites communis*), which does not reflect the genus/family to which the original terms belong. In fact, *cord grass*, *eelgrass* and *salt grass* can be translated as *iarbă*, while for *saw grass* several sources suggest the translation *ceapraz*⁵. The name of the plant is not very well known, which might explain why the translator opted for two Romanian terms more familiar to the audience, although they are not faithful renderings of the original.

Table 6. Species of grass and their Romanian translation

Term	Romanian translation
cord grass (genus <i>Spartina</i>)	iarbă, plante din genul <i>Spartina</i>
saw grass (<i>Cladium jamaicense</i>)	ceapraz (<i>Cladium jamaicense</i>)
Eelgrass (genus <i>Zostera</i> , esp <i>Z. marina</i> , family <i>Zosteraceae</i>)	<i>Zostera marina</i> , iarbă de mare
salt grass (genus <i>Distichlis</i>)	iarbă sărată de pe malul mării, iarbă sărată interioară și iarbă sărată deșertului (<i>Distichlis</i>)

The same translation solutions are employed in the case of *grass* with generic modifiers, e.g. *swamp*, *marsh*, *tall*, *wild*, *blade*, the first two show the origin *iarbă din* (grass from), then *iarbă înaltă* (tall grass), and *buruieni* (uncultivated/wild grass). It should also be mentioned that the combinations *bend of grass* and *grassy bend* are rendered as *plaur* (a compact aquatic formation, dominated by reed, which floats at the surface of the water, cf. dexonline), although *bend* is also defined as “the curved part of a river” (*Collins Dictionary*), so it could be linked to the bank of a river, rather than to floating islands of vegetation.

The situation is the same for the noun *weed* (10 occurrences). When used with its general meaning, i.e. wild plant that grows uncultivated, it is translated as *bălării* or *buruieni*, both of which grow uncultivated, but the former is found on uncultivated land, whereas the latter grows in crops or gardens. Less generic, *seaweed*⁶ refers to a number of marine algae, *duckweed* (genus *Lemna*) are “small, free-floating aquatic perennials that combine to form a green ‘carpet’ on the surface of the water”⁷, while *sour weed* (*Rumex acetosella*⁸) is a particular species of perennial weeds⁹. For *seaweed* the translator alternates between *alge* and *ierburi*

⁵ <https://www.proz.com/kudoz/english-to-romanian/botany/4862525-saw-grass.html> (retrieved on February 1, 2024)

⁶ <https://oceanservice.noaa.gov/facts/seaweed.html> (retrieved on February 1, 2024)

⁷ <https://www.rhs.org.uk/weeds/duckweed> (retrieved on February 1, 2024)

⁸ <https://www.planetayurveda.com/sheeps-sorrel-rumex-acetosella/> (retrieved on February 1, 2024)

⁹ https://www.inaturalist.org/guide_taxa/619269 (retrieved on February 1, 2024)

de mare, which are also generic. *Duckweed*¹⁰ was rendered (quite inaccurately from a terminological perspective) as *mătasea-broaștei* (*Spirogyra*), although the genus *Lemna* is made up of species called *lintiță* in Romanian, for examples *lintiță de apă* (*Lemna minor*). In the case of *sour weed*, the translation is more accurate because *măcriș* (*Rumex acetosa*) belongs to the same family.

Unlike *weeds*, which may be related to the water or not, *reeds* (9 occurrences) are “tall grasses of the genus *Phragmites*, esp *P. communis*, that grow in swamps and shallow water and have jointed hollow stalks” (*Collins Dictionary*). The translator employed two terms discussed previously, i.e. *păpuriș* and *stufăriș*, referring to groups of the plants *papură* and *stuf*. The Latin name shows that *reeds* correspond in fact only to *stuf* (*Phragmites*). However, *păpuriș* occurs only twice as a translation solution for *reeds*.

Returning to the land, the noun *brambles* (genus *Rubus*¹¹), which occurs 12 times, exhibits the most variation in translation with five different solutions (see Table 5 above) displaying very different degrees of specificity. The most specific equivalent is *rugi de mure* (*Rubus spp*), literally “bushes of blackberries”, used twice. The other four variants are equally general, but they stress different aspects, thus *bălării* (uncultivated plants) renders the fact that the brambles in question are wild, while *desiș* (bush), *tufișuri* (bushes, shrubs) and *tufe* (underbush) make reference to the shape and thickness of brambles. A possible explanation for the translator’s preference for generality might be the fact that the fruit of the brambles is never mentioned, so the plant is treated just like *grass*. It should be mentioned that *desiș* derived from *des* (thick) is employed to translate the combination “thick brambles”.

The last example is *palmetto* (17 occurrences), the only plant which is not specific to Romania. It covers a species of the palm family¹². If *brambles* had the highest degree of variation in translation, *palmetto* is at the other extreme, as all the translation solutions include the word *palmier* (palm tree), i.e. *palmier evantai* (*Chamaerops humilis*¹³) in five instances, and *palmier pitic* (*Chamaedorea*¹⁴) in six cases.

4. Conclusions

The examples analysed above show that an accurate rendering of nature terminology is not achieved every time. As the natural setting is always present in the story, it cannot be overlooked, however, the terms are not translated precisely, for example, from the point of view of their family or species when it comes to vegetation.

¹⁰ <https://www.frontiersin.org/articles/10.3389/fsufs.2019.00117/full> (retrieved on February 1, 2024)

¹¹ <https://gardenerspath.com/plants/fruit/brambles/> (retrieved on February 1, 2024)

¹² <https://www.picturethisai.com/wiki/Arecaceae.html> (retrieved on February 1, 2024)

¹³ <https://www.flowertime.ro/palmier-evantai-1055.html> (retrieved on February 1, 2024)

¹⁴ <https://www.horticultorul.ro/flori-de-apartament-gradina/chamaedorea-sau-palmierul-pitic/> (retrieved on February 1, 2024)

The translator's approach to terms referring to wetland involves a lot of variation, the terms are translated into Romanian using different equivalents, and, at the same time, one and the same equivalent is used for several English terms. Sometimes it is difficult to understand the reasons behind this variation, since they are not related to the meaning of the terms. In the case of vegetation, the translator opted most often for generalization, with a few exceptions where the specific (and correct) name of the plant was used, e.g. *sour weed* rendered as *măcriș*, or *brambles* as *rugi de mure*. There is also the tendency to use general equivalents which are more familiar to the audience, e.g. *păpușiș* and *stufăriș* denoting vegetation that grows almost on or near every body of water.

As stated earlier, this attitude may be explained by the translator's desire not to distract the reader from the story, although in this case the story is very closely connected to the natural environment in which it takes place, as the main character spends her life in the marsh, and the murder she is accused of takes place in the marsh. Kasprzak (2011) also quotes the translator's insufficient knowledge as a possible reason for generalization, but, as shown above, clarifications concerning the English and Romanian terminology can be obtained from general language dictionaries (monolingual and bilingual) or from a wide range of available websites dealing with nature, natural remedies or horticulture. This would indicate that the translator did not consider accuracy as a priority in rendering nature terminology, despite the author's professional background.

It should also be mentioned that the wetland-related terms discussed here are not used symbolically in the novel, with the exception of *marsh* and *swamp*, and to a certain extent *bog*, which the author defines in the Prologue through the opposition light vs. darkness (see 3.1 above). In fact, the highest lexical variation is recorded for these terms, which seems to indicate that the translator was aware of their symbolism and tried to preserve it in each situation, by sacrificing consistency in favour of using different lexical solutions, even when those solutions involved simplification or generalization.

To conclude, the aim of the analysis was to show how translators may cope with nature terminology in literary texts and the reasons behind their decisions. The case study presented here seems to indicate that generalization and simplification are considered appropriate solutions in dealing with nature-related terms, and that terminological accuracy is not a priority, at least not always, in rendering the natural landscape in fictional texts, despite the potential loss of information.

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