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OUTLOOK ON TRANSLATION AND INTERPRETING STUDIES: CURRENT PERSPECTIVES

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Introduction

WIOLETA KARWACKA

Translation studies is a diverse field of research with an interest in any translatorial activity from the translation of poetry to localization, from interpreting to subtitling. Thanks to its dynamic development, the discipline now has its own specific range of research methods and unique ways of theorizing translation and interpreting. Manifold theories, models, approaches and ways of conceptualizing the discipline itself have been developing, especially since the mid-twentieth century. Increasing globalization, transnational flows and tech-nological advances constitute both challenges and opportunities not only for the translator community but also for translation researchers who are studying trends, revisiting traditional concepts and striving to explain translation intricacies. This volume of Beyond Philology reflects the dynamics of the field as its contributors discuss interpreting studies, literary translation, specialized translation and localization from various perspectives and focus on the translation process's product and function as well as on practical issues related to translator training.

The first theme discussed in two contributions to this volume is interpreting. Ewa Gumul analyses the level of correspondence between the issues related to increased cognitive effort as perceived by simultaneous interpreting trainees and the indicators of cognitive load identified in interpreted texts. The study is based on a corpus of recordings: 240 interpreting outputs and 5,005 retrospective comments. The results of the study indicate that increased cognitive load involved in simultaneous interpreting and the resulting cognitive effort do not have to be reflected in the product, which is likely the effect of the interpreters' expertise and experience. Przemysław Janikowski discusses the use of religious texts in interpreter training. Spoken religious texts show a high level of metaphor saturation with an increased use of unconventional metaphors. Since the speakers sometimes employ special means of facilit-ating metaphor processing and at the same time marginalize other markers which are traditionally recognised as elements of religious style, the author suggests using religious texts as the second stage in thematic development. Janikowski recommends incorporating religious texts representative of various genres and denominations in interpreting programmes as they can help prepare trainees to interpret not only texts of a religious character, but also any other highly figurative and allusive speeches.

The role and the status of translators are subject to changes, such as the emerging trend to increasingly use machine translation engines and commission human translators to perform post-editing. In his article, Maciej Kur presents the methodology and results of a pilot study comparing the impact of three machine translation engines on the pace of post-editing work and on the general effort related to post-editing of raw MT outputs. The aim of the discussed pilot study was to determine whether the applied method can be successfully used in more extensive research projects focusing on the quality and impact of machine translation. The author proceeds to formulate a set of guidelines for study design, e.g. recruiting professional translators as study participants, ensuring a sizeable study group and adequate text length etc.

Another dynamic and developing area of Translation Studies is research into localization practices. Ewa Nawrocka presents problems related to multitextuality, variables and gender. The multitextuality of video game localization is a challenge for the translator as the texts include both standard forms and creative texts. The text types perform certain functions and call for different translation approaches: a standard approach, a cre-ative approach or a mixed approach. Variables and gender need special attention in game localization as interactive entertainment software contains dynamically generated content. The author attempts to provide some strategies for dealing with these issues.

Arkadiusz Badziński focuses on medical translation with particular attention paid to the significance of collocations as part of the linguistic competence of a medical translator. The aim of his study is to compare the problems encountered by professional and non-professional translators (physicians) with a focus on collocations. Badziński emphasises the key import-ance of collocations in medical translation practice and training.

The contribution by Kaja Makowska presents the state of research on young adult literature. The author provides a his-torical timeframe of the genre, identifies key components and characteristic features, and discusses young adult literature in translation. One of the most prominent qualities of young adult literature is code-switching between teen and adult speech, which constitutes one of the main translation issues addressed by researchers of the genre, who, until recently, have not been interested in YA literature in translation.

The last article of the volume is a study of audiovisual translation from Polish into English, written by Anna Dudek. The main focus here is the analysis of the translation techniques used in the translation of dialectically-marked pro-per names in *Chłopi* (The Peasants). The study indicates that dialectically-marked items are to an extent reduced in AVT and the translation is rarely foreignized.

This special issue of Beyond Philology is devoted to current perspectives in translation and interpreting studies. It is a sample of the dynamics of this area of research in which new trends emerge, traditional concepts are revisited and interdisciplinarity in translation and interpreting studies results in numerous approaches adopted by scholars.

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Evidence of cognitive effort in simultaneous interpreting: Process versus product data

EWA GUMUL

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Abstract

The present study aims at measuring the level of correspondence between the problems related to increased cognitive effort reported by simultaneous interpreting trainees in their retrospective verbal protocols and problems indicators identified in the target texts. The study triangulates process analysis (retrospective protocols) with product analysis (manual comparison of source and target texts). The corpus of the study consists of about 75 hours of recordings of 240 interpreting outputs and the recordings of 5,005 retrospective comments. The results imply that that increased cognitive load involved in simultaneous interpreting and the resulting cognitive effort experienced by trainee interpreters is not always manifested in the product.

Keywords

retrospective protocols, process research, simultaneous interpreting, Gile's Effort Models, cognitive effort, cognitive load

Wysiłek kognitywny w tłumaczeniu symultanicznym. Analiza procesu i produktu przekładu

Abstrakt

Celem niniejszej pracy jest zbadanie zależności pomiędzy wysiłkiem kognitywnym zwerbalizowanym przez tłumaczy symultanicznych w protokołach retrospektywnych a oznakami wysiłku kognitywnego widocznymi w tekście docelowym. Badanie przeprowadzono za pomocą metody retrospekcji oraz analizy produktu przekładu. Korpus badawczy stanowi 240 tłumaczeń oraz 5005 komentarzy retrospektywnych. Wyniki pokazują, że zwiększone obciążenie kognitywne charakterystyczne dla przekładu symultanicznego i będący tego efektem wysiłek kognitywny, którego doświadczają tłumacze, nie zawsze uwidacznia się w tekście przekładu.

Słowa kluczowe

protokoły retrospektywne, badania and procesem przekładu, tłumaczenie symultaniczne, Modele Wysiłkowe Gile'a, wysiłek kognitywny, obciążenie kognitywne

1. Introduction

The aim of this study is to test the level of coincidence between the problems related to increased cognitive effort reported in retrospective protocols of simultaneous interpreting trainees and the problem indicators encountered in the target texts. The research conducted by Englund Dimitrova and Tiselius (2014) shows that the majority of reported problems coincide with the problem indicators identified in the target texts whereas not all problems encountered in the target texts are reported. Given that the latter might be due to a number of reasons related to the limitations of the method, such as memory capacity, potential unwillingness to report problems, and also automaticity in using coping tactics or strategies when dealing with recurrent problems, in this study I will focus only on processing capacity problems reported during retrospection. My aim is firstly to see how they are manifested in the SI renditions and secondly to ascertain whether any of the reported problems are effectively masked by the efficient use of coping tactics and strategies and thus are not detectable in the target-language versions. Unlike in the studies of Englund Dimitrova and Tiselius (2009, 2014), in which they examined a broad spectrum of problems, I will limit my analysis to those problems related to increased cognitive load and processing capacity overload or saturation following the premises of Gile's Effort Models (1985, 1995, 2009, 2016, 2017). Thus, for the purpose of process ana-lysis, cognitive effort has been operationalized as: failure sequences, evidence of competing efforts (competition hypothesis), evidence of working close to cognitive overload (tightrope hypothesis), and negative effect of problem triggers. Previous research (Gumul 2018) revealed that 531 comments out of the total of 5,005 obtained in the study referred to the aspects related to Gile's Effort Models and 108 out of 120 interpreters participating in the experiment made at least one remark reporting them. In this study I will reanalyse these 531 comments comparing each of them with the corresponding target-text segment in search of the problem indicator in the product. The ones analysed in this study are: anomalous pauses, omissions in the target text, repairs, grammatical errors, mispronunciations, and disfluencies in the form of hesitation markers and false starts. These problems indicators are assumed to be indicative of cognitive effort. Such claim might seem precipitated as there is no scientific evidence unequivocally linking such infelicities to cognitive effort. However, since cognitive effort was already reported by the subjects in their retrospective reports, the assumption has been made that these disfluencies, errors and omissions in the product are likely to reflect cognitive effort in these particular cases.

The paper begins with the presentation of the construct of cognitive load and a brief overview of literature regarding the existing models, relying in particular on Gile's Effort Models, as this framework is the basis of analysis conducted for the purpose of the present study.

2. Cognitive load in simultaneous interpreting

The high cognitive load involved in the task of simultaneous interpreting is what distinguishes this mode of interpreting from other forms of translation. As indicated by Seeber, it can either refer to "the processing load imposed on the performer by a particular task (…), or the perceived mental effort the performer invests in the task" (2015: 60). This multidimensional construct originating from the field of psychology was applied extensively for the first time to interpreting research by Gile (1985, 2008) to account for linguistic infelicities, distortions and loss of information observed in simultaneous interpreting, although the broader idea of cognitive processing has been present in interpreting studies since the early 1970s (e.g., Gerver 1971,[1] quoted in Pöchhacker 2016; Kirchhoff 1976/ 2002).

The cognitive load involved in simultaneous interpreting is central to many approaches and models accounting for the mental complexity of this task, especially those aiming at exploring the process of interpreting at the innermost, essentially micro-process-oriented, levels of analysis identified by Pöchhacker (2004, 2016), i.e. cognitive and neural (see Figure 1).

[1] Gerver, D. (1971). *Aspects of Simultaneous Interpretation and Human Information Processing*. PhD thesis. Oxford University.

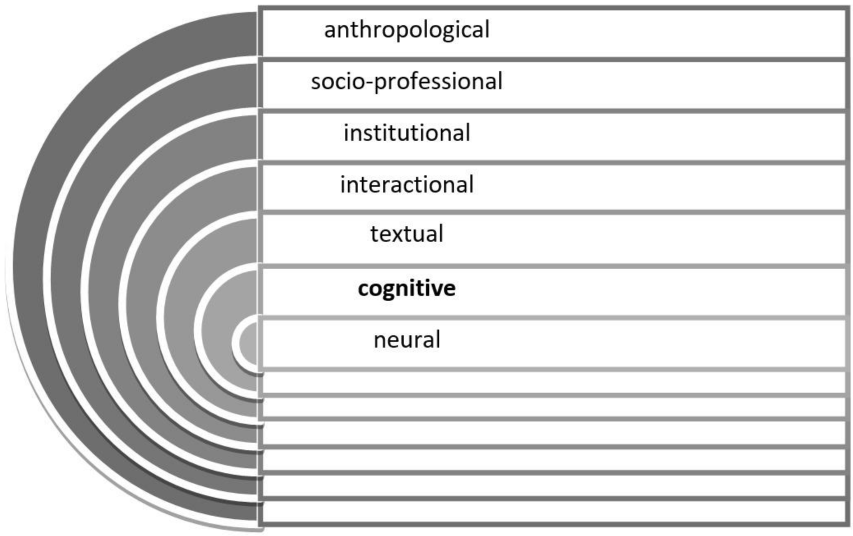

Figure 1
Levels of modeling in the analysis of interpreting
(adapted from Pöchhacker 2016: 78-79)

Of all the potential levels of analysis indicated by Pöchhacker (2016), it is the cognitive sphere which has attracted the highest degree of analytical interest, giving rise to a substantially higher number of models than any other level, which is evidenced by the comprehensive overviews of the existing cognitive processing models in interpreting presented by Moser-Mercer (1997/2002), Gile (2003), Setton (2003, 2015), Pöchhacker (2016), and Korpal (2017). In the subsequent sections I will present the selected models describing processing in SI from the cognitive perspective focusing mostly on Gile's Effort Models, for which empirical evidence is sought in the present study.

3. Cognitive processing models

Early attempts at modeling interpreting within the cognitive perspective began in the 1970s in the experimental psychology period of interpreting research with the contributions of Gerver (1976) and Moser (1978). Both of their models were built upon the information processing approach from the field of psychology. Gerver's (1976) flowchart-type model of the mental structures and procedures involved in input processing and output production in simultaneous interpreting assumes the existence of control processes that play a vital role in "the distribution of attention to the different components of the task" (Gerver 1976: 193). Whereas Gerver's (1976) model is essentially psychological in nature, Moser's (1978) processing model of simultaneous interpreting is an attempt to seek interdisciplinary cooperation between psychologists and interpreters. She elaborated her model of memory structures and processing operations in the form of a flow diagram presenting the temporal course of simultaneous interpreting on the basis of Massaro's speech-comprehension model. Like Gerver's (1976) contribution, Moser's (1978) model also accounts for the simultaneity of processing stages and the necessity of cultivating divided attention between input comprehension and output production. She also indicates that the operations involved in SI compete for available processing capacity. At the same time another model of simultaneous interpreting appeared, elaborated by Kirchhoff (1976/2002), however it went largely unnoticed outside of German-speaking countries until the publication of its translated version in Pöchhacker and Shlesinger's (2002) *Interpreting Studies Reader*. Kirchhoff (1976/2002) models simultaneous interpreting from a psycholinguistic perspective and her multi-tasking model not only explains the mental processes involved in simultaneous interpreting, but also accounts for psycholinguistic processing difficulties resulting both from reaching or exceeding processing capacity limits and divergent linguistic structure of the language pair involved.

Unlike the approaches discussed so far, which were firmly rooted within psychology, Chernov's (1979/2002, 2004) probability-prediction model is based on discourse-oriented linguistics. The model assumes that processing in simultaneous interpreting is to a large extent expectation-based and the key factors which facilitate anticipation are the inherent redundancy of linguistic expression and the probabilistic nature of discourse. While acknowledging the importance of surface structure in forming predictions about the incoming discourse, Chernov also emphasizes the role of background knowledge stating that "[t]he semantic component of the suggested model interacts most closely with the individual's store of knowledge in general [...], and with the situational context of communication in particular" (1979/2002: 106). The aspect of knowledge-based processing in SI is what links Chernov's (1979/2002, 2004) model to the Paris School model which also emphasizes the role of the interpreter's external knowledge. In the triangular process model developed by Seleskovitch (1962), in which she shows the relationship between the sense of the message and the two languages involved, interpreting is viewed as the act of deverbalisation, i.e. reducing words to nonverbal sense (Seleskovitch and Lederer 1984). Whereas the triangular model has a more general implementation applying to both consecutive and simultaneous interpretation as well as to translation, Lederer's (1981) model of eight mental operations, also elaborated within the *théorie du sens*, accounts for the specificity of SI, modeling this mode of interpreting in terms of continuous interplay between multiple concurrent tasks. In line with the general tenet of the interpretive theory, this model also acknowledges that conceptualization occurs by integrating linguistic input with prior knowledge.

Another paradigm which accounts for the role of extratextual knowledge is the cognitive-pragmatic model developed by Setton (1999). He models simultaneous interpreting beyond strictly cognitive mental operations and aims at incorporating communicative aspects in the analysis of mental processes underlying the interpreting task within the framework of the Relevance Theory. The pragmatic context in which the communication takes place is considered to be of vital importance at all stages of cognitive processing. The features of discourse processing which are believed to ease the effort expended in simultaneous interpreting are the construction of mental models and the activation of knowledge schemas. Setton also emphasizes the role of the interpreter's expertise in freeing up processing capacity (Setton 2015: 265).

The construct of processing capacity is also central to Seeber's (2011, 2013) Cognitive Load Model, in which he attempts to describe the amount of cognitive load generated during the task of simultaneous interpreting. With this objective in mind, he designed a conflict matrix for simultaneous interpreting that accounts for interference and overlapping of concurrent tasks. This model subsumes the separate cognitive load model for four SI strategies: waiting, stalling, chunking and anticipation, which are commonly adopted in the case of structurally divergent languages. In his later contribution Seeber (2013, see also Seeber and Kerzel 2012) set out to measure cognitive load involved in simultaneous interpreting by means of pupillometry. As Seeber (2011) indicates, his model is meant as a competing account to Gile's Effort Models, which we shall present in the subsequent section as the conceptual framework for the analysis conducted in this study.

4. Gile's Effort Models

Gile (1995, 1997, 2009) models simultaneous interpreting as a process consisting of three concurrent operations requiring processing capacity: the Listening and Analysis Effort (L), the Production Effort (P), and the Memory Effort (M). The first part involves all of the comprehension-oriented operations from receiving the sound waves to the final decisions about the meaning of the text. The second part, the Production Effort, extends beyond the mere delivery of the target text, as it also includes the formation of a mental representation of the message and speech planning operations. Finally, the Memory Effort refers to all of the mental operations related to the storage of information in memory. This effort assumes the increased demand on short-term memory during the task of simultaneous interpreting (Gile 1997: 198).

Gile (1995, 1997, 1999) complements the equation with the Coordination Effort (C) stressing that coordination function (or “executive” function) also consumes attentional resources. The model assumes that two more conditions must be satisfied for successful performance in simultaneous interpreting. First, L + P + M + C must be less than the Total Available Processing Capacity (TAPC). Second, the processing capacity management condition must be satisfied, which means that “the capacity available for each effort (LA, MA, PA, and CA) must be equal to or larger than its requirements for the task at hand” (Gile 1997: 199).

Gile (1995, 2009) regards all of the operations constituting the simultaneous interpreting process – that is listening and analysing, producing the target text, and storing it in memory – as non-automatic. He relies on evidence from cognitive psychology and psycholinguistic research which confirms that each of these processes has controlled components, given that they all include deliberate action requiring decisions and resources.

In fact, as Gile (1997: 197) emphasizes, the name of the model was chosen to accentuate the non-automatic nature of these operations. It is the very nature of simultaneous interpreting which makes the three processes of comprehension, speech production and memorizing far less automatic than it is the case in any other communication situation.

Firstly, the comprehension effort is more active in SI, given that the interpreters cannot afford to practice selective listening. Unlike conference delegates who can just focus on what they are interested in, interpreters have to concentrate on every aspect of the source speech to be able to render the text. The effort expounded on listening and analysis is also believed to be more intense in interpreting due to the unshared knowledge constraint, which means that the interpreters are bound to be less familiar with the subject matter and terminology than the delegates to whom the source text is addressed (Gile 2009: 16).

Also speech production entails more effort under simultaneous interpreting conditions. Given that interpreters do not speak on their own behalf, but have to render somebody else's speech, they cannot resort to conventional strategies for improving fluency like opting for habitual combinations of words or rearrangement of sequences of words and ideas. Gile observes that "interpreting constraints force interpreters to deviate from their habitual speech production patterns" (2009: 165), which obviously lowers the automaticity of this mental operation.

Finally, the same applies to the third constituent of this model – the memory effort, which is considered to be an essentially non-automatic operation since it involves the storage of information for later use (Gile 2009: 166).

The non-automatic nature of the three efforts is one of the operational assumptions underlying Gile's Effort Models. The others are the competition hypothesis and the tightrope hypothesis.

The competition hypothesis postulates the competitive allocation of effort between the three non-automatic processes. The model assumes that even though the three efforts may be to some extent cooperative, their coexistence will invariably increase processing capacity requirements (Gile 1999: 156). In mathematical terms, Gile (1999) represents his competition hypothesis with one equation (1) and three inequalities (2–4):

(1) $TotC = C(L) + C(M) + C(C)$
(2) $C(i) \geq 0 \quad i = L, M, P$
(3) $TotC \geq C(i) \quad i = L, M, P$
(4) $TotC \geq C(i) + C(j) \quad i,j = L, M, P$ and i different from j

which are explained as follows:

equation (1) represents the total processing capacity consumption
inequality (2) means that each of the three Efforts requires some processing capacity
inequality (3) means that the total capacity consumption is at least equal to that of any single Effort
inequality (4) means that the total capacity consumption is at least equal to that of any two Efforts performed in conjunction (in other

> words, adding a third Effort means adding further capacity consumption). (Gile 1999: 156-157)

The third operational assumption of the Effort Models – the tightrope hypothesis – presupposes that most of the time interpreters work close to cognitive saturation. Gile emphasizes that in simultaneous interpreting we have to take into account that interpreting failures are also caused by "chronic cognitive tension between processing capacity supply and demand" (2009: 182) apart from insufficient linguistic or extralinguistic knowledge or mistakes.

Unlike most of the existing cognitive models of simultaneous interpreting, which do not take into account the external factors that further hinder the process of the cognitively demanding interpreting task, Gile identifies several sources of SI processing failure (2009: 192ff) referring to them as problem triggers. He defines them as "factors and conditions which increase processing capacity requirements or make the interpreter more vulnerable to attention lapses and attention management errors" (Gile 2015: 136). Problem triggers are grouped according to processing capacity requirements imposed by individual efforts. It is worth noting that the very presence of problem triggers does not necessarily engender problems with processing capacity. Problem triggers can only be treated as potential sources of errors or omissions, but whether they occur or not depends on the context. For instance, an informationally dense segment may come at the end of the sentence and additionally be followed by a pause. Then, the Listening and Analysis Effort is no longer active, and the whole processing capacity can be directed to the Memory and Production components (Gile 1995: 174).

Within his Effort Models, Gile (1995) also introduces the idea of failure sequences, which assumes that a given problem trigger might potentially give rise to EOIs (errors, omissions, or infelicities – see Gile 2015) as a result of processing capacity mismanagement rather than only because of its inherent difficulty. One possible scenario of a potential failure sequence is when the interpreter is faced with an incoming speech segment requiring additional capacity resources for production (e.g., a speech segment of high density in terms of either fast delivery rate or dense information content). As a result the interpreter may be forced to delay producing the target-language version until more processing capacity is available for the Production Effort. Obtaining extra processing capacity is possible after the interpreter has been freed from the Listening Effort, that is, working on the incoming speech segment. This, however, may impose excessive strain on the Short-Term Memory Effort because of the backlog of incoming input segments that has accumulated in the meantime. If the interpreter tries to deal with the problem by directing more processing capacity to the Short-Term Memory Effort, this may lead to losses in the capacity aimed for the Listening and Analysis Effort, putting the comprehension of another incoming segment at risk (Gile 1997: 200). Many other types of failure sequences are possible (see Gile 2009: 173). The above simulation clearly shows that failure sequences do not necessarily affect the problematic segment that triggered them, but may occur at a distance, influencing the rendition of segments that pose no particular difficulty (Gile 1995: 175).

Gile's conceptual framework of the Effort Models has been criticised for not taking into account the socio-pragmatic perspective of the interpreting process (see, e.g., Pym 2008). Indeed, considering the contexualists versus cognitivists divide, Gile's (1995, 1997, 2009) model is clearly on the cognitive side. This, however, only reflects the predominant orientation of this paradigm, and by no means does it mean that Gile denies any influence of the socio-pragmatic factors on simultaneous interpreting. In fact, in the most extensive description of the model, which appeared in both editions of his "Basic Concepts and Models for Interpreter and Translator Training" (Gile 1995, 2009), we can find references to the pragmatics of the communicative situation. It is evident in the discussion of laws underlying the choice of preventive and coping tactics. As Gile points out, interpreters are guided by self-protection (risk-aversion) and seek maximum information recovery and maximum communication impact of speech (Gile 1995: 201-204; Gile 2009: 211-214; see also Gile 2016, 2017).[2]

These two communication-oriented aspects of Gile's Effort Models, as well as those essentially related to cognitive processing, we shall see reflected in retrospective protocols of trainee interpreters analysed in the present study.

5. Research design

As indicated in the title of this paper, the present study relies on two types of data: the product data and the process data. The former consists of recordings and transcriptions of simultaneous interpreting outputs,[3] whereas the latter includes recordings and transcriptions of retrospective protocols of the interpreters participating in the experiment. The target-texts amount to approximately 75 hours of recordings and the accompanying retrospective material encompasses 5,005 comments. The material was recorded for the purpose of a larger project aiming at investigating explicitation in simultaneous interpreting (Gumul 2017). Nevertheless, the research design of the former study makes it possible to use the gathered corpus of target texts and verbal reports for the analysis of other aspects of simultaneous interpreters performance.

The subjects in the study form a fairly homogenous group of advanced interpreting trainees with a comparable level of

[2] Gile's Effort Models are described in more detail in the article which searched for evidence of Gile's Effort Models in retrospective protocols of simultaneous interpreters (Gumul 2018).

[3] Note that Englund Dimitrova and Tiselius (2009, 2014) refer to the interpreting outputs as process data, whereas in this study process data refers to retrospective verbal reports, as they are assumed to provide more direct information about the process of interpreting and are one of the tools in interpreting process research (cf. e.g., Hild 2015). Studies relying on verbal reports (either think-aloud protocols or retrospective verbal reports) are considered as process-oriented studies, in contrast to product-oriented studies, which rely only on the target texts.

previous training in conference interpreting and the same language combination. All the participants were native speakers of Polish with English as language B in their combination of working languages. They were students from three Polish higher education institutions: the University of Silesia in Katowice, the University of Gdańsk, and the University College of Social Sciences in Częstochowa (formerly the College of Foreign Languages at the time the material was recorded). Prior to the experiment,[4] the students received between 120 and 150 hours of conference interpreting training.

The source texts used in the study belong to three different genres. They comprise typical text types, routinely interpreted using simultaneous mode: conference presentations, commencement addresses, and political speeches (see Sources). The interpreters were asked to interpret in both directions – from English into Polish and from Polish into English. In order to insure a relative comparability of source texts in each direction, the selected texts are to a certain extent comparable in terms of the topic, the context in which they were delivered, and most importantly the texts constituting each pair share some features of orality, which is directly related to information density. The conference presentations were delivered during a seminar on medical ethics and concern both the moral and legal aspects of refusing to help a patient. These two speeches are apparently written texts delivered orally. In turn, the commencement addresses were both presented at art schools and are fairly general speeches spontaneously delivered, with the lowest degree of prior preparation in terms the exact wording and form. Finally, the political speeches both concern the Iraqi conflict and are

[4] The study cannot be described as truly experimental, as it does not comply with the requirements of experimental research both in terms of the distribution of subjects between experimental and control groups, and the random assignments of subjects to such groups. The term experimental is employed here in its broadest sense, which is often used in the translation studies to refer to the studies which are carried out in a controlled laboratory setting and involve the manipulation of certain variables.

pre-prepared speeches designed to closely resemble oral discourse.[5]

Each source text was interpreted by 40 interpreters working in both directions of interpreting, for a total of 240 target texts. The source texts used in the experiment are authentic speeches. However, in order to control the variable of the rate of delivery, which has a profound impact on various aspects of text processing in simultaneous interpreting, the texts were recorded in laboratory conditions by native speakers of the respective languages. For English source texts, the rate was kept at an average of 110–120 words per minute,[6] whereas in the case of source texts delivered in Polish, it was 80–90 words per minute. The difference in word count stems from the systemic differences between Polish and English, since Polish words tend to be longer. These values might be considered to be roughly equivalent on the basis on the syllable count per minute (Gumul 2017).

The experimental procedure (see footnote 5 above) involved recording the interpreting outputs (dual-track recording) in standard laboratories used for teaching simultaneous interpreting. Prior to the interpretation, the subjects received a thorough briefing concerning the pragmatic setting of each speech, that is, the details concerning the identity of the speaker, the profile of the target audience, the time, the venue, and the subject matter of each text. The cue used to stimulate recall during retrospection was a dual-track recording of the target texts (with the source text in the background). The subjects performed self-retrospection,[7] meaning there was no prompting on the part of the

[5] A detailed description of the corpus and the rationale for the selection of the texts are available in Gumul (2017).

[6] The average of 120 words per minute is the rate of delivery of the source text in English which is generally believed to be the most comfortable and optimal for simultaneous interpreters to ensure the best quality of interpreting (e.g., Gerver 1975, Pöchhacker 2004, Bartłomiejczyk 2016).

[7] Each participant was given control of the in-built recorder in the booth and was asked to stop the recording each time he or she remembered a consciously taken decision and to comment on it aloud. The retrospective

researcher. All of the instructions were given before they started listening to their outputs. The subjects were asked to report all decisions taken consciously during the interpreting task. The objective of the study was not disclosed as to avoid influencing the subjects' verbalisations. This aspect of the research design made it possible to use the data obtained to investigate other aspects of the simultaneous interpreting process, apart from the original aim of analysing explicitation (the results of which were reported in Gumul 2017).

The 5,005 retrospective comments obtained in the study were analysed in search of reports of experienced cognitive effort operationalised here, following the framework of Gile's (1995, 1997, 2009) Effort Models, as failure sequences, evidence of competing efforts, evidence of working close to cognitive overload, and negative effect of problem triggers. As indicated in the introduction to the present paper, 531 verbalisations report on the above-mentioned aspects related to Gile's Effort Models (2009). A detailed account of the results of this stage of the analysis was described in the previous article (Gumul 2018). In this study, the target text segments for which the interpreters reported increased cognitive load are analysed for problem indicators. In other words, the analysis aims at establishing the level of correspondence between process reports and the indicators present in the product.

In this study the problem indicators that can potentially reflect cognitive effort experienced by interpreters and resulting processing problems are: anomalous pauses, omissions in the target text, repairs, grammatical errors, mispronunciations, and disfluencies in the form of hesitation markers and false starts. Some of the above categories need to be clarified further. As far as pauses are concerned, I have taken into account only

comments were recorded on the external source (portable dictation devices placed in the booths) activated by the researcher before the retrospective session.

anomalous unfilled pauses exceeding two seconds.[8] Filled pauses are accounted for within the category of hesitation markers. As for omissions, the only type relevant for the present study are those leading to the loss of information content, which means I excluded surface-form omissions resulting in implicitation or leading to an acceptable level of condensation. Omissions and unfilled pauses are two separate categories in this study, assuming that not every omission might lead to a pause exceeding two seconds. The category of repair also requires some clarification. For the purpose of this study I excluded those self-corrections which apparently stem from lexical search under time pressure and those in which both lexical items are acceptable equivalents in a given context. The results of my previous research reveal that such reiterations, that on the surface look like repairs, are in some cases intended to clarify the message, i.e. are performed either to help the receiver to decode the message, to avoid ambiguity, or to improve the text by adding emphasis (see Gumul 2017). As for grammatical mistakes, judging only the product it might be difficult to distinguish them from grammatical errors which obviously are not in most cases indicators of increased cognitive effort, but simply signs of linguistic incompetence, especially when interpreting into a language B. However, given that the present study only focuses on the analysis of target text segments for which the subjects reported increased cognitive effort, and in the absence of other recurrent grammatical incorrectness of the same type in other segments of a given target text, the assumption has been made that in such text segments they are mistakes that result from processing problems.

[8] Two seconds is the threshold value for anomalous pauses in many studies investigating fluency in simultaneous interpreting (e.g., Pradas Macías 2006). In the study of Pradas Macías (2006) pauses exceeding two seconds in simultaneous interpreting are considered to have a negative impact on the evaluation of fluency.

For the purpose of analysis, four categories of possible correspondence (or lack thereof) between the process data and the product have been established:

1. **RC and I** – cognitive effort reported in retrospective protocols corresponds to a problem indicator in the target text (in the reported segment or the following, which points to a failure sequence). This category also includes the cases of cognitive effort reported at the global level in general comments.
2. **RC and no I (strategy)** – cognitive effort is reported in retrospective protocols, but there is no apparent corresponding problem indicator in the target text, which attests to an efficient use of preventive or coping tactic. The strategy is either reported or visible in the product.
3. **RC and no I (no strategy)** – cognitive effort is reported in retrospective protocols, but there is no corresponding problem indicator in the target text and no preventive or coping strategy has been reported or could be identified in the target text.
4. **RC post and I** – the last category subsumes those cases in which the cognitive effort is reported in the retrospective protocols but the interpreters admit it is *a posteriori* remark triggered by listening to their outputs and it was not a conscious decision taken during the interpreting task. Such verbalisations usually take the form of a supposition (e.g., "probably I didn't hear this part of the sentence", "perhaps I was already tired" etc.). These verbal reports were not taken into account in the previous study (not included in the total count of 531 analysed verbalisations) as they are not retrospective and were triggered by the cueing stimuli. For that reason, in this study, the results for this category are presented separately (see the last column of Table 1) and are not included in Figure 2.

6. Results and discussion

The results reveal that in the majority of cases the reported increased cognitive effort corresponds to problem indicators in the product (see Figure 2 and Table 1). As many as 80% of retrospective comments reporting cognitive effort coincide with one or more indicators identified in the corresponding target texts' segments or those immediately following them (carry-over effect, which is characteristic for SI).

The number of verbal reports which do not coincide with any increased cognitive effort indicator in the product is relatively high (19%, and the total of 99 cases) compared with the results obtained by Englund Dimitrova and Tiselius (2014). In their study there were no such examples in the performance of student interpreters and 15% in the case of professionals, and still for the latter group the researchers were able to find some justification suggesting that in their corpus the examples illustrating this tendency are not fully representative (Englund Dimitrova and Tiselius 2014: 193). The difference between the two studies might be due to a number of reasons. First, we need to consider the sample size. The smaller the size of the corpus, the less likely we are to find examples for less frequent phenomena. Thus, it is natural that in a study analysing the performance of six interpreters certain phenomena might be underrepresented. Another potential reason for the difference is the operationalisation of the analysed problems. As indicated in the introduction, the two studies take into account a different scope of processing problems. The disparity between the results might also be due to a different level of student training in interpreting. The subjects in the study of Englund Dimitrova and Tiselius (2014) were taking the introductory course to translation and interpreting, whereas all the participants in the present study received a complete training in all modes of conference interpreting. Therefore, it might be the case that the subjects in the present study, who are at the final stages of their training, have already mastered more efficient techniques of masking processing problems. As could be expected, the results for the third category show that it is a negligible phenomenon most probably due to the inherent weaknesses of the method of stimulated recall, like memory limitations, a wish to demonstrate cooperation with the researcher, and influence of the cue.

This last factor is also at play in the last identified category of verbal reports which are not truly retrospective. These *a posteriori* remarks report on experienced cognitive effort after having noticed the indicators in their own outputs. They do not reflect a conscious train of thought experienced during the interpreting process, and as such are not taken into account in the total count of analysed reports (the identified 531 comments). Nevertheless they were included in the table below, as these remarks can be considered as an interesting source of information on how trainee interpreters perceive indicators of processing problems in their own outputs (see the last column in Table 1).

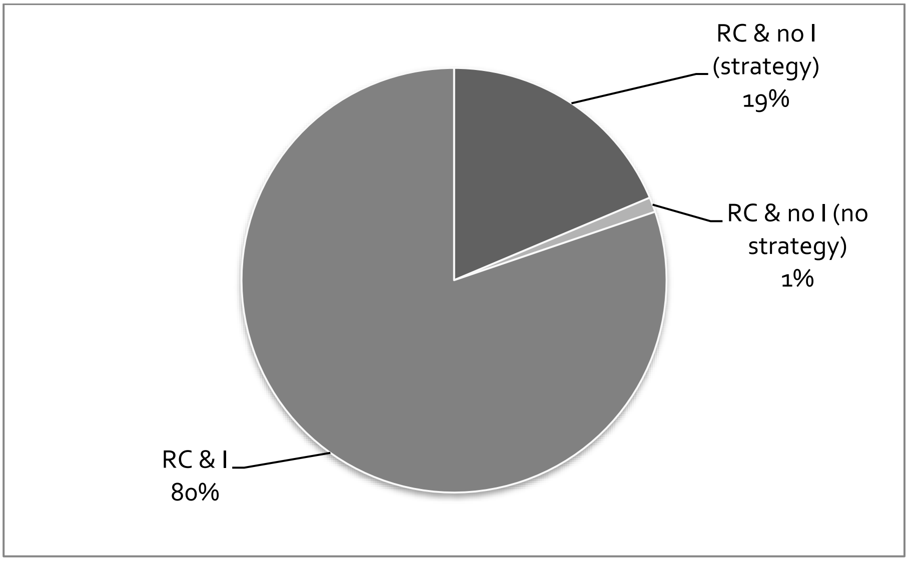

Figure 2
The coincidence between reports of cognitive effort and their indicators in the target texts

Table 1
The coincidence between reports of cognitive effort
and problem indicators in the target texts

	NoRC	RC and I	RC and no I (strategy)	RC and no I (no strategy)	RC post and I
Problem trigger	157	96	58	3	7
Failure sequence	52	52	0	0	7
Competition hypothesis	231	187	41	3	10
Tightrope hypothesis	91	91	0	0	3
TOTAL	531	426	99	6	27

Table 1 shows how these four categories of correspondence between process and product data are represented in the four aspects representing the premises of Gile's Effort Models. The first column (marked NoRC) presents the total number of verbal reports for each of them, while in the subsequent three columns the numbers are split according to the level of correspondence between reported problems and their indicators visible in the interpreting outputs. It is interesting to note that in the case of the reports testifying to failure sequences and the tightrope hypothesis, the subjects' verbalisations always coincide with the problem indicators. The result is hardly surprising given the fact that the scale of experienced processing problems is greater in the case of the saturation or overload of the processing capacity, which is associated to a much greater extent with failure sequences and the tightrope hypothesis than competing efforts or the occurrence of a problem trigger.

The first analysed example represents the first category of correspondence between the process and the product data (RC and I), in which the problem verbalised during retrospection coincides with problem indicators in the target text. In order to free the production effort and avoid taxing the Short-term Memory Effort with the proper name that has been identified by the interpreter as a potential problem trigger, this participant opts for omitting the title. The cognitive effort he experiences is visible in the surface structure indicators of processing problems: the pause (marked in the transcript by a double slash "//") and the hesitation marker:

(1)
ST (T2):[9] szanowni państwo / przypadł mi wielki zaszczyt wygłoszenia inauguracyjnego wykładu dla was studentów i absolwentów szkół artystycznych / był to pomysł Rektora Akademii Sztuk Pięknych we Wrocławiu Jego Magnificencji Profesora Jacka Szewczyka / bardzo dziękuję za to zaszczytne zaproszenie
TT (P22): ladies and gentlemen eee I have the great honour to present this inaugural lecture for you / the students and graduates of Artistic Schools // it was the idea of the vice-chancellor of the Academy of Art in Wrocław eee* [10] professor Jacek Szewczyk / I would like to thank him very much for this kind invitation
RC1: Translating the first fragment I omitted the words 'His Magnificence' because I wanted to focus all my attention on a correct rendering of his name and surname. I assumed that this kind of titles are not that important for the Americans.

In the above example, the analysis of the recording and the measurement of the length of the EVS reveal that the anomalous pause of 2.5 seconds coincides with the occurrence of the item "Jego Magnificencji" ("of His Magnificence"). There is also a hesitation marker "eee" immediately before the title and the

[9] The examples from the corpus of the study (source texts, target texts and retrospective comments) are coded in the following manner: the number of a source text (T2 in this case), the coding number of a given participant (P22 here), and the number of a successive retrospective comment within each output (RC1 in this example).

[10] The asterisk always marks the segment of the target text to which the retrospective comment following it refers.

name of the rector which can also be attributed to the increased cognitive effort when focusing on the correct rendition of non-contextual information (the proper name in this case).

In this study, the assumption has been made that the indicator might not necessarily appear in the segment that proves to be problematic, but in line with Gile's (1995, 2009) idea of failure sequences it might occur at a distance, for instance in the subsequent segment. The example (2) below shows problem indicators (hesitation markers and false starts) not only in the very segment in which the interpreter experienced problems with coordinating the efforts of listening, memorising, and production involved in SI, but also in the subsequent segment, a considerable part of which was omitted as a result of this increased cognitive effort.

(2)
ST (T2): aby sztuka była sztuką przez wielkie S musi się stać częścią rozwoju naukowego i technologicznego / albo nawet ten rozwój wyprzedzać / tak jak było w renesansie / włoscy artyści byli wtedy jedynymi naukowcami / dlaczego nie może tak być dzisiaj? / to tylko zależy od świadomości i postawy artystów / macie łatwy dostęp do każdej dziedziny wiedzy i codziennie około szesnastu wolnych godzin
TT (P25) to make your art the art written with capital A it it has to be a part of / of development or even to be faster than the technological development /* I want you to be also scientists as artists were in the past why cannot it be like this today? it only belyyy / the artist has the access to yyy you've got the access to all realms of knowledge
RC20/P25/T2/A-B: In the fragment about scientists I missed the very beginning and I omitted it. I had no opportunity to go back to that, so I only mentioned the scientists. Simplifying it was my way of saving the fragment. Also the next sentence wasn't translated because I didn't manage to reenter the text after this terrible failure at the beginning. This omission wasn't a deliberate, conscious decision.

In this particular case (example 2 above), the failure sequence is explicitly reported by the interpreter, but in fact the corpus abounds with examples in which the product analysis of the transcripts and recordings suggests that the indicator might be a direct result of a problem reported in the preceding part of the text.

As shown in Figure 2, 19% of the retrospective comments reporting on the cognitive effort do not coincide with problem indicators in the corresponding target-text segments. The use of strategy is either reported explicitly during retrospection or it is clearly visible in the product (the interpreting output). It is the case with example (3), in which there is no indicator of processing problems in the target text, but the retrospective protocol reports on the use of the preventive strategy of reordering information:

(3)
ST (T2): w czasie mojego życia byłem świadkiem powstania kolorowej / a później HD / telewizji / elektrycznej gitary / komputera stacjonarnego / laptopa / DVD / generalnie elektroniki i technologii cyfrowej / pomijam niezwykłe osiągnięcia w wielu dziedzinach nauki
TT (P24): throughout my life I have seen / I have seen a television in colour / I have seen HD television / electric guitar computer laptop / DVD / I have seen all these things being created / invented* / I do not mention many other great achievements
RC19: Here the speaker started enumerating a lot of things and I couldn't remember all of them. That's why I decided to omit the part in which he says they were invented. Instead, to catch up with the speaker, I quickly enumerated all these things saying it practically at the same time as the speaker. And only at the end of the list I added that he witnessed them being invented. That's why I added it at the end. I suppose it sounds a bit awkward but thanks to this decision I managed to enumerate all these things although it was very difficult for me. If I hadn't done that, I guess I would have forgotten at least some of them.

In the above example, the interpreter decided to shift part of the information to the end of the segment. In this way she avoided an excessive load on short-term memory when dealing with this fragment of the text. Enumerations are considered to be one of the major problem triggers in interpreting since they are vulnerable to lapses of attention due to their high density of information and inherent signal vulnerability (given that the individual items are difficult to recover from the context). Changing the order of elements in an enumeration is one of the preventive tactics described by Gile (2009), who attributes its efficiency to saving the processing capacity. He points out that "by reformulating the last elements first, it is possible to pick them up before they have been processed in depth and integrated fully into the semantic network" (Gile 2009: 205–206).

Reported processing problems are often masked by the use of explicitation in the form of physical addition of extra elements (e.g., reiteration of lexical items, addition of modifiers and qualifiers, meaning specification) (see Gumul 2017). In the subsequent example, the interpreter resorts to adding a proposition recoverable from the context which acts in this case as a filler and allows her to allocate more time to the listening and analysis effort:

(4)
ST (T4): niektórzy prawnicy interpretują to nawet tak daleko że w zasadzie każdy lekarz ze względu tylko na to że wykonuje ten szczególny zawód zaufania publicznego / jest w pewnym sensie gwarantem bezpieczeństwa zdrowotnego każdego obywatela będącego w potrzebie / nie wszyscy prawnicy z tym się zgadzają
TT (P71): some lawyers interpret it that in fact each doctor **only because he is a doctor*** he fulfils this specific public trust functions in some sense a guarantor of health for each citizen in need / but not all lawyers agree with this
RC15: I needed a while to think about how to translate the expression 'zawód zaufania publicznego'. That's why I added 'only because he is a doctor'. It doesn't change the meaning of the text, but it gave me some time to think.

The retrospective protocols analysed in the study differ substantially as to the reporting of an indicator. More than half of the reports verbalising problems with increased cognitive load (223 comments) do not mention any indicator. These interpreters describe experienced difficulties, but do not comment on how these problems affected the target text and do not refer explicitly to the resulting disfluencies, omissions or errors. As we can see in Figure 3, 47.7% of retrospective comments mention problem indicators. Omissions are the most often mentioned indicator (72 comments – see Table 2). Omissions are also often mentioned along with another indicator – 19 out of 23 comments describing multiple indicators list omission as one of them. The second most frequently reported indicator is the category of unfilled anomalous pauses, which amount to 57 instances.

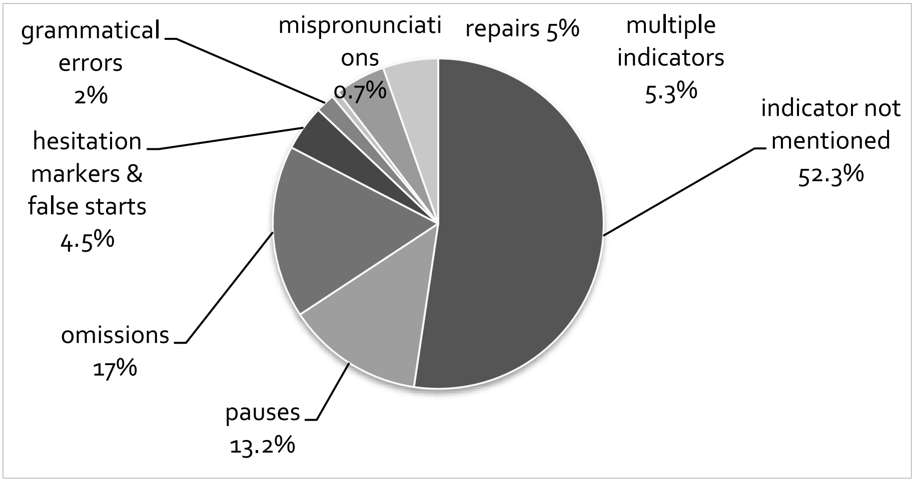

Figure 3
Indicators reported in retrospection vs. indicators not mentioned

Table 2

Indicators found in text segments referred to in retrospection

Types of indicators	Reported indicators	Indicators identified in TTs (reported and unreported)
Omissions	72	131
Pauses	57	97
Hesitation markers and false starts	19	71
Repairs	21	27
Grammatical errors	8	9
Mispronunciations	3	12
Multiple indicators	23	79
TOTAL	203	426

The following example is the case of reporting an unfilled pause, which the interpreter attributes to her fatigue. This retrospective comment, which might attest to the tightrope hypothesis, reports explicitly on the indicator of increased cognitive load, which in this case is not just a matter of prolonged ear-voice span, but involves a considerable omission:

(5)
ST (T4): lekarz powinien odmówić niektórych działań i niektórych czynności właśnie ku pożytkowi chorych / medycyna partnerska stwarza pewien problem i ja przedstawię Państwu moją interpretację i proszę żebyście się Państwo ze mną nie zgadzali / bo ja się mogę mylić / medycyna partnerska wymaga uzgodnienia sprawy między lekarzem i pacjentem
TT (P49): doctors should sometimes refuse to help people there are some there are some situations / in which they should do that / partnership medicine causes certain problems //* partnership medicine requires an agreement between a patient and a doctor
RC9: I omitted the fragment in which the speaker explains the

concept of partnership medicine. I decided it wasn't very important and preferred to wait for the next fragment which is visible in the long pause I made. I did it because I was very tired.

Another example, in which the cognitive effort indicator is explicitly reported, shows how the competing efforts of listening and analysis on the one hand, and production on the other lead to a grammatical mistake, which is apparently more of a slip of the tongue. In this text segment there are multiple processing problems indicators. Apart from the incorrect grammatical form, there are five hesitation markers which, judging from the EVS measurement, can be directly attributable to mismanagement of processing capacity while searching for an equivalent of a problematic lexical item:

(6)
ST (T4): no i druga sytuacja w której jest zerwana ta nić porozumienia zaufania szacunku wzajemnego / przede wszystkim wtedy kiedy pacjent po prostu nie akceptuje lekarza / wówczas / moim zdaniem / lekarz ma pełne prawo do tego żeby nie podejmować się leczenia takiego pacjenta
TT (P46): and the other situation is eee when the bond between doctor and a patient is yyy closed the situation yy in which the patient don't respect trust* a doctor / and a doctor can refuse eee curing aaa patient
RC10: Here I was desperately trying to find an equivalent for 'zerwana nić' [lit. 'broken thread' here in the figurative meaning of a mutual understanding] and it took me so much time that I lost the description of this 'nić'. I tried to compensate for that in the second part of the sentence, in which, instead of acceptance for a doctor, I talk about respect and trust, but unfortunately completely ungrammatically because I was still thinking about how to say 'zerwana nić' in English.

The problems experienced by this interpreter can be explained in terms of Gile's (1995, 2009) Gravitational Model of linguistic availability, which assumes that lexis, apart from the most basic high frequency vocabulary, belongs to the variable part of the language resources stored in the memory and is, therefore, less accessible under the time constraint of SI and therefore requires more processing capacity. Thus, the interpreter might need more time to access certain lexical items, as was the case in the example above.

As indicated in the section specifying the aims of the study, I have not made any quantitative analysis of occurrences of problem indicators which were not mentioned in the retrospective protocols. This is obviously partly due to the size of the corpus. Moreover, such cases are not easily quantifiable, as a given instance of experiencing an increased cognitive effort might give rise to multiple problem indicators. I believe that counting these individually might blur the proportion between reported and unreported cognitive load. In fact, such an attempt has been made by Englund Dimitrova and Tiselius (2014). Their research design facilitated the task as they analysed a small corpus. Moreover, the unit of analysis in their study was a processing problem, which is more easily quantifiable and identifiable at the micro level, relying only on the product rather than the constructs of failure sequences or competing efforts used for the purpose of analysis in the present study. It has to be stressed that the finding of Englund Dimitrova and Tiselius (2014), namely that there is a substantial amount of processing problems that remain unreported, has been confirmed in this study. Although no attempt has been made to obtain the exact figures, it is evident that the corpus abounds with such examples. There are numerous cases of unreported problems possibly related to cognitive effort, which appears to confirm the results obtained by Englund Dimitrova and Tiselius (2014).

Finally, it is worth mentioning that we cannot rule out that at least part of the indicators are most probably mentioned in the retrospective protocols due to the influence of the cue. Since the cueing was done via the product, i.e. the interpreters were exposed to the recordings of their own outputs in order to stimulate memory during the retrospective session, there is a likelihood that not all of them reflect a conscious train of thought during the interpreting process, but have been spotted by the interpreters while listening to their outputs. Some interpreters openly admit it and such cases were not taken into account (the category of RC post and I), but there might be more cases of *a posteriori* comments, which is attributable to the inherent weakness of the method and cannot be avoided.

7. Conclusions

The results of the study imply that increased cognitive load involved in simultaneous interpreting and the resulting cognitive effort experienced by the interpreters might not necessarily be manifested in the product, i.e. the target text. The fact that the majority of the reports of cognitive effort correspond to processing problems indicators is a fairly predictable result. However, the absence of indicators in the outputs of the advanced interpreting students constitutes an interesting finding. The difference between the results of this study and the one by Englund Dimitrova and Tiselius (2014) implies that the higher proportion of effectively masked cognitive effort may be due to the mastery of the technique of interpreting, which entails the use of efficient coping and preventive tactics. In this way it could possibly be seen as directly attributable to the level of expertise and experience. Nevertheless, in order to cor-roborate such claims we need further large-scale research on professional interpreters.

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Style of religious texts as a potential hindrance in interpreter training

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Abstract

According to the thematic progression model of Janikowski (2011) religious texts can be used at the early stages of interpreter training. The reservations against such placement of allegedly stylistically sophisticated texts are scrutinised in the following paper by means of (1) developing a set of features of spoken religious discourse and (2) empirically testing their frequency in a convenience corpus. The results do show an unexpectedly high level of metaphorical saturation of spoken religious texts (1.4 per minute of speech), but they also show that only 8% of these metaphors were unconventional and that speakers sometimes employed special means of facilitating metaphor processing. Additionally, the appearance of other markers traditionally recognised as elements of religious style (intertextual allusions, markers of higher register and other figures of speech) was only marginal. Thus, the results support the use of religious texts as the second stage in thematic development, however, with a set of recommendations.

Keywords

religious discourse, interpreting, interpreter training, metaphors

Stylistyka tekstu religijnego w dydaktyce tłumaczenia ustnego

Abstrakt

Zgodnie z założeniami modelu progresji tematycznej (Janikowski 2011) teksty religijne mogą z powodzeniem być wykorzystywane na wczesnych etapach dydaktyki tłumaczenia ustnego. Niniejszy artykuł odpowiada na zastrzeżenia wobec takiego ich umiejscowienia, koncentrujące się wokół domniemanego wysokiego stopnia wyszukania stylistycznego tekstów religijnych. W pierwszej kolejności autor wypracowuje zestaw cech charakterystycznych dla dyskursu religijnego, a następnie sprawdza częstotliwość ich występowania w korpusie „okolicznościowym”. Analiza wskazuje na bardzo wysokie nasycenie metaforyczne tekstów religijnych (ok. 1,4 metafory na minutę przemówienia), ale jednocześnie na niski odsetek metafor niekonwencjonalnych (zaledwie 8%) oraz na dodatkowe rozwiązania stosowane przez mówców w celu ułatwienia przetwarzania metafor. Pozostałe tradycyjnie rozpoznawane wyznaczniki stylu religijnego (nawiązania intertekstualne, znaczniki podwyższonego rejestru oraz inne figury retoryczne) pojawiają się bardzo rzadko. Potwierdza to zasadność wykorzystywania tekstów religijnych na wczesnych etapach edukacji tłumaczeniowej z pewnymi zastrzeżeniami.

Słowa kluczowe

dyskurs religijny, tłumaczenie ustne, kształcenie tłumacza, metafora

1. Placement of religious texts in interpreter training programmes

The following paper extends and further systematises previous attempts to organise interpreter training according to the thematic progression principle. The founding motivation of the thematic progression model, as presented elsewhere (Janikowski 2011), was to create an interpreter training framework broad enough for international application and perhaps even standardize a certain amount of curricula. The core of the thematic progression model is the progressive increase in the difficulty of the training materials (source texts for class and individual practice) postulated to occur as the class sequences through the following domains of human activity: general, religious, political, business, legal and academic. This sequence was never planned to be autonomous and self-sufficing, rather, coordination with other aspects of the learning process was highly advised (see e.g. Chmiel and Janikowski 2015, Setton and Dawrant 2016 for more complete efforts at coordinating these). Yet, the simplicity of the thematic progression model hides several advantages of such ordering. One is the gradual and fluent transition from the areas students are most acquainted with to the ones most distant from their experiences, which correlates with progressively higher terminological saturation. In effect, the effort involved in classroom activities is increased in a controlled manner. On the other hand, the model assumes the use of authentic material and necessitates the use of varied materials which should increase the students' internal motivation as well as better prepare them for unstable markets. From the perspective of the teacher, the model offers an intuitive approach, relative ease of use and much needed flexibility.

However, already at the level of formulation certain reservations started emerging. One of the main concerns raised by consulted interpreter trainers was the placement of religious texts at the relatively early stage of class progression. The arguments raised revolved around the stylistic complexity and to a lesser extent lexical sophistication or informational density of such texts. If it is true that religious texts are closer to literary parlance than to ordinary speech, not only is their early placement in the progression at stake, but perhaps they should never be used as didactic materials. After all, Alexieva (1992: 221) was sharing some common interpreter knowledge when she decried simultaneous interpreting of literary texts.

The problem is, that – as it often happens in Translation and Interpreting Studies – the reality doesn't quite fit the frame. Religious texts are interpreted and more than that, they are interpreted successfully. And even theoretically their distance from everyday parlance is not universally recognised. Huber, for instance, goes as far as to posit that the distance is nonce (2000: 33–38), at least when it comes to Christian religious texts for Christian audiences.

Obviously, Huber builds his claim around the philosophy of language and one can have linguistic reservations about his argument, especially regarding the full stylistic overlap between common language and religious language. However, the sheer spectrum of positions on the issue is interesting in its own right. Perhaps one of the answers to this puzzle lies in what particular scholars define as 'religious language'. The broader the definition, the more probable it is that the observations mostly concern written texts rather than spoken language and thus fall outside of the scope of our interest. For one, no temporal limitation on the composition makes the religious authors soar. In the written format such authors certainly are more prone to build more syntactically complex utterances, to partially limit redundancy and, with access to external resources, even to transcend the boundaries of their active lexicon. The same authors, when asked to speak, are subject to psycholinguistic limitations of speed and scope of access to lexicon, memory processes involved in maintaining cohesion and coherence or emotional involvement, to name just a few (Damian and Dumay 2007, Hagoort and Levelt 2009). A notable exception in this respect are, naturally, speeches read aloud which actually violate the orality criterion and are thus universally recognised by interpreters as one of the most challenging text types (Pöchhacker 2004: 129–130, Lenart 2006). These, however, pose the same challenges regardless of topical domain.

Yet, there is one more aspect to the definition puzzle that usually seems to be forgotten when discussing religious texts and it is the characteristics of the implied recipient. This distinction between specialist–specialist, specialist–non-specialist and non-specialist–non-specialist communication naturally applies to all spheres and domains of human activity. In the case of religious texts it (roughly) takes the forms of theologian–theologian, theologian–layperson, and layperson–layperson interaction. The distinction seems to set apart a particularly distinct type of texts produced by theologians for theologians which is barely accessible to the general public. The same opinion transpires from Huber's considerations (2000: 34):

> The words used in a Christian religious context are the same that one uses in daily speech: 'father', 'grace', pardon', etc., etc.
> The specific *technical terms* of the language of faith that are used in Christian discourse are relatively rare and not indispensable, because they are explainable by means of common terms. Examples of such technical terms would be: 'prayer', 'salvation', 'redemption', etc. A goodly number of these terms specific to Christian discourse are of a practical and juridical nature, for example: 'church', 'parish', 'chalice', 'bishop', etc., and in a number of cases are taken from other languages, notably Latin and Greek.
> *Theology*, on the other hand, as the reflective science of faith – or as Wittgenstein would say, the *grammar of the language of faith* – has, as does every science, a number of special terms: 'transubstantiation', 'circumincession', 'trinitarian', etc.

For this reason, in the original model I suggested grouping theological texts together with academic ones. Academic texts also reflect specialist–specialist communication and may possess the same features of higher lexical and informational density as well as terminological saturation. Such texts should naturally crown interpreter training. A rough criterion for the efficient separation of religious from theological texts would thus be the level of professionalism of the recipient as well as of the speaker (cf. Lundquist 1991, Kelly 2005: 123).

These two interventions (getting rid of written and theological texts) should already clear some ground for the application of religious texts in the interpreter training programmes; yet the group that emerges as *spoken religious* (not theological) is still suspected of a high level of stylistic sophistication and merits a more in-depth analysis of its actual nature.

2. Criteria for the analysis of style in Spoken Religious Texts

Since there are no studies of features of spoken religious texts available, especially ones that would serve the purpose of elucidating difficulties for interpreting, I take as a starting point a very informative characterisation of religious discourse proposed by Wilkoń (2002: 271–272). This account of textual features of religious language is particularly suited for my purposes as it is built around a comparison with what is dubbed 'secular' or 'non-religious' (*świeckie*) texts. At least to a certain extent this is a comparison with general language which should be the starting point in interpreter training. On the other hand, it must be kept in mind that Wilkoń does not limit his considerations to spoken texts solely, so his observations will have to be filtered accordingly.

The author lists as many as 13 features that characterise religious discourse:

(1) "sacralisation of ideas effecting in imparting the sacred character to words, expressions, sentences and even complete texts" – at the level of words and expressions this results in terminology formation, at higher levels sacralisation expresses itself in intertextuality;

(2) "transcending everyday communication; hence it is not just a continuation of the common language, as is stipulated by some researchers. The spoken religious language is a cultured, literary one, respecting several norms of general Polish" – This

statement requires practical verification, especially since Wilkoń explicitly singles out the spoken language here;

(3) “semantically it is a theocratic language, after all it communicates the ‘kingdom of God’ which is not of this world. This puts it in opposition to the anthropological stance in many non-religious texts” – admittedly, the ‘theocratic semantics’ is a somewhat puzzling construct, difficult to operationalise with specific textual features. It stands to reason, however, that what is meant here is some underlying difference in cognitive framing that could perhaps result in uncommon metaphors;

(4) “meditative and prayerful character of religious language as the language of communicating with God. This communication is conducted in silence and concentration” – this feature is clearly a local one, in that it by definition dismisses the public character of texts that undergo interpretation. Apart from confessions and prayers, which are rather rarely interpreted (see Bowen and Bowen 1987) we will not observe this feature in the majority of texts used in the classroom;

(5) “tendency to perceive the world symbolically” – the more volatile and indeterminate character of a symbol as compared to a metaphor (see Cuddon 2013: 699–702) seems to present the interpreter with a smaller difficulty, because a symbol is not necessarily embedded within a particular expression and it usually requires a more narrative structure that provides more contextual clues;

(6) “metaphorical, allegorical and parabolic character of religious language that introduces an element of pathos” – metaphorically rich language is recognised as one of the basic difficulties in interpreting texts of a more ‘literary’ character (Tryuk 2007: 103) and it certainly should be tested not only in terms of relative frequency, but also metaphor conventionalisation and repetitiveness within a text;

(7) “profoundly archaic and diachronic character of religious language as well as its strong leaning towards tradition that make it somewhat akin to classicising literary styles” – the extended remark supplying the sources of inspiration quite clearly

delimits this observation to written texts. On the other hand, some archaic language has crept into contemporary use in religion and it would be very productive to see how much and how problematic it may be for students of interpreting;

(8) "an attitude of pursuing spiritual and ethical goals, the domain of truth, which results in selection of the semantic fields that refer to such values" – the orientation on the world of values is a very culturally-dependent feature in terms of its influence on interpreting difficulty. In countries where ethics and/or religious instruction have a strong hold on early education (as is certainly the case in Poland) we may expect a facilitatory role. The aforementioned semantic fields should be deeply entrenched in the minds of would-be interpreters. Needless to say, in highly secular countries the difficulties would increase;

(9) "denominational differentiation of religious language that helps keep churches and their worship styles separate, e.g. the highly ceremonial character of Orthodox language as opposed to the language used in Lutheran and Reformed churches" – although it is conceivable that some singular syntactic features can differentiate spoken religious languages of worship, I guess that this feature largely consists of terminological and, more broadly, lexical variation;

(10) "sustained relationship with canonical books, e.g. Bible, which guarantees that some texts remain almost completely unchanged" – since feature (1), "sacralisation of ideas" already extended to complete texts, tests of intertextuality should be enough to check the level of potential interpreting difficulty in this respect;

(11) "ritual character of religious language" – rituality at levels lower than the text is actually an ally of the interpreter as it increases subjective redundancy (even in written texts). To push Wilkoń's idea a little further, the ritualization of religious language should also present itself in highly repetitive thought patterns – a true blessing for anticipatory processes in interpreting. In an even more extended form, ritualization could result in conventionalising the trajectories along which domains are mapped

in metaphorical expressions leading to the situation in which metaphors would be recognised faster (having been built according to similar patterns);

(12) "pursuit of codifying religious genres" – this feature, being an extension of the previous one but beyond the level of text, is barely translatable into practical immediate interpreting problems;

(13) "close and long-standing relationship with rhetoric, e.g. in homiletics" – should in turn result in the increase of frequency with which figures of speech (obviously, including the metaphor again) will be applied.

3. Preliminary analysis of a convenience corpus

Based on Wilkoń's features of religious texts as presented and commented on above, for an empirical analysis of a corpus of spoken religious texts in English and Polish, I worked out the following more manageable set of features that can be envisioned as an operationalisation of the highly evasive construct 'stylistic difficulties in spoken religious texts':

(a) level of metaphoricity (and symbolic character) – which more or less explicitly features in Wilkoń's points (3), (5), (6), (11), (13) and, along with theoretical accounts and external consultations with teachers of interpreting, stands out as potentially the primary marker of difficulty in processing religious style. This difficulty (obviously not in reference to religious texts, and only for sight interpreting) has recently found experimental confirmation in the studies of Zheng and Xiang (2013) or Binghan and Hao (2018).

Since the status of metaphor exceeds that of any other feature, I decided to concentrate on it the most by testing not only its frequency, but also its level of conventionalisation as already suggested in the discussion of feature (6). For the purposes of this analysis I assumed a broad, cognitively informed definition of metaphor as "the cognitive mechanism whereby one experiential domain is partially 'mapped', i.e. projected, onto a different experiential domain, so that the second domain is partially understood in terms of the first one" (Barcelona 2003: 3) with the proviso that being unable to track the actual cognitive mechanisms I will have to rely on their textual manifestations. In effect I will provide the measures of relative frequency of these manifestations. However, in the qualitative analysis I will attempt certain extensions in the spirit of cognitive linguistics.

When it comes to the classification of metaphors according to their conventionality I opted for a simplified three-step typology:

– conventional metaphor, e.g.: "spiritual battle", "influx of ideas", "podcinać skrzydła" (~'clip one's wings');

– metaphor with a predictable trajectory, e.g. "duchowe Westerplatte" ('spiritual Westerplatte'), "knock sin off", "korzenie, z których wyrastamy" ('the roots we grow from'). The predictability is sometimes based on the fact that within the same text the same domain (or its subdomain) has already been explored, but mostly by joining domains that are often and intuitively paired but in a novel way (cf. Johnson 1987);

– unconventional metaphor, i.e. a metaphor with an unpredictable domain mapping or one that is difficult to predict; this class also includes compound metaphors. This group contains the most creative uses of metaphorical language, e.g. "wieczernik dziejów" ('upper room of the ages'), "palimpsest dziejów" ('palimpsest of the ages'), "odsłonić profile wbudowane w architekturę świątyni ducha" ('disclose the profiles built into the architecture of the temple of the spirit').

This division is not fully in line with the more traditional approaches applied in Translation Studies (cf. Newmark 1981: 85–87), but it was modelled on them and created with the aim of simplifying the task of comparing the mental effort involved in decoding metaphors. The underlying assumption was that the difficulty increases gradually when we move from the conventional to the creative and compound metaphors. This increase is the effect of the level of acquaintance with the domains and their mappings. Alexieva suggests a similar approach but she concentrates more on the explicitness of the domains themselves (1999: 51). At the end of the day, the ability to understand metaphors may be more subjective, relying mostly on such factors as differences in fluid and crystalised intelligence (Stamenković et al. 2019), but forming generalisations about interpreter trainee populations in this respect would require an experimental setup beyond the scope of the present considerations of this article;

(b) level of intertextuality (Wilkoń's points 1 and 10) – which is measured by how frequently references to identifiable source texts appear. These references are categorised as either overt or covert to reflect the most important difficulty in the decoding phase of interpreting, namely the identification of the allusion. The simplification in comparison with more developed categorisations of intertextuality (Majkiewicz 2008) should allow us to obtain greater clarity. Interestingly, and to further emphasise the role of metaphorical representations, cognitive processing of intertextuality has also recently been presented as cross-domain mapping (Karpenko-Seccombe 2016);

(c) archaic language and markers of higher registers (Wilkoń's points 7 and 2). These are limited to lexical items for the ease of application and follow the conclusion that Wilkoń was mostly hinting at written texts. If, however, the analysis shows a high level of saturation with archaic lexical elements, the research should be extended to marked syntax;

For ease of classification, a simple inclusion rule was created for this category. An element was classified as archaic if it was assigned such status in one of the two major dictionaries *Słownik języka polskiego PWN* and *The Oxford English Dictionary*;

(d) other figures of speech (Wilkoń's features 6, 13) mostly metonymies, but occasionally also similes, oxymorons, puns and rhymes;

(e) terminological saturation is not a feature of style, but since separation from what was described as theological discourse is important for our purposes and the analysis of the whole corpus was manual anyway, this additional feature was included in the analysis as a simple test of the convenience corpus. It must, however, be noted that in this case the decisions were purely intuitive and based on personal experience.

The corpus itself consisted of 24 recordings with a total length of 11 hours, 6 minutes and 58 seconds. All of the texts were monologic in character and they split into the following (sub)genres of religious speech: sermon – 10 texts, topical presentation – 5 texts, presentation at a religious event – 4 texts, address by a church official – 3 texts, testimony – 2 texts. Each text was transcribed and previously used in classes of either consecutive or simultaneous interpreting. The average speed of presentation was 155 words per minute for the English speakers and 123 words per minute for the Polish speakers.

As was already signalled in the title of the current subchapter, this selection of texts must be qualified as a 'convenience corpus' in that it is not a random sample of religious speeches, but its creation was motivated by class needs. On the other hand, since the corpus's emergence preceded the current study (in some cases by several years) and it reflects the multifaceted process of selecting texts for class practice described elsewhere (Janikowski 2012), there is a high probability that it managed to avoid any researcher bias which might confound the results of the current study.

The results of the quantitative analysis of the corpus are provided in the table below. Frequencies have been recalculated per minute of text for easier reference and better visualisation of potential interpreting difficulties.

The last column in the table provides an overview of the level of repeatability of the selected markers of style. It follows the standard linguistic distinction into tokens and types, wherein tokens are all of the examples of a given category to be found in the text while types only reflect the non-repeated elements (including inflected forms in Polish).

Table 1
The results of the quantitative analysis of the corpus

Category	Subcategory	Token frequency (per minute)	Type frequency (per minute)
Metaphors	conventional	0.83	0.71
	predictable trajectory	0.46	0.36
	unconventional	0.11	0.09
	total	1.40	1.16
Intertextual allusions	overt	0.21	0.17
	covert	0.02	0.02
	total	0.23	0.19
Higher register markers	archaic style	0.07	0.07
	other	0.08	0.08
	total	0.15	0.15
Other figures of speech	mostly metonymies	0.19	0.19
Terms		0.19	0.17

4. Discussion and conclusions

Limited as this study is, it still allows some conclusions to be drawn about the nature of potential difficulties in using religious texts in interpreter training and especially about metaphor use in spoken religious texts as a hindrance for the would-be interpreter.

The reliance of religious speakers on metaphors exceeded all expectations. The tabulated comparison above shows that metaphors appeared in the text more commonly than all the other features taken together. This leads to the situation in which the student–interpreter working with such texts needs to cope with a completely new metaphor in almost every minute of the source material. What makes metaphors so popular in religious discourse? Certainly it is worth considering these results as a confirmation of the stance of cognitivists who believe that cross-domain mapping may very well be one of the most characteristic ways of representing the world. A comparative study with materials of a general or political nature would certainly dispel some doubts here. More pragmatically, the popularity of metaphorical expressions is certainly driven by the multiplicity of the roles they perform. On the one hand they make the message more attractive as is the case with “following in Christ’s footsteps”, “synowie i córki ziemi” (‘sons and daughters of the earth’), or “ogień, który wytryska” (‘the fire that gushes’), on the other, they make it more emotional as in the conventional form of address “brothers and sisters”, which activates the metaphor RELIGIOUS COMMUNITY IS FAMILY. Yet another role is facilitating communication and memorisation as in the example of “korzeń mowy” (‘root of speech’) standing for the common sources of languages.

There is a certain comfort in the statistics above. Namely, only around 30% of the metaphors are not the conventional type with the most creative metaphors appearing roughly one in every ten minutes (which means that in some texts they do not appear at all). Even if Lakoff and Turner were not right about the fully automatic processing of conventional metaphors (1989: 67–72), certainly there is a speeding-up of access to the domains accessed most commonly. Only the last category, unconventional metaphors, is going to be truly problematic for interpreters.

Yet there do appear to be certain means of facilitating the process of comprehension employed by the original speaker. They take the form of additional explanations of the target domain. In the following example:

> Każdy z was, młodzi przyjaciele, znajduje też w życiu jakieś swoje ‘Westerplatte’. Jakiś wymiar zadań, który trzeba podjąć i wypełnić. Jakąś słuszną sprawę, o którą nie można nie walczyć. Jakiś obo-

> wiązek, powinność, od której nie można się uchylić. Nie można ‘zdezerterować’.
>
> (Each of you, my young friends, will also find in your life your own ‘Westerplatte’, some tasks you must undertake and complete, some good cause for which it is impossible not to fight, some duty, some obligation you cannot escape, where ‘desertion’ is not an option.)

the metaphor LIFE IS WESTERPLATTE was explained in detail by providing features of the target domain. This simplification is not reflected in our statistics, and yet it is not uncommon, especially for the unconventional metaphors, but it happens even for the conventional ones, if they form the core of a message. Another measure taken by speakers in such situations is coupling the metaphor with another one which has related or even the same domains. In the example above, it was visible in the mapping CONFORMISM IS DESERTION. It is not very surprising that creative speakers want to help their recipients although it certainly is a mark of well-developed speaking skills and is not a rule.

The other side of the coin, bad speaking skills, can complicate the life of the interpreter in manifold ways, however in the case of metaphors it is likely that the most problematic issues are syntactical errors accompanying the production. Such errors can render even the simplest of metaphors almost completely non-transparent as was the case in the following example:

> Niech łaska Boża oparta na sile naszej wiary i umocniona jednością, jaką tworzymy wszyscy Polacy na różnych miejscach świata, niech będzie tą wspólnotą, która potrafi żyć duchem miłości.
>
> (Let the grace of God, based on the strength of our faith and strengthened by the unity we, Poles, exhibit all over the world, let it be the community that can live in the spirit of love.)

Here the very simple metaphor NATION IS COMMUNITY turns into a structure that is very difficult to decode ‘let the grace [...]

be the community', most probably because in the course of processing, the original speaker lost the source domain. Fortunately, situations as extreme as this one are very rare.

Still, recognising and understanding metaphors is not the only problem involved in interpreting them. Another difficulty lies in recognizing what technique to use in order to transport metaphors to the target language, especially under time pressure. Some theoretical solutions to this problem, albeit for written translation, are neatly outlined by Schäffner (2004). But for a future interpreter such knowledge is only the starting point. It is the task of the student, in cooperation with their tutor, to develop the sensitivity to the mechanisms in which metaphors are created across languages, to build a repertoire of conventional metaphors and to train in techniques of dealing with more complicated cases such as the one presented above. The high level of repetitiveness of mapping trajectories may lead to a certain level of 'automatisation' after some training, especially if it is conducted at relatively early stages when the remaining factors of slow pace (in simultaneous interpreting) or short batches (in consecutive interpreting) as stipulated in the thematic progression model (Janikowski 2011: 130), allow for a smaller accompanying cognitive load (cf. Setton and Dawrant 2016: 31).

To leave metaphors and move on to other stylistic features, all of the remaining criteria based on Wilkoń's suggestions pale in insignificance compared to the metaphors. Needless to say, this may be an unfortunate artefact of the convenience corpus, but it may also follow from the fact that, as was mentioned in their discussion, Wilkoń's features may, for the most part, be better suited to the characterisation of written religious texts. Further studies are needed to disentangle these effects.

The importance of intertextuality, ranking second in the frequency analysis, is undoubtedly the result of the founding character of sacred texts for the religious activities or Christian denominations. The overwhelming majority of allusions were overt and provided with a source; these were quotes varying in length (3 to 36 words) for which either the author or the specific coordinates in the source text (usually the Bible) were given. In such cases students need to be equipped with the understanding of the importance of preparation, knowledge of interdenominational discrepancies between canonical translations and the role of a given quotation in context. This, plus practice, should allow them to decide on the application of the most efficient techniques from among on-site source text consultation, memory-based recital, or summary.

Most translations of sacred texts retain a level of archaism and pathos and thus they also contributed to the third category in my analysis. Yet, even despite this overlap, the markers of elevated register appear very rarely in the analysed texts with the average occurrence of 0.15 per minute of text. Such a tendency could be ascribed to idiolectal rather than sociolectal preferences, as all of the tokens for this category came from just eight of the 24 speeches. As a matter of fact, the tendency was rather to update the religious language, especially if the text was produced by a Protestant denomination. When it comes to archaizing it should also be remembered that interpreter trainees are usually screened for their linguistic competence. In the majority of cases, a skilled utilisation of contextual clues and a broad vocabulary span should be more than enough to deal with archaizing tendencies in the speakers, at least the ones using the student's native language. There might, however, be a pronounced imbalance when it comes to interpreting from the B or C language which requires an intervention.

Finally, the sketchy terminological analysis confirms Huber's ideas cited above even despite the fact that the inclusion in this category was set at a very low threshold of acceptance. This resulted in recognising as terms words such as "encyclical", "council" or "intelligent design", which would not meet standard terminological criteria, but may still be a source of difficulty for students.

5. Limitations and recommendations for further research

The empirical study described above is an attempt at exploring the materials at hand and is surely marked by certain methodological flaws. In further studies, the corpus should be expanded (by other speakers, texts and perhaps other languages) and randomised in terms of acquisition procedures. The analysis could be improved by introducing several judges to the classification process to avoid biases, and most importantly by a comparison with non-religious text types to see the reported frequencies in broader context. Finally, the only way to learn about actual, not potential, difficulty the religious texts cause to students is to implement an experimental paradigm that would scrutinise the effects of their classroom use.

Still, the insight the study offers in its current form is already valuable. Firstly, it shows an unexpectedly high level of metaphorical saturation of spoken religious texts, but at the same time delimits the potential destructive influence of metaphors by showing that a large proportion of these are highly conventionalised and the unconventional ones are often repeated and developed within the text to facilitate their processing. Secondly, the study suggests that the majority of features regularly recognised as markers of religious style are more applicable to written texts and feature only marginally in the spoken variety. Thus, the results support the use of religious texts as the second stage in thematic development, however, with the recommendations outlined below.

A set of separate class segments on metaphors should be organised in which students could consider the theoretical implications of metaphor structure, cultural conditioning of metaphors and the applicable interpreting techniques. Students should regularly work with prepared texts whose main difficulty would be manipulated to include metaphors, intertextual allusions, archaisms (especially in B and C languages) or markers of higher registers. For metaphors the practical exercises could consist of:

- demetaphorising and metaphorising passages or texts,
- turning metaphors into similes,
- exploring domains by building longer and longer texts (first written, then improvised) based on one metaphorical mapping.

Some 15–20% of practical interpreting activities should preferably be devoted to religious texts of various genres and representative of various denominations, some of which should be highly dependent on intertextual use of background texts. Such class compositions combined with students' individual work should prepare them to interpret not only texts of a religious character, but also any others which are highly figurative and allusive in content.

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Method of measuring the effort related to post-editing machine translated outputs produced in the English>Polish language pair by Google, Microsoft and DeepL MT engines: A pilot study

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Abstract

This article presents the methodology and results of a pilot study concerning the impact of three popular and widely accessible machine translation engines (developed by Google, Microsoft and DeepL companies) on the pace of post-editing work and on the general effort related to post-editing of raw MT outputs. Fourteen volunteers were asked to translate and post-edit two source texts of similar characters and levels of complexity. The results of their work were collected and compared to develop a set of quantitative and qualitative data, which was later used to make assumptions related to the general rate of post-editing work and the quality of the post-edited sentences produced by the subjects. The aim of the pilot study described below was to determine whether the applied method can be successfully used in more profound studies on the quality and impact of machine translation in the English->Polish language pair and on the potential of MT solutions on the Polish translation market.

Keywords

machine translation, English->Polish language pair, post-editing, post-editing effort, pilot study, machine translation engines

Nakład pracy podczas posteditingu. Badanie pilotażowe

Abstrakt

Niniejszy artykuł zawiera opis metodologii i wyników badania pilotażowego dotyczącego wpływu silników tłumaczenia maszynowego na tempo i nakład pracy związanej z postedycją. Czternaścioro ochotników dokonało tłumaczenia i postedycji dwóch tekstów źródłowych o podobnym charakterze i stopniu skomplikowania. Uzyskane wyniki zebrano i porównano, a na podstawie stworzonego w ten sposób zbioru danych ilościowych i jakościowych wyciągnięto ogólne wnioski dotyczące tempa i jakości pracy postedytora. Celem opisanego poniżej badania pilotażowego było określenie, czy zastosowana w nim metoda może zostać z powodzeniem wykorzystana podczas dogłębniejszych badań nad jakością i wpływem przekładu maszynowego w parze językowej angielski>polski oraz potencjałem rozwiązań MT na polskim rynku tłumaczeniowym.

Słowa kluczowe

przekład maszynowy, para językowa angielski>polski, postedycja, wysiłek postedycyjny, badanie pilotażowe, silniki tłumaczenia maszynowego

1. Introduction

Recent years have brought us considerable advances in the area of machine translation technology (MT) used to automatically translate source text materials into multiple target languages without human interference (cf. e.g. Bojar et al. 2016). Theoretically anticipated since the beginning of the 21st century, the neural machine translation systems, first introduced by Google in October 2016 and later developed by other companies participating in the market, have caused substantial improvement in the quality of MT output (Bengio et al. 2003, Bentivogli et al. 2016, Wu et al. 2016). Consequently, MT engines have become more and more popular and widespread across the entire translation industry.[1] Nevertheless, the quality provided by even the most modern MT systems still requires human intervention in the form of post-editing, understood as a "correction of machine translation output by human linguists/editors" (Fiederer and O'Brien 2009, Allen 2003, Hutchins and Somers 1992).

Simultaneously, numerous scholars interested in MT technology have been conducting research aimed at the establishment of coherent and unified methods of MT output quality assessment (Bojar et al. 2016). Apart from traditional human-based methods that, for instance, involve the evaluations of the Fluency, Adequacy and Comprehension of machine-produced translations (Han et al. 2017), several Automatic Evaluation Metrics, such as BLEU or METEOR, have been developed to enable a reliable comparison of various MT engines and their efficiency with minimum human effort (Koehn 2010). As the overall quality of MT output depends on numerous factors, such as the source text type, language pair and target language (Hutchins and Somers 1992), the aforementioned task is a difficult one.

This article and the pilot study it describes constitute a preliminary step for a broader research project aimed at determining the level of MT output quality in the English->Polish language pair and the possibilities of applying popular MT systems in the Polish translation market. Such a task requires the establishment of a reliable, reproducible and cost-efficient study framework, which could be used to measure the efficiency of various solutions. The framework proposed in this article is based on several studies conducted in the past (Avramidis 2017, Graham et al. 2017, Han et al. 2017, Fiederer and O'Brien 2009, Callison-Burch et al. 2007, Snover et al. 2006) and is

[1] Cf. e.g. at <https://www.grandviewresearch.com/industry-analysis/machine-translation-market>, accessed 16.07.2018.

adjusted to the project's specific needs. The pilot study described below was designed in such a way to determine whether the proposed method can be efficiently used to obtain reliable results related to post-editing time and effort. It was conducted in May and June 2018 at the University of Gdańsk, Poland.

2. Methodology

2.1. Description

The pilot study was conducted on a test set composed of two source documents (A and B) containing 459 words each in 19 (Document A) and 20 (Document B) individual sentences. Both documents were presented to a group of 14 MA students in the Department of Translation Studies, who constituted a group of subjects. The subjects were divided into three groups (on the basis of the MT engine used to produce the output for post-editing – Google's GNMT, Microsoft's MNMT and DeepL Translator) and asked to perform a two-stage task based on translation and post-editing of the provided source material.

During the first stage of the task, the subjects were given 40 minutes to translate the contents of Document A into Polish and to produce target texts of the highest possible quality. During the second stage of the task, the subjects were given 40 minutes to post-edit the machine translated contents of Document B, again producing target texts of the highest possible quality. During both stages of the task, the number of parameters (total edit time, understood as time spent on editing target segments in the CAT software, words typed per hour and characters typed per hour, number of keystrokes and mouse clicks and numbers of "Delete" and "Backspace" key uses) were measured and recorded.

After the completion of the task, the data collected during both stages was gathered to enable the performance of quantitative and qualitative analyses of all parameters. Individual results obtained by the subjects during the first and second stages of the task were added and divided by the number of participants assigned to the same group. This way, the average total edit time, words per hour, characters per hour, keystrokes, mouse clicks, backspace use and delete use parameters were obtained per each engine and each stage. These average values were later used to calculate the difference between individual engines and the difference between the parameters obtained during the translation stage and the post-editing stage.

The translations provided by each subject were collected and stored in the form of a .tmx file and were sent together with raw MT outputs to an independent translation agency for quality assessment. The reviewer was instructed to look at all translations of each source sentence and to order them on the basis of their quality. The results were then compared and analysed, and a general ranking of quality provided by individual subjects and all MT engines was developed.

In the meantime, the Human-targeted Translation Error Rate (HTER)[2] score was calculated for each translated sentence contained in the .tmx files on the basis of the MT outputs produced by the corresponding engines to measure the number of editing steps that needed to be performed by the subjects to obtain post-edited versions of the target text.

2.2. Source material

The entire research project was based on texts related to the construction industry, with particular reference to technical specifications. Hence the contents of both documents used during the pilot study were randomly picked from the specification of materials and workmanship,[3] describing general methods recommended during extending ground floors, altering interiors and converting the lofts of buildings. As the overall quality of the MT outputs relies heavily on the type of the processed source texts, the source material selected for such a study needs to be:

[2] Specia and Farzindar (2010); Snover et al. (2006).

[3] Publicly available at <http://studylib.net/doc/18186005/specification-of-materials-and-workmanship-required-in>, accessed 16.07.2018.

- highly repetitive in structure, preferably developed in accordance with a generally accepted pattern;
- focused more on terminology than on the style and other linguistic features;
- widely available.

We believe that the technical specifications meet all these requirements, as they are very often similar to each other and differ in details, their form is frequently governed by legal documents such as building codes applicable in particular countries (repetitive structure), they are technical in nature, their primary aim is to provide information (terminology focus) and they are abundant and can be easily obtained in both studied languages either on the internet or at construction companies (availability).

Initially, the test set developed for the pilot study contained two documents with 10 sentences (229 words in total) each, picked at random and meeting the abovementioned specification. After the analysis of results provided by the first two subjects it appeared, however, that Document B was too short. The subjects finished their task before the time was up and returned to the finished translations to review and redo them, which introduced unintentional noise into the obtained results. Therefore, the results obtained by subject 1 and subject 2 were excluded from the analysis of temporal parameters and the source texts volume was eventually doubled to reach 19 (Document A) and 20 sentences (Document B) (459 words in total) in each of the documents used during the pilot study.

The documents were cleared of any formatting and imported into separate CAT tools projects (one project for Document A and one project for Document B) with two separate and empty translation memories attached.

2.3. Subjects

Participants of the pilot study were recruited from the University of Gdańsk students who attended the MA course in the

Department of Translation Studies. The participation offer was entirely voluntary and aimed at students displaying sufficient motivation to take part in extracurricular activities. There were no preliminary requirements specified for the subjects, apart from being an MA student of Translation Studies. Interested students enrolled through an online form, where they specified the date and hour of their availability. In total, 14 subjects took part in the pilot study. The subjects were divided into three groups and each group worked on the contents processed by a different MT engine – Group A: Google Neural Machine Translation (GNMT – Subjects 1, 2, 3, 11, 12), Group B: Microsoft Neural Machine Translation (MNMT – Subjects 7, 8, 9, 10, 14) and Group C: DeepL Translator (DeepL – Subjects 4, 5, 6, 13).[4]

2.4. Session time

The pilot study sessions were designed to last 90 minutes. During that time, the subjects were provided with the instructions (5 minutes) and asked to perform both stages of the task (translation and post-editing – 40 minutes each). In between these two stages, a 5-minute break was organized for the subjects to rest and to allow for the collection of time-tracking and input data gathered during the first stage.

In total, five individual sessions were held between 21.05. 2018 and 9.06.2018, with one to seven subjects present simultaneously in the laboratory.[5]

2.5. Software and preparation

In order to unify the workspace and enable the collection of reliable time-tracking and input data, the subjects taking part in

[4] Unfortunately, the number of subjects recruited for the study could not be divided evenly, therefore the number of students working with one of the engines needed to be decreased.

[5] Because of this time span and due to the fact that the subjects were recruited from among the students of one university department, the possibility of communication taking place between various participants of the study in between sessions could not be completely ruled out.

the pilot study worked in MemoQ 8.2 and SDL Trados 2017 CAT tools. All subjects had some prior experience with MemoQ and SDL Trados software and both of these programs allow for time-tracking (either via an integrated feature in the case of MemoQ 8.2 or through a dedicated "Qualitivity" plugin in the case of SDL Trados 2017) and for the integration of machine translation engines. SDL Trados Studio 2017 was chosen mainly due to the lack of a proper plugin for DeepL integration in MemoQ 8.2 and it was used only by the subjects assigned to Group C.

Apart from time trackers, the computers used during the task were equipped with WhatPulse software,[6] which measured and registered the number of keystrokes and mouse clicks made by the subjects in their CAT tools. Apart from the overall amount, the software provided separate values corresponding to the use of the "Backspace" and "Delete" keys, which was especially helpful during the post-editing process.

Before each session, the workstations used by the subjects were prepared by creating new projects in CAT tools (for Document A and Document B separately) with empty translation memories and without term bases. In the case of projects with Document B imported, an applicable plugin for MT engine integration was enabled to allow for automatic translation of source segments with the use of the given engine directly in the CAT tool window. Similarly, the WhatPulse software was enabled in Windows OS and reset to delete all the data it may have accidentally registered before the beginning of each session.

2.6. Instructions and course of the session

Each session was supervised by an observer, who was responsible for the proper organization of the study and provided the task-related instructions. Before their appearance for the session at the laboratory, the subjects were not informed about the nature and focus of the pilot study and the information provided to them during the sessions was restricted to the minimum

[6] Available at <https://whatpulse.org/>, accessed 17.07.2018.

necessary. Before the commencement of work on the first stage of the task, the subjects were asked by the observer to:

- produce the translation of source sentences displayed on the screens of their workstations within the time limit of 40 minutes;
- focus on individual sentences and deliver as much high-quality target text as possible within the specified time frame;
- pay no attention to time limit, as the source document is purposefully too long to be translated completely on time;
- use all tools and techniques known and available to them apart from any MT engines and solutions;
- confirm every segment after the completion of each individual sentence.

After the break separating the first two stages of the task, the subjects were given identical instructions, with “Produce the translation” changed to “Post-edit”. If any of the subjects was not familiar with the term, an oral explanation was given by the observer.

During the subjects’ work, the observer’s role was minimal. During the break and after the completion of the second stage, the observer collected all the time-tracking and input data gathered during the study and reset the CAT tools projects and the WhatPulse software.

2.7. Constraints

The pilot study described above was meant to test the proposed measurement method and to help to establish a sound and possibly reliable basis for more profound research work on MT technology in the English->Polish language pair. Due to its character, the study was subjected to various financial, temporal and organizational constraints that indirectly influenced the adopted methodology and obtained results. These constraints included the following factors, which need to be highlighted:

- The number of subjects was relatively low – among all students of the Translation Studies Department only 14 were willing to take part in the extracurricular study.
- Subjects were students with a low level of professional experience – the quality of the produced outputs does not mirror the quality of translation required from professional translators active on the translation market.
- Subjects could communicate with each other in between the sessions – due to the voluntary character of the study, the organization of a single simultaneous session for all subjects was impossible.
- The quality of the outputs produced by the subjects and MT engines during the first stage of the task was not compared with the quality produced during the second stage – the budget allocated for qualitative analysis made it possible to perform such an analysis on only one set of outputs.
- The comparison of the impact exerted by individual engines depended heavily on the skills of the given subject – due to temporal restrictions, each of the students worked on MT outputs produced by only one engine, which made it impossible to compare the results obtained by the same students with the use of various engines.

The problems listed above need to be taken into consideration during the interpretation of the results obtained during the study and the elimination of such problems is essential for any future research based on the proposed method. More details about potential areas for improvement are described in Section 5: Conclusions.

2.8. Results

3.1. Quantitative analysis

3.1.1. Stage 1

During the first stage of the task, the subjects were asked to deliver high-quality translations of the 20 sentences included in Document A in the time of 40 minutes. The time of their work and some input methods (number of mouse clicks and keystrokes) were collected by the software installed and enabled at their workstations.

The total edit time required by the subjects to perform this stage varied from 33:53[7] to 44:43.[8] The average value of total edit time parameters obtained by all subjects was 39:49. As far as the Words per Hour parameter is concerned, the values obtained by the subjects varied from 207.73 to 602.97, while the value of the Characters per Hour parameter varied from 1572.64 to 3727.08. The average values for both these parameters were equal to 372.8 words per hour and 2442.83 characters per hour.

Table 1

Values of total edit time parameters measured
for each subject during Stage 1

Subject No.	Total Edit Time
3	00:39:40
4	00:40:29
5	00:40:18
6	00:41:26
7	00:35:51
8	00:39:43
9	00:39:09
10	00:44:43
11	00:33:53
12	00:40:09
13	00:42:37
14	00:39:45
AVG	00:39:49

[7] All temporal values are given in mm:hh format.

[8] In the case of subjects 4, 5, 6, 10, 12 and 13, the overall time of stage 1 completion exceeded the specified limit of 40 minutes, as some of the subjects refused to finish their work mid-sentence. The observer did not intervene in such cases.

Table 2
Values of words per hour and characters per hour parameters measured for each Subject during Stage 1

Subject No.	Words per hour	Characters per hour
3	461.25	3307.38
4	406.09	2042.32
5	602.97	3078.9
6	298.31	1572.64
7	312.95	2409.86
8	264.35	2054.37
9	444.43	3242.8
10	226.73	1770.94
11	517.01	3727.08
12	207.73	1579.64
13	464.61	2368.09
14	267.16	2159.89
AVG	372.80	2442.83

Table 3
Numbers of keystrokes, mouse clicks, “Backspace” and “Delete” keys uses measured for each subject during stage 1

Subject No.	Keystrokes	Mouse Clicks	Backspace	Delete
3	2857	151	N/A	N/A
4	2221	163	N/A	N/A
5	4475	193	N/A	N/A
6	2808	200	547	37
7	2544	156	237	0
8	1928	145	280	2
9	2947	146	307	8
10	1892	110	121	0
11	3366	119	387	10
12	1330	141	66	0
13	2629	218	67	4
14	2189	142	192	0
AVG	2598.83	157.00	244.89	6.78

The number of keystrokes used by the subjects in their CAT tools to complete stage 1 of the task varied from 1330 to 4475, with the average value equal to 2598.83, while the number of mouse clicks varied from 110 to 218, with the average value equal to 157. “Backspace” key was used between 66 and 54 times, while the “Delete” key was used between 0 and 37 times[9] (average values: 244.89 and 6.78).

2.8.1. Stage 2

During the second stage of the task, the subjects were asked to post-edit the machine translated contents of Document B. The parameters of their work were measured in a similar fashion as in the case of the first stage of the task.

Total Edit Time of post-edited segments varied from 17:52 to 41:35, with an average value equal to 33:18.

The number of words per hour typed by the subjects during the post-editing varied from 456.08 to 1538.06, while the number of characters ranged from 3467.07 to 7982.46, with average values equal to 817.6 words per hour and 5410.01 characters per hour.

As far as the input data collected during the second stage of the task is concerned, the number of keystrokes used during post-editing varied from 377 to 2206, with an average value equal to 1179.92, number of mouse clicks varied from 126 to 307, with an average value equal to 204.58, the “Backspace” key was used between 16 and 412 times, with an average value equal to 158.67, while the “Delete” key was used between 0 and 107 times, with an average value equal to 24.75.

[9] Due to a resetting mistake, the values corresponding to the use of “Backspace” and “Delete” keys by subjects 3, 4 and 5 were not properly registered and are therefore excluded from the described analysis.

Table 4
Values of total edit time parameters
measured for each Subject during Stage 2

SUBJECT No.	Engine Used	Total Edit Time
3	GNMT	00:30:12
4	DeepL	00:36:14
5	DeepL	00:34:48
6	DeepL	00:34:04
7	MNMT	00:41:35
8	MNMT	00:37:02
9	MNMT	00:35:00
10	MNMT	00:40:39
11	GNMT	00:33:50
12	GNMT	00:38:43
13	DeepL	00:17:52
14	MNMT	00:19:36
AVERAGE		00:33:18

Table 5
Values of words per hour and characters per hour
parameters measured for each subject during stage 2

Subject No.	Engine Used	Words per hour	Characters per hour
3	GNMT	844.25	6350.73
4	DeepL	758.41	3936.15
5	DeepL	789.65	4098.27
6	DeepL	806.65	4186.49
7	MNMT	614.58	4613.68
8	MNMT	674.09	5097.78
9	MNMT	695.91	5315.31
10	MNMT	456.08	3467.07
11	GNMT	734.22	5542.14
12	GNMT	635.26	4838.84
13	DeepL	1538.06	7982.46
14	MNMT	1264.07	9491.2
AVERAGE		817.60	5410.01

Table 6

Numbers of keystrokes, mouse clicks, “Backspace” and “Delete” keys uses measured for each Subject during Stage 2

Subject No.	Engine Used	Key-strokes	Mouse Clicks	Back-space	Delete
3	GNMT	1096	224	115	107
4	DeepL	645	176	55	0
5	DeepL	1031	297	112	18
6	DeepL	1076	307	253	0
7	MNMT	2206	136	287	0
8	MNMT	1202	238	203	0
9	MNMT	1678	133	177	106
10	MNMT	1908	284	136	0
11	GNMT	1704	190	412	58
12	GNMT	770	188	89	0
13	DeepL	377	126	16	8
14	MNMT	466	156	49	0
AVERAGE		1089.36	191.00	149.14	21.21

In the case of the Total Edit Time parameter, only Subject 7 needed more time to complete post-editing stage of the task in comparison with the time required for translation without the aid of an MT engine (15.99% difference); all other subjects worked more quickly when post-editing the machine translated sentences than during translation without MT support, with differences varying from -0.15% to -58.08%. The average difference calculated on the basis of all of the collected results was equal to -15.73%.

The number of words typed per hour during the post-editing stage of the task increased between 30.96% and 373.15% in comparison to stage 1, giving an average value of 136.03%, while the number of characters typed per hour increased between 33.11% and 339.43%, with the average value equal to 134.57%.

Table 7
Difference in the values of total edit time parameters measured for each subject during stage 1 and 2

Subject No.	Engine Used	Difference - time
3	GNMT	-23.87%
4	DeepL	-10.50%
5	DeepL	-13.65%
6	DeepL	-17.78%
7	MNMT	15.99%
8	MNMT	-6.76%
9	MNMT	-10.60%
10	MNMT	-9.09%
11	GNMT	-0.15%
12	GNMT	-3.57%
13	DeepL	-58.08%
14	MNMT	-50.69%
AVERAGE		-15.73%

Table 8
Difference in the values of words per hour and characters per hour parameters measured for each subject during Stage 1 and 2

Subject No.	Engine Used	Difference – words	Difference – characters
3	GNMT	83.04%	92.02%
4	DeepL	86.76%	92.73%
5	DeepL	30.96%	33.11%
6	DeepL	170.41%	166.21%
7	MNMT	96.38%	91.45%
8	MNMT	155.00%	148.14%
9	MNMT	56.58%	63.91%
10	MNMT	101.16%	95.78%
11	GNMT	42.01%	48.70%
12	GNMT	205.81%	206.33%
13	DeepL	231.04%	237.08%
14	MNMT	373.15%	339.43%
AVERAGE		136.03%	134.57%

A comparison of the input parameters obtained during the performance of the first two stages of the task revealed that most of the subjects used fewer keystrokes and more mouse clicks during post-editing than during human translation (average values equal to respectively -51.69% and 35.41%). When compared to human translation, the "Backspace" key was used less frequently (-22.15% on average) and the "Delete" key was used more frequently (178.33% on average) in the case of post-editing.

Table 9

Difference in the numbers of keystrokes, mouse clicks, "Backspace" and "Delete" keys uses measured for each subject during stage 1 and 2

Subject No.	Engine Used	Difference – Keystrokes	Difference – Mouse Clicks	Difference – Backspace	Difference – Delete
3	GNMT	-61.64%	48.34%	N/A	N/A
4	DeepL	-70.96%	7.98%	N/A	N/A
5	DeepL	-76.96%	53.89%	N/A	N/A
6	DeepL	-61.68%	53.50%	-53.75%	-100.00%
7	MNMT	-13.29%	-12.82%	21.10%	0.00%
8	MNMT	-37.66%	64.14%	-27.50%	-100.00%
9	MNMT	-43.06%	-8.90%	-42.35%	1225.00%
10	MNMT	0.85%	158.18%	12.40%	0.00%
11	GNMT	-49.38%	59.66%	6.46%	480.00%
12	GNMT	-42.11%	33.33%	34.85%	0.00%
13	DeepL	-85.66%	-42.20%	-76.12%	100.00%
14	MNMT	-78.71%	9.86%	-74.48%	0.00%
AVERAGE		-51.69%	35.41%	-22.15%	178.33%

2.8.2. HTER scoring

The post-edited sentences provided by the subjects were used to calculate HTER scores for each sentence and each MT engine used during stage 2 of the study. HTER is a metric that can be efficiently used to measure the effort required to post-edit MT outputs and, in these terms, to evaluate the efficiency and usefulness of MT engines (Specia and Farzindar 2010; Snover et al. 2006).

Individual HTER scores were calculated with the use of the following formula:

HTER= # of editing steps# of reference words

where editing steps included all insertions, deletions, substitutions and shifts of word sequences used by particular subjects during the post-editing stage of the task to produce target sentences, treated during the analysis as "reference" translations, giving the results between "0" (no editing steps) to "1" (the MT output changed entirely).

The HTER scores were calculated for each source sentence in relation to each target-reference sentence provided by the subjects. The results were then averaged per sentence and per engine to allow for a comparative analysis of effort and impact of MT outputs provided by all three MT engines used during the study.

HTER scores obtained during the performance of stage 2 by individual subjects varied from 0.11 to 0.62, giving an average HTER score of 0.30.

The subjects who post-edited outputs provided by GNMT achieved average HTER scores in the range between 0.12 (Sentence 20) and 0.58 (Sentence 14), with an overall average score equal to 0.29. When working on outputs provided by MNMT, HTER scores obtained by the subjects varied from 0.05 (Sentence 11) to 0.69 (Sentences 8 and 17), with an overall average score equal to 0.43. The DeepL engine allowed for the obtainment of HTER scores in the range between 0.06 (Sentences 11 and 19) and 0.32, with an overall average score equal to 0.17.

Table 10

Average HTER scores calculated for each of the subjects

Avg HTER score per Subject	
Subject no.	Avg HTER score
1	0.16
2	0.25
3	0.34
4	0.18
5	0.22
6	0.16
7	0.47
8	0.38
9	0.43
10	0.62
11	0.36
12	0.23
13	0.11
14	0.34
TOTAL AVG	0.30

Table 11

Average HTER scores calculated for each sentence and MT engine

Average HTER scores per sentence and per engine			
Sentence no.	GNMT	MNMT	DeepL MT
1	0.25	0.37	0.15
2	0.21	0.44	0.18
3	0.15	0.23	0.20
4	0.31	0.33	0.17
5	0.29	0.49	0.27
6	0.18	0.62	0.13
7	0.30	0.61	0.18
8	0.33	0.69	0.09
9	0.16	0.37	0.10
10	0.54	0.42	0.28

11	0.37	0.05	0.06
12	0.38	0.24	0.08
13	0.29	0.40	0.20
14	0.58	0.53	0.26
15	0.16	0.49	0.21
16	0.37	0.53	0.32
17	0.45	0.69	0.18
18	0.16	0.23	0.13
19	0.15	0.43	0.06
20	0.12	0.61	0.16
TOTAL AVG	0.29	0.43	0.17

2.9. Qualitative analysis

All of the sentences produced by the subjects during stage 2 of the task were collected from .tmx files, placed in a single .xls file, anonymised and randomized to change their order and prevent any accidental pattern recognition. The .xls file was then sent to an independent translation agency with a request to evaluate the quality of target sentences and to put them in order in terms of their quality.

The evaluator was given a set of instructions to follow and was required to take into consideration the accuracy, fluency and style of the provided sentences.[10] Apart from the target sentences produced by the subjects, the .xls file contained also the un-post-edited MT outputs. No information about the subject of the study and machine translated outputs used as a basis for post-editing was revealed to the evaluator.

The evaluated sentences were given points from "1" (the highest quality) to "17"[11] (the lowest quality). The potential ideal

[10] Understood as: "accuracy" – the translation should contain the same information as the source text; "fluency" – the translation should be easily understandable for the reader of the target text; "style" – the translation should be adjusted to the character and aim of the source text (cf. White, 1994).

[11] As the collected outputs included 14 sentences post-edited by the Subjects and 3 machine translated sentences for each source segment.

output would therefore obtain a score of 20 points, and the potential worst output would obtain a score of 304 points.[12] If the evaluator decided that two or more translations represented similar quality, an equal score could be given to them.

The scores assigned to particular sentences were later collected, grouped and averaged per subject and per engine. The scores given to raw MT outputs were then compared with the results obtained by particular subjects.

Table 12

Sums and average numbers of quality points given to each of the subjects and MT engines

Subject no. (MT engine used)	Sum of quality points (# of produced sentences)	Avg quality points
1 (GNMT)	64 (9)	8.00
2 (GNMT)	61 (10)	6.10
3 (GNMT)	90 (20)	4.50
4 (DeepL)	122 (20)	6.10
5 (DeepL)	127 (20)	6.35
6 (DeepL)	114 (20)	5.70
7 (MNMT)	173 (19)	9.11
8 (MNMT)	164 (20)	8.20
9 (MNMT)	234 (20)	11.70
10 (MNMT)	42 (9)	5.25
11 (GNMT)	120 (20)	6.00
12 (GNMT)	112 (18)	6.22
13 (DeepL)	154 (20)	7.70
14 (MNMT)	225 (19)	11.84
Scores given to raw MT outputs		
GNMT	212 (20)	10.6
MNMT	212 (20)	10.6
DeepL	124 (20)	6.2

[12] The overall range of points was lowered for the sentences that were not post-edited by all Subjects due to the time restriction.

The sum of points given to individual subjects varied from 90 to 234,[13] with 212 points given to raw outputs provided by GNMT and MNMT engines and 124 points given to raw outputs provided by DeepL engine. The average numbers of points given to the subjects varied from 4.50 to 11.84 per sentence, with 10.6 given to GNMT and MNMT engines and 6.2 given to DeepL engine. The following table presents a summary of total and average numbers of quality points assigned to individual subjects and MT engines.

3. Summary

The primary aim of the task was to determine whether the method described above could be used to efficiently measure the time and effort required during translation and post-editing of texts of similar volumes and levels of complexity. The measurement method was based on the comparison of temporal results obtained during stage 1 and stage 2 of the task and on the comparison of HTER scores calculated for each post-edited sentence produced by the subjects. The following section presents the overall summary of results obtained during the study.

In general, when time of work is considered, the subjects worked 15.73% faster during the post-editing of raw MT outputs than when translating texts from scratch. During stage 2 of the task they also entered 136.03% words and 134.57% characters more in target segments within a unit of time and they needed 51.69% keystrokes less in comparison with stage 1. Simultaneously, during the post-editing stage of the task the subjects needed 35.41% more mouse clicks to perform their work than they did during the translation stage. Considering the character of the post-editing work and the number of editing steps that needed to be introduced during the process in various parts of sentences provided by MT engines, such results could be anticipated, as numerous words and fragments of sentences

[13] Some subjects did not manage to post-edit all sentences given to them during stage 2 of the task. The total numbers of sentences post-edited by particular subjects are given in parentheses.

were already placed in the target segments and the subjects needed less time and keystrokes to edit them, but more mouse clicks to actually place their cursors in places that required editing.

Considering the impact of individual MT engines used during the study on the time of subjects' work, the seemingly best results were obtained with the use DeepL engine (25% shorter editing time), followed by MNMT (12.23% shorter editing time) and GNMT (6.14% shorter editing time).

Table 13

Differences in the values of key parameters measured during the study for each MT engine

Average temporal and input parameters per engine					
Engine	Diffe-rence – time	Difference – words	Diffe-rence – charac-ters	Diffe-rence – keystro-kes	Diffe-rence – mouse clicks
GNMT	-6.14%	76.60%	81.11%	-58.92%	29.05%
MSMT	-12.23%	156.45%	147.74%	-34.37%	42.09%
DeepL	-25.00%	129.79%	132.28%	-73.82%	18.29%

The results obtained for the use of the "Backspace" and "Delete" keys were inconsistent, ranging from -76.12% to 34.85% in the case of the former and -100% to 1225% in the case of the latter, leading to the conclusion that the use of these keys is an individual matter.

As far as the HTER scores are considered, the overall average score obtained by the Subjects (0.30) could be perceived as comparable with the results achieved during some previous studies (Snover 2006). As HTER scoring depends greatly on the post-editorial skills, it can be presumed that it would be higher in the case of the same task given to more skilled subjects. There was a visible tendency displayed by some of the subjects, who did not introduce many changes in sentences they considered "acceptable". As the subjects were not professional translators or specialists in the area of construction industry, some post-edited sentences copied the mistakes included in raw MT output. As such mistakes were not rectified, the HTER scores could be lowered.

The lowest HTER scores were achieved by the subjects working on outputs provided by DeepL engine (average HTER score: 0.17), followed by GNMT (0.29) and MNMT (0.43). To some extent, a relation between HTER score and Total Edit Time parameter can be observed, as subjects working on outputs provided by DeepL engine were both fastest and obtained the lowest HTER scores on average. The same could be said about the results obtained by Subject 13 (the highest increase in time – 58.08% and the lowest HTER score – 0.11). However, when considering the results obtained with the use of GNMT and MNMT, there seems to be no direct relation between pace of work (6.14% and 12.23% respectively) and HTER scores (0.29 and 0.43 respectively). Similarly, the HTER results obtained by Subjects 14 and 3, who followed Subject 13 in terms of post-editing speed (50.69% and 23.87% faster than when translating from scratch) were higher than for instance the HTER scores obtained by Subjects 4 and 12, who were much slower in post-editing than Subject 13 (10.50% and 3.57% respectively). Figure 1 depicts the aforementioned relation.

The difference in the quality of post-edited sentences provided by the subjects was determined on the basis of a ranking developed by an independent translation agency. The lowest average number of points was obtained by the subjects working on the outputs produced by the GNMT engine (5.53), followed by DeepL (6.46) and MNMT (9.69), with the lowest score achieved by Subject 3 (GNMT – 4.50) and the highest score achieved by Subject 14 (MNMT – 11.84). Table 14 contains the summary of temporal, HTER and qualitative results obtained by each of the subjects.

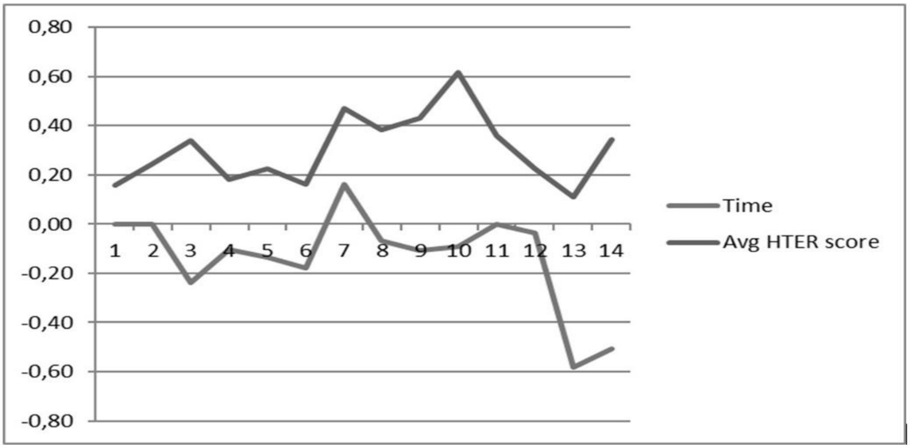

Figure 1
Relation between total edit time parameter and average HTER scores

Table 14
Comparison of total edit time parameters, average HTER scores and average number of quality points

Comparison of temporal, HTER and qualitative parameters per Subject			
Subject no.	Editing time difference	Avg HTER score	QA AVG
1	n/a	0.16	8.00
2	n/a	0.25	6.10
3	-23.87%	0.34	4.50
4	-10.50%	0.18	6.10
5	-13.65%	0.22	6.35
6	-17.78%	0.16	5.70
7	15.99%	0.47	9.11
8	-6.76%	0.38	8.20
9	-10.60%	0.43	11.70
10	-9.09%	0.62	5.25
11	-0.15%	0.36	6.00
12	-3.57%	0.23	6.22
13	-58.08%	0.11	7.70
14	-50.69%	0.34	11.84
TOTAL AVG	-15.73%	0.30	7.34

The quality of raw MT outputs was also evaluated and the individual engines achieved average scores of 10.6 (GNMT and MNMT[14]) and 6.2 (DeepL). In most cases, the raw MT outputs were evaluated lower than post-edited sentences, with most notable exception of 3 sentences translated by DeepL engine, which were considered to be of the highest quality (score = 1) among all other provided translations. In general however, the outputs provided by MT engines were evaluated lower than the outputs provided by most human subjects.

Figure 2 depicts the relation between all 3 key parameters measured during the pilot study.

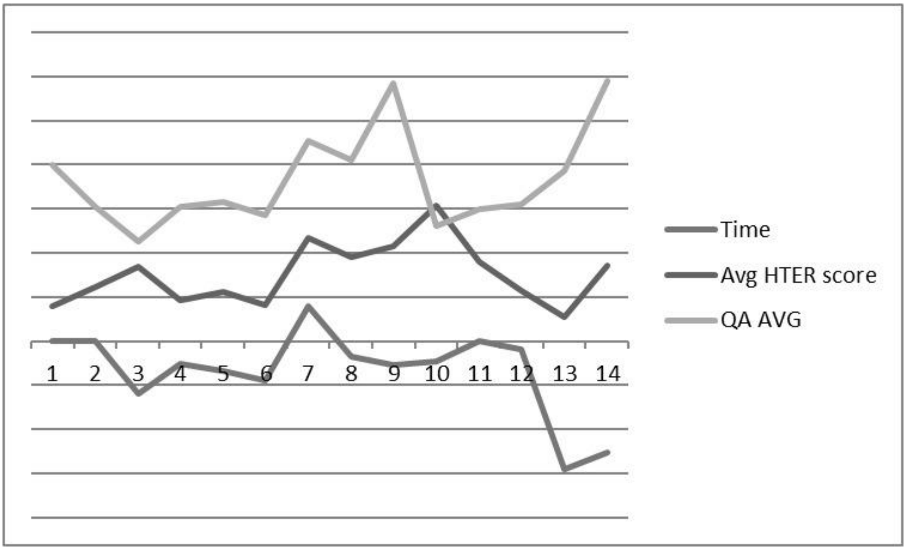

Figure 2
Relation between total edit time parameter, average HTER scores and average number of quality points

[14] The scores given to most individual sentences translated by GNMT and MNMT varied, the equal overall average results seem to be a mere coincidence.

In the case of some subjects (most notably Subjects 6, 7, 8, 13 and 14) there seems to be a recognizable pattern of relation between the parameters. However, the determination of a general dependence would require some further research.

4. Conclusions

The analysis of the practical implementation of the measurement method proposed above and the results obtained with its use revealed several drawbacks that should be considered before applying the aforementioned methodology in more profound studies on the impact of MT solutions on post-editing effort and quality of the final product in the English->Polish language pair. Some of these drawbacks resulted from the constraints that influenced the pilot study[15], others were caused by the lack of experience in organization of similar research. Nevertheless, the experiences gained during the pilot study allowed for the identification of potential areas for improvement that should be implemented in the future studies in order to obtain more reliable results. The following list presents these areas:

– Subjects should be recruited from among professional translators with more experience in translation and post-editing than students, to obtain outputs of higher quality.
– Groups should be composed of as many subjects as possible, to obtain higher reliability of the average scores and results.
– Sessions should take place simultaneously, to make it impossible for the subjects to communicate amongst themselves.
– Source texts should be long enough, to eliminate the risk of subjects finishing their tasks before time.
– Subjects should be given a clear signal to stop working, to avoid unnecessary noise in temporal data.
– Much attention should be paid to the preparatory stage taking place before sessions, to avoid any resetting mistakes that could negatively influence the consistency of results.
– Each of the subjects should be given an opportunity to produce post-edited target segments with the support of each MT engine

[15] Cf. Section 2.7: Constraints.

analysed during the study, to allow for direct comparison of results independent of individual skills of the subjects.
- The quality of outputs produced during stage 1 of the task should be evaluated in a similar manner as the quality of post-edited segments, to allow for comparative analysis of both methods of target text production.

We believe that careful consideration of these areas and their implementation during future research work would improve the general usefulness and efficiency of the proposed methodology, which in its amended form could be successfully used to measure various parameters related to post-editing in the English->Polish language pair and to obtain reliable and repetitive results.

5. Further study

The pilot study described in this article was designed and conducted as an attempt to establish a reliable methodological basis for more detailed research on machine translation in the English->Polish language pair. The list of potential areas for improvement presented above will be used to develop the method further and to obtain more reliable, repetitive and standardized results and patterns.

Future research will involve the development of a larger corpus of technical and construction industry texts and translations, detection and categorization of the most common errors occurring in MT output materials, development and training of a Moses-based MT engine and performance of tests aimed at the determination of possible potential of regular expressions in automatic post-editing and improvement of MT output quality. The results of these efforts will be presented in future publications.

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Game localization pitfalls: Translation and multitextuality

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Abstract

From the translator's perspective multitextuality is one of the major challenges of video games localization. The translator needs to cope with texts spanning from the most standard, such as error messages, to the most creative, for example poems. Although every game is unique, it is possible to observe some commonalities with respect to textual genres and text types in video games. Various text types play diverse functions, their content is outstandingly multifarious and they include both standard and creative style and terminology. All of this leads to an assertion that they call for different translation approaches: a standard approach, a creative approach or a mixed approach.

Keywords

games localization, localization, translation approaches, standard approach, creative approach, mixed approach, multitextuality

Pułapki lokalizacji gier. Tłumaczenie a wielotekstowość

Abstrakt

Z perspektywy tłumacza wielotekstowość jest jednym większych wyzwań lokalizacji gier wideo. Tłumacz musi radzić sobie z tekstami od najbardziej standardowych, jak komunikaty o błędach, do najbardziej kreatywnych, jak np. wiersze. Chociaż każda gra jest unikalna, można zauważyć pewne prawidłowości w odniesieniu do gatunków i typów tekstów w grach wideo. Odgrywają one różne funkcje, ich zawartość jest wyjątkowo zróżnicowana i zawierają standardowy i kreatywny styl oraz terminologię. Wszystko to prowadzi do stwierdzenia, że do poszczególnych typów tekstów należy odpowiednio dobrać podejście tłumaczeniowe: standardowe, kreatywne lub mieszane.

Słowa kluczowe

lokalizacja gier, lokalizacja, podejście tłumaczeniowe, podejście standardowe, podejście kreatywne, podejście mieszane, wielotekstowość

1. Introduction

From the translator's perspective, multitextuality is one of the foremost challenges of video games localization and "The quantity and variety of the translatable assets generated by each video game may come as a surprise to people who are unacquainted with these products" (Bernal-Merino 2013: 152). Ingame texts and collateral materials span a wide variety of textual genres and text types (Bernal-Merino 2008, Mangiron and O'Hagan 2013, Mogi Localization Agent 2018). Moreover, every game is unique, which adds another level of difficulty and unpredictability to the localization effort. Despite these factors, however, it is possible to discern some commonalities as far as textual genres and text types are concerned. Once we grasp the textual complexity of games, it is also feasible to recognize specific translation approaches which are relevant to particular textual genres, text types and functions.

In addressing the issue of multitextuality the present article proposes a taxonomy of game texts and determines some possible translation approaches suitable for particular textual genres and text types. The presented classification of game texts will be based on fantasy MMORPG games such as Guild Wars 2 and Elder Scrolls Online, but similar text types can be found in other genres. Similar to the propounded game texts' taxonomy, the proposed translation approaches are the author's own invention based on years of translation practice and didactics.

2. Textual genres and functions

In the most general terms, we need to realize that video game localization involves a marriage of specialized and literary translation, where "terminology meets literature" (Bernal-Merino 2008: 42[1]). According to Mangiron and O'Hagan (2013: 153-154), "a wide range of text types, from literary to technical with the use of literary narrative devices, legal texts and contemporary dialogue scripts full of street-speak, can be present within one game".

As far as specialized translation is concerned, games include technical, marketing, and legal texts. Regarding literary texts Bernal-Merino (2008: 42-43) argues that such texts indeed constitute literature:

> One of the textual types displayed in video games has a direct link with creative writing and literature: the in-game dialog and narration. Some people might feel uneasy about using the term literature, but I don't think there is any other word that would describe texts produced by the act of creative writing with an aim to thrill, move and delight.

All of these textual genres, as I call them, pose different challenges for the translator. Technical elements require knowledge

[1] Bernal-Merino identifies the following textual types in games: journalistic, technical texts, user-interface texts, didactic texts, legal texts, narration and dialogue texts (2008).

of software localization, IT terminology and localization industry standards. Marketing content requires a dynamic and attractive style characteristic of advertising. Legal elements require a competence in translating licensing agreements, terms and conditions, and privacy policies. Translating literary fragments in turn, such as dialogs and plot, requires cultural and linguistic sensitivity, knowledge of pop culture, creativity and literary flair.

Additionally, games localization is a purpose or *skopos* oriented activity (O'Hagan and Mangiron 2013). The most general purpose of games is to entertain gamers and immerse them in the game universe, and this is also the purpose of the localized version. Moreover, games localization is target-oriented from its very onset (Esselink 2000). Therefore, the goal of game localization is to adapt the game in such a way as to entertain and immerse the target audience in order to generate income. The business side of localization cannot be ignored, as it governs game developers in their decision making process: determining whether or not the game will be localized, and if yes, then to what level[2] etc.

In order to make the matter more transparent we can employ Katharina Reiss's textual functions (1971/2000) following Mangiron and O'Hagan (2013). The informative function is content-focused, the persuasive function is appeal-focused and the expressive function is form-focused. Thus technical and legal texts are governed by the informative function, presenting states and facts. Marketing texts display a focus on the appeal and their function is persuasive. Literary texts in games, like all literature, display an expressive function. While translating texts of particular genres, it is advisable to preserve and prioritize the functions of particular textual genres in the localized version of the game.

[2] Levels of localization are as follows: no localization, box and docs localization, partial localization and full localization (O'Hagan and Mangiron 2013).

Table 1
Textual genres and their functions

Textual genre	Informative	Persuasive	Expressive
Legal	✔		
Technical	✔		
Marketing		✔	
Literary			✔

3. Text types in games localization

The textual genres mentioned above need to be supplied with actual text types present in video games. In the most general terms, games feature two kinds of texts: in-game content and collateral materials.[3]

In-game content is the actual text of the game and can be further subdivided into Game Interface, Game Mechanics and Game Lore.[4] The interface includes elements such as menus, dialog boxes with options and settings, and strings (error messages, status messages, questions, tooltips). Game Mechanics, in turn, comprise item names and descriptions, hero classes and skills, player instructions, hints, tutorials, trophies and achievements. Game Lore consists of plot (descriptive texts, epic texts), dialogs (between player and NPC,[5] between multiple NPCs), quests and missions (dialogs, summaries, journals), world history, races, books and poems.

Collateral materials are external to the game and include text types such as Legal Texts, Informational Texts and Marketing Texts. Legal Texts include the EULA,[6] Terms and Conditions,

[3] For an alternative game text taxonomy see O'Hagan and Mangiron (2013).
[4] Mangiron and O'Hagan (2013) utilize a division of texts into diegetic and non-diegetic. In this light Game Interface and Game Mechanics are non-diegetic, whereas Game Lore is diegetic.
[5] An NPC is a Non Player Character, controlled by the game's AI.
[6] EULA is the End User License Agreement.

and Privacy Policy.[7] Informational Texts can be the game manual or walkthrough and also content such as the Readme file, updates, patches and developer announcements. And finally Marketing Texts cover advertisements, descriptions and web content.

Table 2
Text types in video games

In-game Content	Collateral Materials
Game Interface: ➢ menu ➢ dialog boxes with options and settings ➢ strings (error messages, status messages, questions, tooltips) Game Mechanics ➢ item names and descriptions ➢ hero classes and skills ➢ player instructions, hints, tutorials ➢ trophies and achievements (names and descriptions) Game Lore ➢ plot (descriptive texts, epic texts) ➢ dialogs (between player and NPC, between NPCs) ➢ quests and missions (dialogs, summaries, journals) ➢ world history, races ➢ books, poems, songs	Legal Texts: ➢ EULA ➢ Terms and Conditions ➢ Privacy Policy Informational Texts: ➢ user instructions ➢ Readme ➢ updates, patches ➢ developer announcements ➢ system requirements Marketing Texts: ➢ adverts ➢ descriptions ➢ web content

[7] Elsewhere Bernal-Merino (2015) proposes a division of texts into: the game itself, the official website of the game, promotional articles, game patches and game updates.

4. Text types vs textual genres

In order to have a firmer grasp of multitextuality in video games it would be useful to map the various text types onto the previously mentioned textual genres. The in-game content spans texts ranging from technical to literary, depending on the game element. Collateral materials (legal, informational and marketing), belong to the legal, technical and marketing genres respectively.

Table 3

Text types vs textual genres in video games

	Category	Textual Genre
In-game content	Game Interface	Technical
	Game Mechanics	Technical
	Game Lore	Literary
Collateral materials	Legal Texts	Legal
	Informational Texts	Technical
	Marketing Texts	Marketing

5. Standard-to-creative continuum

Such a variety of textual genres and text types can be quite overwhelming for the translator, who needs to know how to translate all of them. In other words, the translator is expected to apply a proper translation approach relevant to a given textual genre, text type, and function. In the most general terms, the texts present in video games span from the most standard (Legal Texts, error messages) to the most creative (dialogs, poems). Therefore it is possible to discern a standard-to-creative continuum of texts in video games. Additionally, it is possible to arrange the different game text types along the standard-to-creative continuum from the most standard, i.e. Legal Texts, to the most creative – Game Lore. Texts which fall in between these two points would combine standard with creative features.

STANDARD CREATIVE

Legal Texts | Game Interface | Informational Texts | Game Mechanics | Marketing Texts | Game Lore

Figure 1
Standard-to-creative continuum vs text types

Thus it is reasonable that standard texts would invite a standard approach, and creative texts a creative approach. The standard approach is based on industry standards, while the creative approach amounts to literary translation or transcreation (O'Hagan and Mangiron 2013). Regarding transcreation, Bernal-Merino (2006) does not consider it to be a useful term. Presently we are considering the creative approach rather than transcreation, although the concepts are close. Furthermore, since games constitute a domain where "terminology meets literature" (Bernal-Merino 2008: 42), it would be advisable to discern different approaches to style and terminology.

6. Style and terminology

Style will be understood as a motivated choice observed at all the levels of language and discourse, to include (Verdonk 2006: 203):

1. Graphology (typographical features: typeface, punctuation, etc.)
2. Phonology (sounds, rhythm, rhyme, etc.)
3. Lexis (vocabulary)
4. Syntax; grammar (sentence structure, use of tenses, etc.)
5. Semantics (considerations of textual meaning)
6. Pragmatics; discourse (features of external context; communicative situation)

A standard style would amount to one that is sanctioned by industry standards. As far as technical translation, and more specifically IT and software localization are concerned, such standards are to be found in the style guides of companies. These standards are specifically prepared for translators and localizers. An example of such a style guide is the Microsoft Style Guide, which is available publicly and contains localization guidelines for Windows-based applications (Microsoft Style Guide 2018). The Microsoft Style Guide contains a description of Microsoft voice, language specific standards and localization considerations.

Creative style, in turn, can be described as a style that is required in marketing (Multilingual Technologies, 2018) and literary texts. In other words, creative style is one that is not too close to the original syntax and sounds both natural and attractive. Creative style requires creativity on the part of the translator and is the opposite of word-for-word translation. In Marketing Texts, creative style is used to better communicate the advertising message to the target receivers and to exert a marketing influence in line with the persuasive function. Literary texts in games require a creative style in order to read well (IAIA, 2016) and to enable player entertainment and immersion in the game universe. Such texts accomplish this through an expressive function.

Terminology is to be viewed as 'a set of designations belonging to one special language' (ISO 1087–1, 2000 in Schmitz, 2006: 578). Standard terminology, similar to style, is based on industry standards. Such terminology can be found in specialized dictionaries and company termbases. An example of a publicly available termbase is Microsoft's terminology which can be accessed online in the Microsoft Language Portal (Microsoft Language Portal 2018). Along with IT and software-related terminology there is the established terminology of games, which can be found not only in representative titles of a particular game genre, but also in dictionaries such as The Game Developer's Dictionary (Carreker 2012); słownik gracza (*Słownik gracza*, 2018) and on various websites devoted to games.

Creative terminology is terminology created for a particular game. The original game often contains new terms created especially for a given title. This kind of terminology requires creative localization. Examples of such terms are item names (Astral Crossbow, Glimmer of Hope[8]), names of skills (Agonizing Chop, Executioner's Strike[9]), names of character classes (Mesmer, Dervish[10]) and races (Asura, Sylvari[11]).

7. Translation approaches

Thus we have arrived at translation approaches which will combine approaches to style and approaches to terminology in video game localization. The first approach would be the fully standard, with a standard approach to style and terminology. The second one: mixed, combining a standard and a creative approach to both style and terminology. The final approach would be a creative one with a creative approach to style and terminology. This can be illustrated on the standard-creative continuum given in the form of a table below.

As far as textual genres are concerned, Legal Texts generally require a standard approach. Technical and Marketing Texts in games usually call for a mixed approach. Literary Texts in turn invite a creative approach.

From the standpoint of the text types discerned previously, the relevant approaches are suggested in Table 6.

STANDARD MIXED CREATIVE

□---□

Figure 2
Localization approaches

[8] Baldur's Gate: Siege of Dragonspear (2016).
[9] Guild Wars (2005).
[10] Guild Wars (2005).
[11] Guild Wars (2005).

Table 4
Localization approaches

Approach	Style	Terminology
Standard	Standard	Standard
Mixed	Standard or Creative	Standard or Creative
Creative	Creative	Creative

Table 5
Textual genres and most common translation approaches

Textual genre	Standard	Mixed	Creative
Legal	✔		
Technical		✔	
Marketing		✔	
Literary			✔

Table 6
Text types and most common translation approaches

Text type	Standard	Mixed	Creative
Legal Texts	✔		
Game Interface		✔	
Informational Texts		✔	
Game Mechanics		✔	
Marketing Texts		✔	
Game Lore			✔

8. Localizing Legal Texts

The function of Legal Texts is informative and they display a standard style and standard terminology.

Table 7
Style and terminology in Legal Texts

Legal Texts	Standard	Creative
Style	✔	
Terminology	✔	

Considering the above, the standard approach is advised for both style and terminology. These texts cover the licensing agreement (EULA), Terms and Conditions, Privacy Policies etc. The original meaning needs to be faithfully reproduced, and the style as well as the terminology needs to conform to the standards of legal texts. Below is an example excerpt from Guild Wars 2's Privacy Policy.

This Privacy Policy explains how we collect, use, protect, and store your Personal Information and how we respect applicable data protection laws. Other service providers and websites, including those we may link, may have their own privacy policies. If you have questions about how other websites, services, or games handle your Personal Information, you should review their privacy policies.	W niniejszej polityce prywatności wyjaśniono, jak zbieramy, wykorzystujemy, chronimy i przechowujemy dane osobowe Użytkownika oraz jak przestrzegamy obowiązujących przepisów w zakresie ochrony danych. Inni dostawcy usług i witryny, włącznie z tymi, do których przekierowujemy, mogą mieć własne polityki prywatności. W razie pytań odnośnie do sposobu, w jaki inne witryny, usługi lub gry postępują z danymi osobowymi Użytkownika, należy zapoznać się z ich politykami prywatności.

Source: Guild Wars 2, Privacy Policy [Website] (2019).
Own translation.

The usage of the term “User” (Użytkownik) is an example of the standard style of legal texts in Polish. There is also some standard terminology: privacy policy, collect, store, data protection, service providers, website, services, Personal Information.

9. Localizing the Game Interface

The Game Interface usually displays standard style, but it may contain standard and creative terminology.

Table 8
Style and terminology in the game interface

Game Interface	Standard	Creative
Style	✔	
Terminology	✔	✔

While localizing the Game Interface, which belongs to the technical genre, the standard approach would be the most commonly used. This means that the menu, dialog boxes with options and settings, and strings (error messages, status messages, questions, tooltips) are usually translated using standard style and standard terminology. These are defined by the software localization standards. When dealing with Windows-based games, the software localization standards can be found in the Microsoft Style Guide and Microsoft Terminology available in the Microsoft Language Portal (Microsoft Language Portal 2018). Other platforms and game producers utilize their own style guides and termbases. The creative approach to terminology is reserved for situations in which the translator encounters new terms in the UI which require creative localization.

The examples below come from the game Guild Wars 2. These are error messages, which are generally translated in a uniform, standard manner.

The game client lost its connection to the server. Please wait a few minutes before restarting the client and trying again	Klient gry utracił połączenie z serwerem. Odczekaj kilka minut, a następnie zrestartuj klienta i spróbuj ponownie.
Network error. Please check your Internet connection and try again.	Błąd sieci. Sprawdź swoje połączenie internetowe i spróbuj ponownie.

Source: Guild Wars 2 [Website], Common Error Codes (2019). Own translation.

10. Localizing Informational Texts

Informational Texts tend to display standard style, but like the Game Interface, they may contain both standard and creative terminology.

Table 9
Style and terminology in informational texts

Informational Texts	Standard	Creative
Style	✔	
Terminology	✔	✔

The function of Informational Texts is informative. These span from user instructions, Readme files, updates and patch descriptions, to developer announcements and system requirements. Localizing user instructions is based on software localization standards, such as using the imperative form for describing all kinds of procedures. User instructions can be found in the game manual (now usually in an electronic or web form, previously also in booklet form) or in the walk-through. The style tends to be simple and clear. The suggested approach to be applied here is the standard one: standard style and standard terminology. There is also the possibility that the game's creative terms will be referred to, which is a case where consistency with the translation of the in-game terms is required, which is another industry standard.

The excerpt below comes from the manual of the game Morrowind, which belongs to the Elder Scrolls franchise. It contains standard procedures in the imperative, a description of what can be done and a description of the consequences of the actions taken by the player. The fragment contains only standard terminology: “left click” (kliknij lewym przyciskiem myszy), “item” (przedmiot), “inventory” (ekwipunek), “pick up” (podnieść), “equip” (wyposażyć się), “drop” (upuścić), “armor” (zbroja), “clothes” (ubranie), “rings” (pierścień), “potions” (mikstury), “ingredients” (składniki), “weapons” (broń), “lockpicks” (wytrychy), “torches” (pochodnie), “icon” (ikona), “unequip” (przestać używać), “cursor” (kursor).

ITEMS	PRZEDMIOTY
Left click an item in your inventory to pick it up. You can equip the item by then dropping it on your character picture. This allows you to wear armor, clothes, and rings, read books, use potions and ingredients, and ready weapons, lockpicks, torches, or other items. Any equipped item will be shown with a box around the icon. To unequip, click the item again, and then drop it. You can either drop items into your inventory or into the world. Holding the cursor over an item will display information on that item.	Aby podnieść przedmiot znajdujący się w ekwipunku, kliknij go lewym przyciskiem myszy. Możesz wyposażyć się w przedmiot, upuszczając go na wizerunek swojej postaci. Tym sposobem możesz założyć zbroję, ubrania, pierścienie, a także czytać książki, używać mikstur i składników oraz przygotować broń, wytrychy, pochodnie i inne przedmioty. Aby przestać używać przedmiotu, kliknij go ponownie, a następnie upuść. Przedmioty można upuszczać w ekwipunku lub w świecie gry. Przytrzymanie kursora na przedmiocie spowoduje wyświetlenie informacji o nim.

Source: Morrowind [Manual] (2002).
Own translation.

Another fragment comes from the Guild Wars 2 Game Release Notes and constitutes a description of updates implemented in the game. Expressions such as “reduced”, “fixed a bug” and “decreased” are standard and in Polish their translation is also standard and takes the impersonal form (zmniejszono, naprawiono). There are also some standard terms: might, PvP, WvW, trigger, cast, bonus, critical-hit chance. In addition to these terms we also have examples of creative terminology: Revenant (Zjawa), Unrelenting Assault (Nieubłagana Napaść), Roiling Mists (Mętne Mgły).

Revenant ● Unrelenting Assault: Reduced might duration from 8 seconds to 5 seconds in PvP and WvW. Fixed a bug that caused this skill to trigger the confusion condition multiple times in a single cast. ● Roiling Mists: Decreased bonus critical-hit chance from 100% to 50% in PvP.	Zjawa ● Nieubłagana Napaść: Zmniejszono czas trwania mocy z 8 sekund do 5 sekund w PvP i WvW. Naprawiono błąd, który powodował, że ta umiejętność aktywowała stan dezorientacji wiele razy przy pojedynczym użyciu umiejętności. ● Mętne Mgły: zmniejszono dodatkową szansę na trafienie krytyczne ze 100% do 50% w PvP.

Source: Guild Wars 2 [Website], Game Update Notes (2019). Own translation.

11. Localizing the Game Mechanics

Game Mechanics appears to be the most unpredictable of all the text types. This category may include both standard and creative style as well as standard and creative terminology.

Table 10

Style and terminology in the game mechanics

Game Mechanics	Standard	Creative
Style	✔	✔
Terminology	✔	✔

Texts belonging to the Game Mechanics category typically contain item names and descriptions, hero classes and skills, player instructions, hints, tutorials, trophies and achievements. Their function is generally informative. These are the texts typically found only in games. Sometimes they can also be found on websites devoted to particular games. The most frequent approach here would be the mixed approach. The standards are based on the most representative games and can also be established by the game developer. The creative side is mostly related to creative terminology, but creative style is also possible.

Item names and descriptions typically refer to weapons, armor, or other objects used by the player. These usually have unique names, although they may include standard terms which are used in other games. The descriptions tend to be typical, which means that the style is similar across different games. Descriptions usually have a form of "what something is" and "what it does". This same style applies to skills and their descriptions. Sometimes items may be supplemented by a story as in games such as Baldur's Gate I (1998) and Baldur's Gate II: Shadows of Amn (2000), or by a humorous description.

The focus of hero classes is mostly informative. In-game player instructions, hints and tutorials inform and direct the player in undertaking a particular action. These mostly take an imperative form, which is rooted in the basic standards of software localization.

Trophies and achievements are a relatively new occurrence and are quite popular in games nowadays. These consist of a catchy name and a description of what has to be done to acquire them, given in an imperative form. Specifically these catchy names require a very creative stylistic approach since they often contain word-play, alliteration and allusions to pop culture whether from films, songs, or other games.

The example below presents a skill description as it appears in-game. It is a relatively standard text as skills in various games appear to be similar. Apart from the standard style illustrated in the translation by the expression “Slices” (Zadaje) there are also a number of standard game terms: “cast time” (czas użycia), “target” (cel), “range” (zasięg), “enemy” (przeciwnik), “deal damage” (zadać obrażenia), “bleed” (krwawienie), “Physical Damage” (obrażenia fizyczne). Also when translating such fragments, the developer provides a text with variables, which are only later replaced with specific values, hence expressions such as “points” (pkt.) and “seconds” (s), which will be suitable no matter what value these variables will assume. There is also an example of a creative term, which is the name of the skill “Twin Slashes” (Bliźniacze Cięcia).

TWIN SLASHES I Cast Time Instant Target Enemy Range 5 metres Cost 1944 Stamina Slice an enemy with both weapons to cause deep lacerations, dealing 1994 Physical Damage with each weapon and causing them to bleed for an additional 9795 Physical Damage over 9 seconds.	BLIŹNIACZE CIĘCIA I Czas użycia Natychmiast Cel Przeciwnik Zasięg 5 metrów Koszt Wytrzymałość: 1944 Zadaje przeciwnikowi cios obiema broniami, aby spowodować głębokie rany. Zadaje 1994 pkt. obrażeń fizycznych każdą z broni, a także wywołuje krwawienie powodujące dodatkowe 9795 pkt. obrażeń fizycznych przez 9 s.

Source: Elder Scrolls Online [Computer Software] (2014).
Own translation.

The next fragment is a class description. The first thing to notice is that the creative term Mesmer has been transferred directly into the Polish version as Mesmer. Another unusual term is phantasmal magic, which has been translated as "fantazmatyczna magia". Other terms are quite standard: duelist, wield, weapon, fight. Hence the text can be classified as featuring creative style with both creative and standard terminology.

Mesmer Mesmers are magical duelists who wield deception as a weapon. Using powerful illusions, clones, and phantasmal magic to ensure that their enemies can't believe their own eyes, mesmers tip the balance of every fight in their favor.	Mesmer Mesmerzy posługują się w walce magią, a ich bronią jest oszustwo. Za pomocą potężnych iluzji, klonów i fantazmatycznej magii sprawiają, że ich wrogowie nie mogą uwierzyć własnym oczom. Tym sposobem mesmerzy potrafią przechylić szalę zwycięstwa na swoją korzyść.

Source: Guild Wars 2 [Website] Mesmer (2019).
Own translation.

12. Localizing marketing texts

Marketing texts most frequently include a creative style and standard terminology but creative terminology is also possible.

Table 11
Style and terminology in marketing texts

Marketing Texts	Standard	Creative
Style		✔
Terminology	✔	✔

As far as Marketing Texts are concerned, the most commonly used approach is the mixed one, combining a creative approach to style supported by standard or creative terminology. The function of a marketing text is persuasive and it is often achieved through a catchy, creative style. It is expected that the translation will read well, be stylistically attractive and idiomatic in order to maintain the appeal. This is the reason why it is advisable to have a creative approach regarding style. The terminology, in turn, needs to comply with industry standards with the exception of game-specific terms which, similarly to terms in Informational Texts, would need to be consistent with the in-game content translation.

The text below is a short excerpt from the Guild Wars 2 website. It features two sentences, of which the second is quite long.

Competitive Play Competitive play in *Guild Wars 2* is easy to learn but offers challenges for new players and hardcore PvPers alike. Whether you decide to jump into quick, furious matches between small groups of players in organized PvP or join hundreds of other players in the grand battles of World vs. World, PvP is where you'll find the ultimate challenge!	Współzawodnictwo Łatwo jest się nauczyć współzawodnictwa w Guild Wars 2, choć oferuje ono wyzwania zarówno dla nowych graczy, jak i hardcorowych wielbicieli PvP. Możesz dołączać do szybkich, intensywnych pojedynków małych grup graczy w zorganizowanym PvP. Możesz też wraz z setkami innych graczy brać udział w wielkich bitwach World vs. World. Niezależnie od Twoich preferencji to właśnie PvP postawi Cię przed najtrudniejszym wyzwaniem!

Source: Guild Wars 2 [Website], Competitive Play (2019).
Own translation.

In such a text, a creative approach to style is very important. Hence the order of the elements in the first sentence has been changed in the Polish version. The second sentence in turn has been divided into three separate sentences so as to maintain the clarity of the text in the Polish version. Additionally it should be noted that “you” and “your” in Polish Marketing Texts is usually translated with a capital letter. As can be observed, more often than not a creative style in marketing is supplemented by standard terminology, here: “competitive play” (współzadownictwo), “hardcore player” (gracz hardcorowy), “PvPer” (wielbiciel PvP), “match” (pojedynek), “battle” (bitwa), “World vs. World” (World vs. World).

13. Localizing the Game Lore

The Game Lore generally displays a creative style and creative terminology.

Table 12

Style and terminology in game lore

Game Lore	Standard	Creative
Style		✔
Terminology		✔

Localizing texts belonging to the Game Lore category, i.e. plot (descriptive texts, epic texts), dialogs (between player and NPC, between NPCs), quests and missions (dialogs, summaries, journals), world history, races, books, poems, songs, calls for a creative approach. This category contains texts which can be described as literary, whose function is expressive, i.e. form-focused. These texts are the ones which demand the most creativity from the translator, an activity often described as transcreation (O’Hagan and Mangiron, 2013). Descriptive texts and epic texts serve to present the story of the game and it is very important that they have a natural, attractive style. Quests and missions often include texts in the form of dialogs, summaries and journals. Dialogs also serve to present the story and the characters in the story. Books and poems, if present, enrich the game world and play an important role in creating immersion.

The example below is a fragment of the player journal in the game Elder Scrolls Online. This is a descriptive text, which additionally provides the player with hints for their required action. Moreover, since the player can be male or female, the text has been translated to maintain gender neutrality, using expressions such as "My death was" (Moja śmierć była), "Having awoken, I can surmise" (Przebudziwszy się, mogę stwierdzić).

SOUL SHRIVEN IN COLDHARBOUR I died, but that was only the beginning… I awoke in Oblivion. My body is intact, but my soul has been torn from my body. I must find a way out of this nightmare place to reclaim what was lost to me, or I will be damned for all eternity. I have been approached by a hooded figure who wished to speak to me, but I had other things to attend to. I should find them and see what they wanted from me.	ROZGRZESZENIE W COLDHARBOUR Moja śmierć była tylko początkiem… Przebudziwszy się w Oblivionie, mogę stwierdzić, że moje ciało jest w dobrym stanie, ale moja dusza została z niego wyrwana. Muszę wydostać się z tego koszmarnego miejsca i odzyskać utraconą duszę. W przeciwnym razie czeka mnie udręka przez całą wieczność. Podeszła do mnie zakapturzona postać i chciała ze mną porozmawiać. Muszę ją odnaleźć i dowiedzieć się, czego chce.

Source: Elder Scrolls Online [Computer Software] (2014).
Own translation.

The other example comes from the same game and is an instance of a dialog. Apart from the gender neutrality in "You managed to discover" (Udało ci się odkryć) what is most interesting about this fragment is the special way the character Razum-dar speaks, referring to himself in the third person. His speech is typical for the Khajit race and constitutes an idiolect that is worth transferring.

-Razum-dar- Raz's investigations have brought him to Rellenthil. When this one noticed your Psijic friend slip into town, Raz figured you'd be along soon.	-Razum-dar- Dochodzenie Raza doprowadziło go do Rellenthil. Gdy ten zobaczył, jak twój przyjaciel z zakonu Psijic zakradł się do miasta, Raz pomyślał, że wkrótce podążysz za nim.
So what did you discover in Artaeum, the island that isn't here anymore? Ow. That made Raz's head hurt!	A zatem co udało ci się odkryć w Artaeum, na wyspie, której już tu nie ma? Ał. Od tego wszystkiego Raza rozbolała głowa!
We learned that the false Aldrach belonged to a Daedric cult called the Court of Bedlam.	Dowiedzieliśmy się, że fałszywy Aldrach należał do daedrycznego kultu o nazwie Dwór Bedlam.
Goodbye.	Do widzenia.

Source: Elder Scrolls Online [Computer Software] (2014).
Own translation.

Another example from the same game is a poem entitled Song of the Spirits. The game Elder Scrolls Online abounds in lore that can be found in quests and missions as well as in books and poems. The skills required to translate such excerpts are no different than what is needed when translating ordinary poetry, with creativity being probably the most important element.

Song of the Spirits The night is dark, The ground is deep, Its warmth can keep you still. Your pain forget, Your anguish gone, Your slumber will not end. I am your guard, I am your hope, I will not fail my charge. The night is dark, The ground is deep, You shall not rise today.	Pieśń duchów Noc jest ciemna, Dno głębokie, Jej ciepło cię ukoi. Twój ból zapomniany, Twoja udręka miniona, Twój sen się nie skończy. Jestem twym stróżem, Jestem twą nadzieją, Nie ustanę w mojej szarży. Noc jest ciemna, Dno głębokie, Nie powstaniesz dzisiaj.

Source: Elder Scrolls Online [Computer Software] (2014).
Own translation.

The next fragment comes from the game Guild Wars 2. It is a description of the Sylvari race. Here we see creative terms – "Sylvari" (Sylvari), "Pale Tree" (Blade Drzewo) and the "Dream" (sen).

Sylvari Sylvari are not born. They awaken beneath the Pale Tree with knowledge gleaned in their pre-life Dream. These noble beings travel, seeking adventure and discovery. They struggle to balance curiosity with duty, eagerness with chivalry, and warfare with honor. Magic and mystery entwine to shape the future of this race that has so recently appeared.	Sylvari Sylvari się nie rodzą. Budzą się pod Bladym Drzewem z wiedzą zdobytą we śnie poprzedzającym ich życie. Te szlachetne istoty podróżują w poszukiwaniu przygód i odkryć. Nieustannie starają się osiągnąć równowagę między ciekawością a obowiązkiem, gorliwością a rycerskością oraz walką a honorem. Magia i tajemnica splatają się, by kształtować przyszłość tej rasy, która pojawiła się tak niedawno.

Source: Guild Wars 2 [Website], Sylvari (2019).
Own translation

14. Summary

It is necessary to conclude that the proposed game texts taxonomy and translation approaches are relative since every game is unique. Some games will lack certain text types or contain ones not covered in the presented classification. Sometimes it may be hard to decide whether the text displays a standard or a creative style, whereas creative terminology is often based on the standard one. Still, the differentiation into standard and creative style, standard and creative terminology, and their combinations could be useful in practical terms and serve as general directions to help translators get a grasp of the game's multitextuality. Realizing that games span texts from the most standard, such as EULAs and error messages, to the most creative, such as dialogs, journals and poems, can make the life of the translator easier. Knowing when to be uniform and conform to standards and when to be creative is an important guideline, especially for translators entering the market and students of Translation Studies.

The translator's freedom in texts belonging to Game Lore is often quite considerable and can be larger than in classic literature. The translation of Game Lore is characterised by target-orientedness[12] which means that greater modifications are often justified. Moreover, game localization in general is also function-oriented (Mangiron and O'Hagan 2013). The informative, persuasive and expressive functions of particular textual genres and text types can be achieved in part through the application of the presented translation approaches.

[12] The goal of game localization is "taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold (Esselink, 2000).

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Game localization pitfalls: Translating variables and gender

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Abstract

Variables and gender constitute game localization pitfalls due to the fact that games are interactive entertainment software and contain dynamically generated content. Variables pose a problem in languages (such as Polish) which use inflection (conjugation and declination). Gender is an issue as the player, the characters the player creates, and the characters the player encounters in the game world can be male or female. Gender neutrality is a requirement not only in all messages directed to the player but also in plot related texts such as dialogs and journals. The present article seeks to investigate the subject of variables and gender in order to determine some strategies for dealing with these pitfalls.

Keywords

games localization, variables, placeholders, gender, strategies

Pułapki lokalizacji gier. Tłumaczenie zmiennych i płci

Abstrakt

Zmienne i płeć stanowią pułapki lokalizacji gier wideo z powodu faktu, iż gry stanowią interaktywne oprogramowanie rozrywkowe i zawierają dynamicznie generowaną treść. Zmienne są źródłem problemów w językach takich jak polski, który używa fleksji (koniugacji i deklinacji). Rodzaj gramatyczny odzwierciedlający płeć jest wyzwaniem, ponieważ gracz, postacie tworzone przez gracza oraz spotykane przez niego w świecie gry mogą być rodzaju męskiego lub żeńskiego. Neutralność płciowa stanowi wymóg we wszystkich komunikatach kierowanych do gracza, lecz także w tekstach związanych z fabułą, takich jak dialogi i dzienniki. W niniejszym artykule podjęto próbę zbadania tematu zmiennych i płci w celu określenia pewnych strategii ukierunkowanych na radzenie sobie z tymi pułapkami.

Słowa kluczowe

lokalizacja gier, zmienne, symbole zastępcze, płeć, rodzaj gramatyczny, strategie

1. Introduction

Video games constitute interactive entertainment software which, more often than not, generates dynamic content for the player. The interactivity and dynamic character of games is the source of two major pitfalls in the area of game localization, namely variables and gender. This is especially true for languages such as Polish, which have a rich morphological system with gender, number and declensions (Chandler and Deming 2012, Sajna 2013). Variables and gender, especially when combined, prove to be a Pandora's box (Kischewski 2016).

Variable issues arise directly from the fact that the game contains placeholders, which will later be dynamically replaced with appropriate content. According to Bernal-Merino, "linguistic variables allow the game engine to create correct phrasing ‘on-the-fly’, avoiding retranslation which saves time and money in localisation projects” (2018: 128). Moreover, “variables can be used in many complex ways to enhance players’ immersion by addressing them, their chosen profile and their performance directly” (Bernal-Merino 2007: 6). “When text is displayed in-game, strings often change based on variables such as location, player’s name, number of items and so on. Developers have many conventions for notating these variables, and translators must be familiar with these in order to provide accurate translations for these strings” (Chandler 2008: 36).

By the same token, variables are potentially error-prone since their removal or alteration may result in a game crashing (Chandler and Deming 2012, Tutka 2017, Kuipers 2010). According to a MoGi Localization Agent (2019) variables can be tricky because their replacements are not always known. The solution is to account for all possibilities in the most natural way. In Kischewski’s opinion (2016), there are many cases where variables could be eliminated altogether by the developer, even if it means having much more text to translate. Still, variables are a part of most localization projects and although they constitute a predicament they are here to stay, not only for the previously mentioned economic reasons, but also due to their vital function in providing the player with customised content. Nonetheless, “while the use of variables for in-game parameters such as speed, endurance or armour won’t cause much of a problem, using variables to create sentences invariably does” (Kishewski 2016: 47).

Subsequently, gender issues stem from the fact that the player has a gender. The character the player creates and plays with can often be male or female as well (Bernal-Merino 2007), (Bernal-Merino 2013). Furthermore, the non-player characters also have a gender, one that oftentimes their invented names do not hint at. As one might imagine, staying gender-neutral is usually a challenge in the translation from English into languages with a grammatical gender of verbs such as Polish (MoGi Localization Agent 2019). Using variables for nouns with a grammatical gender is equally problematic. What is required is a grammatical agreement between the noun functioning as the subject and the verb as well as between the verb and the noun functioning as an object, which has an impact on the whole sentence (Bernal-Merino 2007c).

A frequent mistake that can often be observed in localized games is using the masculine form to refer to the player. Indeed the Polish noun for player, gracz, is masculine, however, referring to all players in the masculine form is sexist and risks being ungrammatical and incorrect whenever the player or character name is female[1] (Kischewski 2016). According to O'Hagan and Mangiron, "[g]iven the broadening appeal of games to a diverse player population and the increasing number of female gamers, gender related questions in games will continue to pose significant challenges" (2013: 207). Hence special care must be taken in order to maintain gender neutrality and gender-inclusiveness in localized games (Pérez and Sáenz 2019), which can be achieved by employing a variety of linguistic strategies.

In order to account for the obstacles posed by variables and gender the present article will seek to explain how these problems arise as well as aim at identifying certain possible solutions that can be employed by the translator as part of the game localization endeavour.

2. Variables

The indisputable role of variables is to display customised content to the player throughout the entire play (Sajna 2013). "Variables are used in many complex ways in order to trigger players' suspension of disbelief" (Bernal-Merino 2013: 205) and thus play an important part in enabling player immersion (O'Hagan and Mangiron 2013). Variables are "replaced by different values when certain conditions are met", including a player's action (O'Hagan and Mangiron 2013: 11) and choices (Bernal-Merino

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[1] A simple example is: '<NAME> zaprosił cię do gry', which can result in: 'Anna zaprosił cię do gry' (Anna invited (masculine gender) you to the game).

2007b). They constitute “replaceable parameters normally preceded by a “%” sign” (O’Hagan and Mangiron 2013: 96). They are replaced “on-the-fly” by the game engine (Bernal-Merino 2015) and are typically part of the software products (Sajna 2013) to which games naturally belong. As such they may be a source of grammatical errors (Chandler and O’Hagan 2016, Bernal-Merino 2013, Kischewski 2016). As Heimburg comments: “people don't even notice when the grammar is good, but they certainly notice when the grammar is bad” (Heimburg 2006: 136).

Variables can generally be strings of text or numbers. Strings of text are usually nouns or proper names. Languages such as Polish normally require inflection of nouns which is impossible in localization since all nouns and proper names are dynamically inserted in the nominative case with some rare exceptions. Variables can also be numbers “whose precise value is determined as the *game* is played” (Heimburg 2006: 148). Both kinds of variables pose specific problems when translated into languages such as Polish. The only viable solution is to take into account all the possibilities (MoGi Localization Agent 2019) and ensure that the resulting text which the player sees will be grammatical, even if not stylistically pleasing.

In classic applications, strings are represented by the placeholder %s (s for string), whereas numbers by %d (d meaning decimal).[2] If we take for example the noun ‘house’ in Polish we will have three different forms of the noun according to the number: 0 *domów*, 1 *dom*, 2, 3, 4 *domy* and 5 or more *domów*. In such cases, the most basic strategy regarding number variables is to move the number in the workfile to the end of the sentence after a colon or a hyphen (Table 1).

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[2] There is no unified way of representing placeholders among various developers. They can hint at the content (<NAME>) or not at all (%1, %2). Moreover, the % character does not represent the percent but aims to show that the expression is a variable.

Table 1

	Workfile	Example result
English	% houses	3 houses
Polish	Domy: %d Domy – %d	Domy: 3 Domy – 3
Backtranslation	Houses: %d Houses – %d	Houses: 3 Houses – 3

In another example the English version contains an optional plural form in brackets. Such a solution would be incorrect in Polish and is not generally used. Similarly to the previous example, the standard strategy is to move the number variable to the end after a colon or a hyphen (Table 2).

Table 2

	Workfile	Example result
English	%d day(s) left	4 days left
Polish	Pozostało dni: %d Pozostało dni – %d	Pozostało dni: 4 Pozostało dni – 4
Backtranslation	Days left: %d Days left – %d	Days left: 4 Days left – 4

Variables which are nouns or proper names are often the objects of verbs and, as such, also normally would require inflection. Hence various strategies are employed to make the sentence grammatical. The most basic strategy is to use a colon or a hyphen before the variable (Table 3).

Another example combines a number variable with a string variable. Since it is not advisable to use two colons or hyphens in one sentence a possible strategy is to put the number in brackets after the string variable as shown in Table 4.

Table 3

	Workfile	Example result
English	Kill %s	Kill Silver Drake
Polish	Zabij: %s Zabij – %s	Zabij: Srebrny Smok Zabij – Srebrny Smok
Backtranslation	Kill: %s Kill – %s	Kill: Silver Drake Kill – Silver Drake

Table 4

	Workfile	Example result
English	Kill %d %s	Kill 10 wolves
Polish	Zabij: %s (%d)	Zabij: wilki (10)
Backtranslation	Kill: %s (%d)	Kill: wolves (10)

The example below (Table 5) adds a place, where the player is to kill the given creatures as "sentences may contain multiple noun variables" (Heimburg 2006: 146). This is where another strategy, specification, can be introduced. In the translation a specifying noun 'place' is used which can be inflected and linked with a string variable that would be rendered in the nominative case.

Table 5

	Workfile	Example result
English	Kill %d %s in %s	Kill 10 wolves in Wild Forest
Polish	Zabij: %s (%d) w miejscu %s	Zabij: wilk (10) w miejscu Dziki Las
Backtranslation	Kill: %s (%d) in place %s	Kill: wolf (10) in place Wild Forest

The following example contains two string variables and is a case where the translator cannot change the order of the variables since the placeholders are identical. The example is a typical tip given to the player in real time strategy games so it is apparent that the first variable refers to a unit (jednostka) while the second refers to a building (budynek). The advisable strategy here is to use two specifying nouns, which can be inflected so that the end result would be grammatical.

Table 6

	Workfile	Example result
English	You can recruit %s in %s	You can recruit archer in archery range
Polish	Możesz zwerbować jednostkę %s w budynku %s	Możesz zwerbować jednostkę łucznik w budynku strzelnica
Backtranslation	You can recruit unit %s in building %d	You can recruit unit archer in building archery range

The next example is the same with the exception of placeholders. Whenever the placeholders for strings has a different form, the translator can move them around the sentence and possibly achieve a more natural sounding result, as shown in Table 7.

Table 7

	Workfile	Example result
English	You can recruit %1 in %2	You can recruit archer in archery range
Polish	W budynku %2 możesz zwerbować jednostkę %1	W budynku strzelnica możesz zwerbować jednostkę łucznik
Backtranslation	In building %2 you	In building archery

	can recruit unit %1	range you can re-cruit unit archer

In general the examples above[3] may not sound perfectly natural but they constitute a necessary compromise between completely non-grammatical and natural sounding sentences. The most commonly used strategies are applying colons and hyphens as well as moving the variable to the end of the sentence. Brackets can also be useful. Still, whenever the translator knows what the string will refer to, like in the last example, a specifying noun can be used to make the sentence sound more natural in the target language. There is also usually the possibility to consult the game developer and ask what the variable will be replaced by in order to choose the best strategy for a given instance.

3. Variables and gender

Another type of string variable which may pose gender issues is the one referring to the names of players and in-game characters (cf. Diaz-Monton 2007). The problems with these variables arise whenever a language, like Polish, displays gender inflection. The most commonly encountered situation concerns the past tense in Polish which is gender specific. One possible solution to the problem is to turn the past tense into the present tense, which is gender-neutral in Polish (Table 8).

This strategy is appropriate to all of the cases where the action was recent, being reminiscent of the English present perfect tense. Of course, the present perfect tense would also be usually rendered in the present tense in Polish (Table 9).

[3] The examples above are invented by the author and they do not come from any particular game title.

Table 8

	Workfile	Example result
English	%s left the game	Anna left the game
Polish	%s opuszcza grę[4]	Anna opuszcza grę
Backtranslation	%s leaves the game	Anna leaves the game

Table 9

	Workfile	Example result
English	%s has won	Unger has won
Polish	%s wygrywa	Unger wygrywa
Backtranslation	%s wins	Unger wins

Still, the problem concerns not only the past tense. Another example is the verb "should", which is gender specific in Polish. In such cases it is advisable to use a synonym such as "must", which would work for both genders. Moreover, it is important to note that "their" here is a gender-neutral form sometimes used in games by developers (Pérez and Sáenz 2019).

Table 10

	Workfile	Example result
English	%s should heal their wounds	Yaris should heal their wounds
Polish	%s musi uleczyć swoje rany	Yaris musi uleczyć swoje rany
Backtranslation	%s must heal their[5] wounds	Yaris must heal their wounds

[4] A literal translation using a masculine form would result in: 'Anna opuścił grę', which is a glaring mistake. 'Gracz Anna opuścił grę' would also not be the best solution.

[5] In Polish the word "swoje" is gender-neutral.

4. Gender

Similar to variables, gender issues are caused by the interactive and dynamic nature of games. First there is the player, who has a gender. Second, there are player-created characters who can be male or female[6] since "in some games players can choose their character's gender, race or profession, and this information ties seamlessly into the virtual world in meaningful ways" (Bernal-Merino 2015: 39). "In those games where players are free to choose their avatar, race, gender, personality, and so forth, linguistic variables have to be built into the dialogue so that the game addresses players in specific terms, enhancing their experience (Bernal-Merino 2007b). And third, there are the NPCs[7] residing in the game world. We have already seen a few examples of the first two gender issues while discussing variables.

As regards the third case, the problems that occur most often are: (a) when the name of the NPC does not unequivocally hint at a gender (e.g. Yaris) and (b) when the workfile the translator receives to work on does not contain the name of the character who is speaking a given line. In the first instance it is necessary to consult all available reference materials to establish the gender of the character or ask the game developer. When however, as in the latter case, there is no information whatsoever on the speaker, the translator can either translate gender-neutrally (which will add to the difficulty and may have a negative effect on naturalness) or direct a whole series of queries to the developer asking about the speaker characters and their gender. It is important to stress here that the last case constitutes a severe problem and should not occur when working with a professional developer who applies best practices in their localization projects. Hence it is vital that the developer provide

[6] In some games there is a single protagonist who has a specific gender. In such cases gender neutrality is not an issue and the translator needs to adjust the text to fit the protagonist's gender.

[7] NPC is a non-player character controlled by the artificial intelligence (AI) of the game.

"the name and gender of the character who is speaking in dialogs as well as the addressee" (O'Hagan and Mangiron 2013: 144).

Even if games feature gender-inclusive language such as 'they' instead of 'he' or 'she' or 'police officer' instead of 'policeman' (Pérez and Sáenz 2019), they may still pose problems in translation. Likewise, even when cooperating with well-prepared developers, gender is an issue in games localization. Apart from the short lines with variables, discussed previously, gender issues are typically found in dialogs and journals. The examples below come from the game *Baldur's Gate: Siege of Dragonspear*, which has not been localized into Polish. Hence the translations are my own suggestions. The first example is a dialog fragment spoken by the main NPC antagonist to the player character.

When Cealar says 'you've come', an obvious mistake would be to translate it with 'przyszedłeś' (masculine form of "you have come"). In such dialogs that are spoken to the player character who can be male or female, it is necessary to maintain gender neutrality by working around gender. Here is another case when the present perfect (or past) tense is rendered in Polish by the present: 'przychodzisz' ("you come"). Although this strategy may seem obvious, translators sometimes forget about it and it is not uncommon to encounter mistakes in this area even in well-localized games, such as the previous instalments of *Baldur's Gate*.

Table 11

English	Polish	Backtranslation
Caelar Argent Change is upon us. Great and righteous change. **You've come** to face me, so do so! Now is your time.	Caelar Argent Nadchodzą zmiany. Wielkie i szlachetne zmiany. **Przychodzisz**, by stawić mi czoła, więc do dzieła! Nastał twój czas.	Caelar Argent Change is upon us. Great and righteous change. **You come** to face me, so do so! Now is your time.

The second example concerns a conditional clause which can also be rendered in the present tense. Here the literal translation is avoided (gdybyś tylko wiedział/wiedziała) and the phrase ‘you are not aware’ is used (Nie zdajesz sobie sprawy).

Table 12

English	Polish	Backtranslation
Caelar Argent And so we reach the end of a long, long journey. **If you only knew** the sacrifices I made to bring us to this point. All of them worthwhile.	Caelar Argent A więc dotarliśmy do końca prawdziwie długiej drogi. **Nie zdajesz sobie sprawy**, jak wielką zapłaciłam cenę, by doprowadzić nas do tej chwili. A jednak było warto.	Caelar Argent And so we reach the end of a long, long journey. **You are not aware of** the sacrifices I made to bring us to this point. All of them worthwhile.

The problem in the next example is the adjective ‘ready’. Adjectives are gender-specific in Polish and the word ‘ready’ has been known to cause problems in many games. In the example below, ‘ready’ (gotowy/gotowa) has been replaced by a similar expression: ‘do you want to...?’. Moreover, ‘ready’ is repeated in the answer options of the player. The player can answer with 1, 2 or 3. Instead in 2 the verb ‘want’ (chcę) is repeated and in 3 there is an expression ‘when I get ready’ (jak się przygotuję).

Table 13

English	Polish	Backtranslation
Caelar Argent What do you say then, <NAME>? Are you **ready** for this final battle? 1: I'll be the one leading the battle, Corporal. 2: **Ready?** No. But it needs to happen, regardless. 3: I need more time to prepare. I'll return when I'm **ready**.	Caelar Argent Więc, co powiesz, <NAME>? **Chcesz się zmierzyć** w ostatecznej bitwie? 1: To ja poprowadzę bitwę, dowódco. 2: **Chcę?** Nie. Ale i tak nas to nie ominie. 3: Potrzebuję więcej czasu. Wrócę, **jak się przygotuję**.	Caelar Argent What do you say then, <NAME>? **Do you want to challenge me** in a final battle? 1: I'll be the one leading the battle, Corporal. 2: **Want?** No. But it needs to happen, regardless. 3: I need more time to prepare. I'll return when I **get ready**.

The fragment below is a dialog between a female blacksmith, Jegg,[8] and the player. In order to avoid gender specificity the Polish version displays a change of subject. Instead of 'you saved us' the Polish text says 'thanks to you we avoided' (dzięki tobie uniknęliśmy). Another example of a change of subject is a change from 'I acquired' to 'they fell into my hands' (wpadły mi w ręce). The next strategy for gender-neutrality to be found in the fragment below is the omission of 'I was wondering' altogether in order to avoid a literal translation (zastanawiałem się / zastanawiałam się), which would be gender specific. The last example in turn is rendering 'I'd like to' as simply 'I want to' (Chcę), in which the auxiliary verb is omitted and a synonymous Polish expression is used instead.

[8] Jegg is female, which apart from the game can be checked in a wiki: http://baldursgate.wikia.com/wiki/Jegg

Table 14

English	Polish	Backtranslation
Jegg Hey there, I heard **you saved us** all from certain death. S’pose I’m obliged to you for that. Is there anything I can do for you? Weapons you need? Armor? 1: Would you be able to make M’Khin a set of armor? I’m having trouble finding a suit that fits her. 2: Actually, there is something you might be able to help me with. **I acquired** these stone shards not too long ago. They clearly have magical qualities – **I was wondering** if you might be able to incorporate them into a weapon of some sort? 3: I’d like to see your wares.	Jegg Witaj. Słyszałam, że to **dzięki tobie uniknęliśmy** pewnej śmierci. Chyba jestem ci za to wdzięczna. Czy mogę coś dla ciebie zrobić? Potrzebujesz broni? Zbroi? 1: Czy możesz zrobić zbroję dla M’Khin? Mam problem ze znalezieniem dla niej czegoś odpowiedniego. 2: Jest coś, w czym możesz mi pomóc. Niedawno **wpadły mi w ręce** te odłamki kamienia. Najwyraźniej są magiczne. Czy możesz umieścić je w jakiejś broni? 3: **Chcę** zobaczyć twoje towary.	Jegg Hey there, I heard **it is thanks to you that we avoided** certain death. S’pose I’m obliged to you for that. Is there anything I can do for you? Weapons you need? Armor? 1: Would you be able to make M’Khin a set of armor? I’m having trouble finding a suit that fits her. 2: Actually, there is something you might be able to help me with. These stone shards **fell into my hands** not too long ago. They clearly have magical qualities. **Can you** incorporate them into a weapon of some sort? 3: **I want** to see your wares.

In another fragment below we can see a change of subject: ‘if I hadn’t killed him’ is rendered as ‘if he wouldn’t die by my hand’ (gdyby nie zginął z mojej ręki). The other instance of gender avoidance is ‘you would have me retreat’ translated as ‘am I supposed to’ (Mam uciekać) since a literal translation would be gender specific (chciałbyś, żebym uciekł/uciekła).

Table 15

English	Polish	Backtranslation
Porios Back away, <NAME>. Back away and you might survive this. 1: Lay down your arms. I’ve no wish to hurt you. 2: That’s what the last fellow said–well, he WOULD have said it **if I hadn’t killed him** first. 3: Attack me and you’ll die, as surely as the sun will rise in the morn. 4: **You would have me retreat** from you? You jest, surely.	Porios Wycofaj się, <NAME>. Wycofaj się, a może to przeżyjesz. 1: Odłóż broń. Nie chcę cię skrzywidzić. 2: To samo powiedział poprzedni. To znaczy POWIEDZIAŁBY, **gdyby nie zginął z mojej ręki**. 3: Zaatakuj mnie, a zginiesz. To pewne jak to, że wzejdzie słońce. 4: **Mam uciekać** przed tobą? To jakiś żart.	Porios Back away, <NAME>. Back away and you might survive this. 1: Lay down your arms. I’ve no wish to hurt you. 2: That’s what the last fellow said–well, he WOULD have said it **if he hadn’t died by my hand** first. 3: Attack me and you’ll die, as surely as the sun will rise in the morn. 4: **Am I supposed to retreat** from you? You jest, surely.

In the following dialog the past tense is rendered as past tense, but the form is plural: 'I searched' becomes 'we searched' (szukaliśmy cię) thereby avoiding the gender of the protagonist. This is possible since it is obvious that the game is generally played with a party of heroes rather than a single hero.[9]

Table 16

English	Polish	Backtranslation
Viconia Well met, <NAME>. It's been a while. 1: After Sarevok's fall, I **searched for you**. What happened? 2: What are you doing here? 3: Well met indeed. I must go now. Perhaps we will speak again later.	Viconia Miło cię widzieć, <NAME>. Minęło sporo czasu. 1: Po upadku Sarevoka **szukaliśmy cię**. Co się stało? 2: Co tu robisz? 3: Ciebie również. Muszę już iść. Może porozmawiamy później.	Viconia Well met, <NAME>. It's been a while. 1: After Sarevok's fall, **we searched for you**. What happened? 2: What are you doing here? 3: Well met indeed. I must go now. Perhaps we will speak again later.

The next dialog fragment takes place with a major antagonist in the game, named Sarevok. Here we see again that the past tense is rendered by the present tense without losing the sense. 'You did not think me truly dead' becomes 'you do not think I can be truly killed' and hence gender is avoided although the translation includes a slight shift in meaning that is still contextually acceptable.

[9] It is possible to play with just one hero, but the default gameplay assumes a party of heroes.

Table 17

English	Polish	Backtranslation
Sarevok You **did not think me truly dead, did you?**	Sarevok **Nie sądzisz chyba, że da się mnie zabić?**	Sarevok You **do not think I can be truly killed?**

The last dialog fragment displays a change in voice: from active to passive. 'I felled you' becomes 'you have been felled by me' (zostałeś przeze mnie pokonany). In other words, the unknown gender of the player is substituted for the known gender of the NPC, Sarevok. The other example is rendering the present perfect by the present tense in Polish: 'I've had my fill' becomes 'I've enough of' (Mam już dość).

Table 18

English	Polish	Backtranslation
Sarevok We will never end, you and I. Even in death. 1: Prove it, if you can. **I felled you** once. I will do so again. 2: The end has come and gone already, brother. **I've had my** fill of vengeance. 3: You are naught but ashes. Return from whence you came, and bother me no more.	Sarevok Nigdy nie będziemy kwita. Nawet po śmierci. 1: Udowodnij to, jeśli zdołasz. Już raz **zostałeś przeze mnie pokonany.** Czeka cię to po raz kolejny. 2: Koniec nadszedł i minął, bracie. **Mam już dość** zemsty. 3: Jesteś tylko prochem. Wracaj, skąd przybyłeś, i nie zawracaj mi głowy.	Sarevok We will never end, you and I. Even in death. 1: Prove it, if you can. **You have been felled by me** once. I will do so again. 2: The end has come and gone already, brother. **I've enough of** vengeance. 3: You are naught but ashes. Return from whence you came, and bother me no more.

The following examples come from the same game, *Baldur’s Gate: Siege of Dragonspear*. These are sentences taken out of the journal. Journals in games provide a summary of the plot and quests for the player. The journal in the English version of *Siege of Dragonspear* is written in the past tense from the perspective of the protagonist. Using past tense in Polish is often impossible, so in such cases present tense is used. This changes the character of the text but the change is inevitable since the story must be gender-neutral. Still the present tense in stories is not objectionable as it is sometimes used in presenting plots in literature. Thus despite changing the tense it is possible to maintain the epic character of the story.

In the first and second example, the past tense and the present perfect are rendered in the present. ‘I freed’ becomes ‘I free’ (Uwalniam). Likewise, ‘I have helped’ becomes ‘I help’ (Pomagam).

Table 19

English	Polish	Backtranslation
I **freed** the trolls to wreak vengeance on the crusaders.	**Uwalniam** trolle, aby zemściły się na członkach krucjaty.	**I free** the trolls to wreak vengeance on the crusaders.

Table 20

English	Polish	Backtranslation
I **have helped** Elandro deal with his anxieties.	**Pomagam** Elandro poradzić sobie z lękami.	I **help** Elandro deal with his anxieties.

In the following example gender is avoided by rendering the auxiliary verb "should" as "must", which is gender-neutral in Polish.

Table 21

English	Polish	Backtranslation
I should keep watch for another appearance of the hooded man.	**Muszę wypatrywać** kolejnego pojawienia się zakapturzonego człowieka.	**I must keep watch** for another appearance of the hooded man.

In the next example there is again "should" rendered as "must". Also the past tense is rendered as the expression 'I managed to' (udało mi się) in order to maintain the past meaning in a gender-neutral form. However, this relatively easy solution should not be overused as it may result in an unnatural style on a textual level. If the translator were to use it all over the journal the result would certainly not be very good. This expression 'udało mi się' should be reserved for situations where the past meaning is not rendered well by the present and when it fits contextually as an achievement of the player character.

Table 22

English	Polish	Backtranslation
I **should tell** de Lancie that **I poisoned** the supplies.	**Muszę powiedzieć** de Lancie, że **udało mi się zatruć** zasoby.	I **must tell** de Lancie that **I managed to poison** the supplies.

In the example below, a literal translation is avoided (De Lancie chce, abym zatruł/zatruła) and a gender-neutral form is used: 'expects that I poison' (oczekuje ode mnie, ze zatruję).

Table 23

English	Polish	Backtranslation
De Lancie **wants me to poison** the crusaders' food and water in Dragonspear Castle.	De Lancie **oczekuje ode mnie, że zatruję** żywność i wodę członkom krucjaty w Zamku Smoczej Włóczni.	De Lancie **expects that I poison** the crusaders' food and water in Dragonspear Castle.

The last two examples display a change of subject as the strategy to avoid gender. In the first sentence vision becomes the subject, while in the second, it is Edwin.

Table 24

English	Polish	Backtranslation
I've had a vision of Bhaal's death.	**Nawiedziła mnie wizja śmierci Bhaala.**	**A vision of Bhaal's death came to me.**

Table 25

English	Polish	Backtranslation
I've welcomed Edwin into my party.	**Edwin dołączył** do mojej drużyny.	**Edwin joined** my party.

5. Summary of gender-neutral strategies

Table 26 presents a summary of various gender-neutrality strategies presented in this paper. It should not be seen as a definitive list since such a thing does not seem possible. It serves, however, to show that the same problems may have different solutions depending on the context. Using a variety of strategies and not overusing one of them (for example the expression 'I managed to') is the key to the translator's success. Although this table presents some possible strategies, creative solutions need to be generated by the translator on a case-by-case basis. One thing is certain: gender requires special attention from the translator. Maintaining gender neutrality when required is a key to immersive play for the gamer, which is the ultimate goal of all video games.

Table 26

Pitfall	Strategy	Example EN	Example PL	Back-translation
Past tense, present perfect tense	Using present tense	**You've come** to face me, so do so!	**Przychodzisz**, by stawić mi czoła, więc do dzieła	**You come** to face me, so do so!
	Changing the subject	**I've welcomed** Edwin into my party.	**Edwin dołączył** do mojej drużyny.	**Edwin joined** my party.
	Using passive voice	**I felled you** once.	Już raz **zostałeś przeze mnie pokonany.**	**You were felled by me** once.
	Using the expression 'I managed to'	I should tell de Lancie that I **poisoned** the supplies.	Muszę powiedzieć de Lancie, że **udało mi się zatruć** zasoby.	I must tell de Lancie **that I managed to poison** the supplies.
	Omission	They clearly have magical qualities – **I was wondering if you might be**	Najwyraźniej są magiczne. **Czy możesz** umieścić je w jakiejś broni?	They clearly have magical qualities. **Can you** incorporate them into a weapon of

		able to incorporate them into a weapon of some sort?		some sort?
	Using plural form if appropriate	After Sarevok's fall, **I searched** for you.	Po upadku Sarevoka **szukaliśmy** cię.	After Sarevok's fall, **we searched** for you.
Adjective	Using a context – dependent synonymous expression	Are you **ready** for this final battle?	**Chcesz się zmierzyć** w ostatecznej bitwie?	**Do you want to challenge me** in a final battle?
Auxiliary verb should	Using 'must'	**I should keep watch** for another appearance of the hooded man.	**Muszę wypatrywać** kolejnego pojawienia się zakapturzonego człowieka.	**I must keep watch** for another appearance of the hooded man.
Want sb to do sth Would have sb do sth	Using a synonymous expression	De Lancie **wants me to poison** the crusaders' food and water in Dragonspear Castle.	De Lancie **oczekuje ode mnie, że zatruję** żywność i wodę członkom krucjaty w Zamku Smoczej Włóczni.	De Lancie **expects that I poison** the crusaders' food and water in Dragonspear Castle.
		You would have me retreat from you?	**Mam uciekać** przed tobą?	**Am I supposed to retreat** from you?

6. Conclusions

All things considered, variables and gender constitute palpable pitfalls of game localization into Polish. Variables pose problems due to the fact that they are an unknown factor introducing gaps in texts. Additionally, the Polish language has grammatical features such as inflection. These two issues combined will always lead to problems, solutions to which are merely compromises. Texts with variables are rarely perfect, nonetheless, for now it is impossible to dispense with them. They are an inevitable element inherited by games from software and thus responsible for dynamically-generated content.

Translators in game localization are expected to handle such items successfully and working with variables has been defined as one of the translators' competences (O'Hagan and Mangiron 2013, Chandler 2008). When dealing with variables all possible cases must be considered and "the best possible solution needs to be applied to avoid grammatical errors and inconsistencies that may disrupt the pace of the game by attracting the player's attention for the wrong reasons" (O'Hagan and Mangiron 2013: 133). "To create immersive and varied game-play experiences, developers might want to consider limiting the use of variables to in-game parameters and use proper sentences whenever a game's narrative is concerned" (Kischewski 2016: 47). This would surely result in a better quality of texts and would be a preferable solution. Still, in reality variables are expected to stay especially since they are key to customised player content.

As indicated previously, variables may combine with gender issues and become the reason for a sort of double jeopardy. "The safest option is to use translations that will work in all contexts, regardless of the gender and number of the noun they modify, even if this translation may not be preferred one stylistically" (O'Hagan and Mangiron 2013: 132). Gender issues found in dialogs and journals are another story. In this domain, the naturalness of language cannot be compromised. The player should perceive the text as if it was written originally in their language.[10] Good style is a priority which outweighs fidelity to the original text.[11] The general sense must be maintained but can be rendered with synonyms which are not especially close. Hence 'should' can be rendered as 'must' even though the latter is stronger. The past tense can be rendered by the present, the active voice by the passive and the singular by the plural. It all depends on the particular situation but such modifications aiming at gender-neutrality are acceptable, even necessary, to maintain the natural flow of plot text in games – a quality games share with literature.

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[10] This is a general requirement for games localization (O' Hagan and Mangiron 2006).

[11] Localization, and games localization in particular, is target oriented (Esselink 2000, O'Hagan and Mangiron 2013).

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Problems in medical translation among professional and non-professional translators: Collocations as a key issue

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Abstract

English is currently the *lingua franca* in medicine, especially due to the development of new terms that combine the medical field with technical areas. The aim of this study is to compare the problems encountered by professional and non-professional translators (physicians) with special attention paid to collocations. Further valuable observations and comments are also added by the respondents. The paper discusses the key position of collocations in the medical register in which the erroneous use of collocations discredits the paper and the researcher, thus hindering the dissemination of medical knowledge. Additionally, some other problematic issues are also highlighted. The author postulates further collocation-related empirical studies with attention paid to the phenomena of both teaching collocations and assessing the competence of the translator in the domain of collocations.

Key words

medical translation, medical collocations, medical language, medical translator, medical register

Problemy związane z tłumaczeniem medycznym wśród tłumaczy zawodowych oraz tłumaczy niezajmujących się zawodowo przekładem. Kolokacje jako kluczowe zagadnienie

Abstrakt

Język angielski obecnie pełni rolę *lingua franca* w medycynie, zwłaszcza ze względu na rozwój nowych terminów łączących dziedzinę medycyny z dziedzinami technicznymi. Celem badania jest porównanie problemów, które napotkają tłumacze zawodowi oraz lekarze, którzy samodzielnie dokonują przekładu tekstów medycznych, ze szczególnym uwzględnieniem kolokacji. Kolejne cenne spostrzeżenia i komentarze są również dołączone przez respondentów. W artykule omówiono nadrzędną pozycję kolokacji w rejestrze medycznym, w którym błędne zastosowanie kolokacji dyskredytuje artykuł oraz badacza, utrudniając w ten sposób upowszechnianie wiedzy medycznej. Dodatkowo podkreślono również inne problematyczne kwestie. Autor postuluje dalsze badania empiryczne w zakresie problematyki kolokacji z uwzględnieniem zjawisk związanych z ich nauczaniem i ocenianiem kompetencji tłumacza w zakresie znajomości kolokacji.

Słowa kluczowe

tłumaczenie medyczne, kolokacje medyczne, język medyczny, tłumacz medyczny, rejestr medyczny

1. Introduction

According to Lee-Jahnke (1998: 87) and Niebrój (2010: 13), the English language has become the *lingua franca* in the world of medicine. In the 21st century in particular, technological innovations are omnipresent. Some terms related to these innovations are also employed in the world of medicine, particularly in cardiology, ophthalmology, nano-medicine or bio-engineering, with the result that an immense progression of medical vocabulary is observed. Such rapid development was obviously initiated at the end of the 19th century, however, it was the 20th century in particular, which saw the expansion of medical terminology into fields such as oncology or radiology (c.f. Badziński 2007: 235). Furthermore, new specialties came into existence (e.g. hypertensiology). Consequently, some of the most rapidly developing medical specialties, such as cardiac surgery, neurosurgery, nano-medicine or genetics, have contributed to the interdisciplinary connection between medical and para-medical specialties (e.g. bio-statistics). The multiplication of single lexemes and longer expressions (i.e. two, three or four word phrases) was also noted. These terms are translated mostly from English into other languages and, as a result, they become incorporated in the general medical register.

The language of medicine has been analyzed by a number of specialists in the field such as Lee-Jahnke (1998), Montalt (2007), Džuganová (2013), Pilegaard (2016), and Karwacka (2016). Different lexical relationships in the medical field have also been studied by various Polish authors, e.g. Wysocka (2001), Kokot (2001), Leśniewska (2008), and Badziński (2010).

As Montalt (2007: 156) rightly states, medical specialties may be characterized by different norms in terms of terminology. It should be kept in mind that the contemporary division into more than 40 basic specialties (including hypertensiology or psycho-oncology) has resulted in the formation of a wide variety of lexemes that are typical and characteristic of one field exclusively (e.g. genetics). Over time, obviously, such terminology is incorporated into the general medical terminology or it may be typically limited to the original field (e.g. cardiology, ophthalmology).

2. The aim of the study

The aim of the study was to analyse problems in medical translation which are experienced by both professional translators and physicians who are non-professional translators involved in the process of doing medical translation of their own manuscripts. A survey questionnaire was used as a research tool in the present study in order to obtain information regarding the key problems related to medical translation and subsequently to analyse the most frequent components mentioned by the respondents based on the prepared survey questionnaire. Due to the fact that certain obstacles occur in the process of specialized translation, an in-depth analysis is believed to be useful in the translation process as it highlights certain problematic domains and, in consequence, hopefully offers some solutions for the future.

3. Material and method

The survey was conducted between January 2017 and May 2017. Thirty-nine respondents were enrolled in the study. The word *translator* in the present study refers both to medical translators who are experts in their field by profession and to physicians who translate their own manuscripts for publication. The former group therefore was labelled as *professional translators* (8), whereas the latter one was defined as *non-professional translators* (31). The term *non-professional* was deliberately chosen because physicians usually do not possess formal knowledge related to translation, nor are they familiar with certain translation strategies.

For the purpose of the study, the following auto-definition of the term *translator* was adopted, i.e. medical translators who perceive their role in such a way and who were working as medical translators at the time of the study. The exclusion criteria were as follows: former experience in translation with no present participation in the process of translation for over a year and/or experience in conference medical interpreting (as it could cause potential interactions between translation and interpreting, hence the results in the survey might be related to both processes). No further exclusion criteria were employed.

None of the physicians had a language background in terms of formal language studies. Seven of them (23%), however, passed the Cambridge Advanced Examination (CAE) and two of them (<1%) the Cambridge Proficiency Examination (CPE), which according to the Common European Framework of Reference for Languages, equates to the C1 and C2 levels, respectively.

As far as professional translators were concerned, all of them (8) were graduates of the English Studies Departments from different Polish universities. None of them, however, had any medical background or any other professional association with medicine (except for translation) that could potentially affect the survey results, nor did they have any post-graduate medical-related studies.

The total number of respondents who were provided with the survey questionnaire was initially 42. However, three of them did not return the survey questionnaire with their answers for unknown reasons (all respondents had previously given their consent to participate in the study). Therefore, the final total number of respondents was 39, 19 women and 20 men, between the ages of 32 and 53. All of the professional translators had at least four years of experience in medical translation either from working as freelance translators or from providing services to translation agencies. In the group of non-professionals, the physicians had at least three years of experience in translation and their experience as medical doctors ranged from 4 to 24 years.

Both groups were provided with the anonymous survey questionnaire to assess the problems encountered in the process of translation. The respondents were also asked to share further comments if problems they had experienced were not included in the questionnaire.

The questions in the questionnaire survey were divided into two subsections. The first was connected with the characteristics of the respondents (age, years of experience in translation and the number of translated articles). The second subsection was related to the detailed analysis of key problematic issues. All of the survey participants were requested to comment only on issues related to their English language use due to the fact that the interference of other non-native languages could be a factor potentially adversely affecting the results of the questionnaire survey.

As the main goal was to reach active translators who are practically involved in the process of translation, the survey questionnaire was distributed among physicians from the medical universities of Silesia, Katowice and Zabrze. In the case of professional translators, dissemination was via translation agencies in Poland.

The questionnaire survey was prepared specifically for the purpose of the study and was exactly the same for both study groups, except for the question related to work experience, where in the case of physicians the question of medical experience was provided in addition to the question of translation experience.

In the case of professional translators, the mean number of translated articles per respondent was 11 per year, whereas in the case of non-professional translators it was four per year. It should be noted that the majority of translations were sent to international journals (82.7%) with an *Impact Factor* of at least 1.2. The remaining translations (17.3%) were submitted to Polish journals which do not have an *Impact Factor*. In the section allotted to additional comments, a significant number of survey participants (seven; 18%; three translators and four physicians) noted that their manuscripts had been rejected due to low quality of language as indicated by reviewers. This is of great importance to the present study.

In the case of physicians who do their translation themselves, none of them had translated any article that was outside of the domain of their own specialty. The articles which were translated in cooperation with the specialists from other fields (e.g. statisticians) were also considered. This cooperation was due to the fact that some parts of medical manuscripts (such as elements of statistics) frequently require the assistance of other experts. That issue was mentioned by five respondents (physicians). It should be remembered that statistics as a separate scientific discipline has its own terminology, which may also be difficult for physicians. As a result, some physicians delegate the statistical part to statisticians, as indicated in the additional comments in the questionnaire.

The medical specialties translated by professional translators who were survey participants were as follows: neurology, oncology, paediatrics, radiology, surgery, laryngology and dermatology. Physician respondents translated articles in the fields of cardiology, oncology, neurology, diabetology, psychiatry, surgery, nephrology, haematology, and public health.

Due to the fact that non-professional translators (physicians) may not necessarily be familiar with the technical terms used in linguistics (e.g. passive voice, collocations, register), some examples were provided to illustrate the meaning where necessary for question clarity.

Special attention was paid to the clarity and transparency of the questions in order to avoid ambiguity. The questions were formulated in English, in an approachable manner without referring to highly specialized translation terminology.

Open questions were generally avoided except for the final question in which the respondents were asked to express their further comments related to the process of translation. Interestingly, some of these comments were very important as they indicated problems which had not been previously included in the questionnaire (e.g. medical register).

Next to the items included in the survey questionnaire, a score of 1-5 points was also included to indicate the frequency of a particular problem. Table 1 presents the complete survey questionnaire.

Table 2 provides the questionnaire results with the number of respondents who indicated particular problems and the scores of the problem intensity.

Note: For the purposes of clarity and visibility the problem specified in the table is given with a shorter description (for further details: please see Table 1). Please note that the table with the most problematic issue is in bold.

No (no) - number; N/a – not applicable; Nc – not calculated

Table 1

The survey questionnaire related to the most common problems encountered in the process of translating medical texts

<table>
<tr><td colspan="3">CHARACTERISTICS</td></tr>
<tr><td colspan="3">1. Sex: ....
2. Age: ....
3. Specialization (in the case of physicians only):
....
4. A. Years of experience in translation:
....

B. Years of experience in clinical practice
(for physicians only) ....
5. Number of translated articles: ....
6. Medical specialties which were translated:
..............................</td></tr>
<tr><td>No.</td><td>Problems related to</td><td>Please, also indicate the frequency of the problems – score 0-5 where
0 = no problems
1 = some minor problems
2 = rarely problematic
3 = quite problematic
4 = frequently problematic
5 = highly problematic</td></tr>
<tr><td>1.</td><td>use of tenses</td><td></td></tr>
<tr><td>2.</td><td>use of passive voice (e.g. was verified, was further analyzed, has been mentioned etc.)</td><td></td></tr>
<tr><td>3.</td><td>a large number of noun phrases</td><td></td></tr>
<tr><td>4.</td><td>length of sentences in the Polish language</td><td></td></tr>
<tr><td>5.</td><td>lack of appropriate tools (e.g. glossary, dictionary)</td><td></td></tr>
<tr><td>6.</td><td>finding an appropriate grammar construction in the English language</td><td></td></tr>
<tr><td>7.</td><td>articles – (a/an/the)</td><td></td></tr>
</table>

8.	prepositions *(on/at/in/by)*	
9.	collocations, i.e. fixed combinations of lexical items, e.g. • *transilluminated scrotal swelling* • *replaced by supplementation* • *concurrent zinc deficiency* • *stocking-glove distribution deficit*	
10.	other problems	
11.	no problems	

Table 2
Problems related to medical translation
as indicated by both study groups.

No.	Problems related to	Total no. of professional and non-professional translators	No. of		Total no. of points from both groups	No. of points given by	
			professional translators	non-professional translators		professional translators	non-professional translators
1.	use of tenses	9	2	7	34	6	28
2.	use of passive voice	-	-	-	-	-	-
3.	a large number of noun phrases	5	3	2	10	7	3

4.	length of sentences in the Polish language	18	6	12	22	10	12
5.	lack of appropriate tools (e.g. glossary, dictionary)	5	3	2	17	11	6
6.	finding an appropriate grammar construction in English	21	6	15	68	27	41
7.	articles	19	6	13	40	11	29
8.	prepositions	23	6	17	64	18	46
9.	**collocations**	**23**	**7**	**16**	**72**	**33**	**39**
10.	other problems	11	3	8	Nc	Nc	Nc
11.	no problems	3	1	2	N/a	N/a	N/a

4. Results

Ninety-three percent of the survey questionnaires were completed and returned, which is representative, considering the fact that no other studies on medical collocations have been conducted on such samples in Poland as yet. The study revealed interesting results in both groups, namely problems related to collocations.

Of note, as many as 11 respondents (28%) provided their additional comments regarding the observations connected with the process of translation. Furthermore, two opinions are of great significance as they pay attention to the interdisciplinary nature of the articles that were translated (oncology-neurology and cardiology-diabetology).

Survey respondents indicated problems with all of the issues listed in the questionnaire except, surprisingly, the passive voice. The detailed characteristics of the results are presented in Table II. The following were given the most attention: tenses (9; professional translators-2, physicians-7), articles (19; 6/13) prepositions (23; 6/17), a large number of noun phrases (5; 3/2), the length of the sentence (especially in the mother tongue - L1) (18; 6/12), inability (impossibility) to find the appropriate grammar structure in the target language (L2) (21, 6/15), lack of the appropriate tool (e.g. glossary) (5; 3/2), collocations (23; 7/16). Interestingly, three respondents (one professional translator and two physicians) had no difficulties related to the translation of articles, which was indicated in the questionnaire.

However, when the score related to the difficulty of particular components was assessed, the results were different. For the purpose of the present study, each point from the total number of 1-5 was calculated. Therefore, the total number of points for each component was as follows: 34 points for tenses (professional translators-6, physicians-28), 40 for articles (11/29), 64 for prepositions (18/46), 10 for a large number of noun phrases (7/3), 22 for the length of the sentence (in the mother tongue - L1) (10/12), 68 for inability (impossibility) to find the appropriate grammar structure in the target language (L2) (27/41), 17 for lack of the appropriate tool (e.g. glossary) (11/6) and 72 for collocations (33/39).

5. Discussion

5.1. An outline of the main problem

The most problematic issues indicated by both medical translators and medical professionals are prepositions and collocations, with 23 responses in each component. However, if the difficulty score is considered, the number of points attached to collocations considerably surpasses the number of points in the case of prepositions (72 points *vs.* 64, respectively).

Bearing in mind that translation is, to a large extent, a process of creative problem-solving (Karwacka 2016: 58 after Mackenzie 1998) and since the overwhelming majority chose collocations as the most problematic issue, the notion of collocations requires further analysis.

5.2. Collocations

Collocations, technically known as conventional syntagms, are the semantico-syntagmatic structures with some extent of combinability (Leśniewska 2008: 111, c.f. Białek 2009: 22). The term, initially introduced by J. R. Firth in the 1950s, is derived from Latin (Takač and Miščin 2013: 237). Definitions of collocations and the criteria for assessing the extent of collocability as well as their strengths are different (cf. Leśniewska 2008: 11, Badziński 2011: 13). Most researchers view them as multi-word phrases in language, including fixed expressions (Gledhill 2000: 1). Linguists distinguish different collocation levels in a given language based on "unpredictability", which is particularly visible in the case of a comparative analysis of two languages (Gledhill 2000).

Studies based on corpus analysis have also contributed to the popularity of the collocation phenomenon. As it becomes easier to access processed information, searching collocations has become simpler and, obviously, less time-consuming. Rapid technological development in data-processing, on the one hand, and a plethora of words that are annually created in the medical field on the other, have also contributed to an increased interest in medical collocations.

As a consequence, the difficulty connected with the proper use of collocations emerged. The results of many studies (e.g. Waller 1993, Howarth 1996, Nasselhauf 2003) clearly indicate that collocation-related problems are observed even at an advanced level of language, which may explain why seven professional translators (88%) and sixteen physicians (52%) indicated this problem. It is also reflected in the final product which is, in this case, translation.

Collocations constitute one of the most problematic issues both for translators and physicians who are involved in the process of translating their own texts. The notion of collocations is highly complicated, as they may range from totally free to totally fixed phrases and yet there is a huge gap between these two extremes. Generally, however, collocations fall into two major categories, i.e. grammatical and lexical. The first category is composed of a phrase that consists of a dominant word (noun, verb, adjective) and a preposition. Lexical collocations, on the other hand, are normally devoid of infinitives or prepositions and are made up of nouns, verbs, adverbs or adjectives (Badziński 2011).

However, some scientists use a more complex typology, applying different criteria to the term *collocation*, which as a language phenomenon, is perceived from completely different perspectives. Gledhill (2000: 1) distinguishes three perspectives: statistical/textual, semantic/syntactic and discoursal/rhetorical approaches. According to Gledhill (2000: 2), the first perspective frames collocations as the syntagmatic association of lexemes which prefer the company of another item rather than its synonyms because of usage-related constraints. Gledhill (2000: 2) states:

> from the point of view of many corpus linguists, all that separates collocation from mere word co-occurrence is the statistical level at which the researcher is happy to say that the co-occurrence is not accidental. [...] a textual collocation is likely to have a specific textual function or may occur in a rather restricted set of contexts.

The second approach, semantic/syntactic, is related to a more abstract relationship that exists between words and no reference to the frequency of occurrence is made. Therefore, the term *collocation* is extended from restricted collocations to less conventional notions i.e. grammatical collocation in which grammatical items are mixed with lexical ones (phrasal verbs) and de-lexical verbs (e.g. *take a decision*) (Gledhill 2000: 7).

As Gledhill (2000: 14) reports after Fernando (1996), the third approach, discoursal/rhetorical, is analyzed from the perspective of performance with the focus on rhetorical effect and no special attention is paid to lexical units or grammar.

Keeping the above typology in mind, the definition of the term *collocations* adopted for the purpose of the present paper and given in the survey was as follows: phenomena larger than words, which are fixed combinations of lexical items.

Proper communication and dissemination of knowledge must be based on the correct use of collocations as they constitute a key part of the English language and therefore form a rich and complex area which is quite frequently neglected by teachers, students and (even worse), translators themselves.

5.3. Other issues indicated by both groups of translators

Aside from the problems with collocations, other issues were indicated. Problems with tenses were reported by both groups, which is surprising in the case of medical translators, due to the fact that all of them had a language background and were graduates of different departments of English studies.

However, it is not surprising that seven physicians reported English tenses as a significant problem. Two of them provided further descriptions and specified the problem in a more detailed manner. The most problematic issue was connected with the use of past tenses, particularly past simple and past perfect. One respondent also noted a problem with using present perfect. It is obvious that unfamiliarity with the proper use of the correct tense may, in fact, disturb the order of the medical procedures in the text, which obviously instantly disqualifies such a paper due to ambiguity and confusion. It may stem from the fact that Polish learners of English are too conservative in following grammar issues and sometimes do not observe the context-related tense usage, which in this case is of paramount importance. It may even be speculated that the excessive use or overuse of the past perfect is a common occurrence, which may immediately result in the rejection of a paper by reviewers.

None of the respondents indicated problems connected with the passive voice. It might be partially explained by the fact that passive voice is mainly used in medical texts rather than past simple (rarely in perfect tenses) and therefore the structure is relatively easy. Passive forms in the Polish language (such as *obserwowany*, *zwizualizowany*) are most often translated directly into passive in English, hence this is probably why no difficulty was observed in this respect.

A multitude of nouns in medical expressions constituted another problem, since some of them originate from Greek or Latin, whereas others are typically English-derived lexemes. It would appear then that ideally they should not be mixed. However, their practical application shows something completely different (c.f. Badziński 2011). Greek, Latin and English prefixes are frequently placed next to one another, which for translators may pose some difficulty as to which prefix should be chosen. This problem was indicated by three respondents. In Polish, a common problem is related to nouns functioning as attributes. Furthermore, noun phrases in this instance do not only form expressions with two nouns, but they frequently collocate with three or four, which is one of the typical phenomena in specialist medical register. As a result, in one collocation the number of nouns occurring in a linear manner may reach three or four lexemes (*sleep apnoea syndrome; cancer pain treatment; stocking-glove distribution deficit*). The problem with the nouns may be related to the order of these components and their form, due to the fact that physicians have the tendency to put the plural form in the wrong places (*symptom occurrence vs. symptoms occurrence [sic!]*). A multitude of nouns may obviously be connected with the text layout and may be dependent on practical issues such as the common occurrence of phrases with *of*, which may encourage and promote the omission of this preposition by using the linear noun segments as indicated above. What is particularly important here is the fact that the random formation of such combinations is absolutely impossible due to the specificity of medical language.

The issue of a multitude of nouns may be part of the collocation category as it can be seen from a strictly grammatical perspective (problems related to the formation of the plural form) or the problem within the collocation itself.

The length of sentences in Polish is significantly different compared to English (Belczyk 2012: 46). Problems in this respect were observed by 18 respondents, which accounts for 46.1% of the total number of respondents. While English uses relatively shorter sentences with one or two complements, the structures in medical language in Polish are abundant with complements and interjections, often deprived of verbal phrases. Furthermore, the willingness of some authors to collect and place a large amount of information in one sentence often complicates the issue, thus resulting in extremely long structures. Such sentences sound absolutely natural and proper in Polish whereas, when translated into English, the meaning of the sentence becomes vague and blurred, often leading to clumsy and meaningless constructions. Dividing compound sentences partly solves the problem, however, it may result in the omission of crucial information not so much in terms of grammar but rather emphasis.

The lack of an appropriate tool (glossary, dictionary) – as one of the problems indicated by five respondents (12.8%) is rather thought-provoking and surprising considering the practically unlimited access to medical databases. Theoretically, glossaries and medical dictionaries should solve this problem so that it should not be observed at all. However, this ideal state was not confirmed by the questionnaire survey. In point of fact, contemporary reference sources and databases (medical databases, parallel and synonymous articles etc.) are numerous.

Wnętrzak (2008) tried to fill in the gap on the market in terms of providing particular field-related dictionaries. Considering the number of lexemes found there, it was partly achieved, yet at some point the publication procedures stopped and were not continued.

Finding the right grammar structure in English was a problem for 21 of 39 respondents, which may be due to the literal translation of sentences into English, which is still very common practice not only among physicians but also among translators. Impersonal structures probably pose the greatest challenge in this regard, which was reflected by additional opinions provided by three respondents in the survey. The lack of proper structure may be related to the accumulation of nouns, as already discussed above. Consequently, this issue is directly combined with other factors. An additional problem does not necessarily have to be related to the lack of adequate construction – it may be the lack of knowledge in this respect.

Articles, including zero article, and prepositions were also frequently mentioned problematic issues. Although the rules on their detailed use are widely discussed in the literature (Quirk 1997, Swan 2005), their proper use still remains a highly difficult task, as indicted by the survey questionnaire. In the case of Poles who speak English, the problem arises from the fact that articles do not occur in Polish. This is probably due in part to a superficial familiarization with the subject matter, and also to some disregard of the context-dependent phenomenon of countable and uncountable nouns where the given lexeme may occur as countable or uncountable depending on the surrounding lexemes.

In the case of prepositions, problems might be related to the literal translation of these parts of speech by means of *calque* or the fact that some prepositions occur only in Polish whereas in the equivalent expressions in the English language, such prepositions are not present *(wpływać na vs. influence).* Another explanation might also be the fact that certain words and phrases should be acquired together with the prepositions which are the integral parts of such phrases. Finally, the difficulties may be related to the use of a different preposition due to context – in other words the use of context-related prepositions (*complain about* used in the general register *vs. complain of* which is typical of the medical register).

The issue of prepositions is also directly related to collocations. This may concern both general language and a highly specialized register. At this point, it is difficult to offer any specific recommendations in this regard, since the phenomenon of the misuse (or the non-use) of prepositions is also closely related to the phenomenon of collocations. It should be stressed that in English the noun declension has a residual form, and cases are expressed by means of word order or, more importantly, by prepositions, of which *to*, *at*, *for* are the most prevalent (Belczyk 2004: 23). When the introduction of the instrumental form appears clumsy, in such situations it can be replaced by another expression (e.g. *by means of*). The context at this point seems to be very helpful. However, it is not a panacea for all of the difficulties encountered with prepositions, since it is not always possible to make a simple paraphrase to completely eliminate the preposition.

A few comments provided by physicians explicitly suggest that their language knowledge related to their own specialty does not seem to be similar to their knowledge of collocations. Furthermore, despite the correct use of single words, the general meaning of the sentence may be lost due to the erroneous use of collocations. In highly specialized texts (e.g. genetics, bioengineering) the main problem is related to adjectival phrases (as indicated by three respondents in the survey).

Based on the above analysis, it is clear that the "near-native" competence is absolutely required in the case of medical translation where inappropriate structures or words not only distort the meaning, which may have (literally) deadly consequences, but such errors may also discredit scientists. Therefore precision, however trivial it may seem, is of great importance.

6. Study limitation

The number of professional translators (eight) may be a study limitation. However, it should be borne in mind that it is difficult to obtain the acceptance and approval of medical translators for study participation (author's own observation).

7. Conclusions

To the best of the author's knowledge, this is the first study in Poland demonstrating the problems and challenges related to the translation of medical texts which has been carried out on the basis of a survey questionnaire distributed simultaneously among active translators and medical professionals in the Republic of Poland. The collected data are interesting due to the fact that the problematic issues are indicated by two completely different groups, both of whom are actively involved in the process of translation. Ignorance of collocations may obviously result in the rejection of a manuscript due to language inadequacy. This in turn, may adversely affect the reputation of the researcher, but, what is even more worrying, it may also be an obstacle to the dissemination of knowledge which under normal circumstances would have been published had it not been for the erroneous use of collocations. Considering their significant role related to the knowledge of medical collocations and their practical use for understanding and conveying medical knowledge internationally, further collocation-related empirical studies should be conducted. Furthermore, it is postulated that collocation-oriented studies should also consider the competence of the translator in the domain of collocations.

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Young adult literature in translation: The state of research

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Abstract

The aim of the article is to examine the concept of young adult literature, provide its historical timeframe, identify its key components, and, finally, discuss young adult literature in translation by presenting the state of research on the topic. After analysing the concept of a *young adult*, the article moves on to provide a brief summary of adolescent fiction's history, concluding that J. D. Salinger's *The Catcher in the Rye* and S. E. Hinton's *The Outsiders* largely contributed to the recognition of the genre. The paper mentions characteristic style choices employed by the authors of young adult fiction, the most prominent being the blend of registers or 'code-switching' between teen and adult speech, as acknowledged by Penelope Eckert and Chuck Wendig. Code-switching constitutes one of the main translation problems and is discussed at large in two compelling papers on the topic of young adult literature translation, namely *Translating Young Adult Literature. The High Circulation Rate of Youth Language and Other Related Translation Problems in "The Catcher in the Rye" and "The Outsiders"* by Saskia Tempert and *Translating Young Adult Literature: Problems and Strategies. John Green`s "An Abundance of Katherines"* by Loana Griguta. Both dissertations analyse the language of adolescent novels (in the twentieth and the twenty first century) and devise a list of strategies dedicated to adequately rendering English source versions into Dutch and Romanian, respectively. These writings indicate a growing interest in the field of young adult literature translation. The article expresses the hope that more scholars will elaborate on the topic.

Keywords

young adult literature, history of young adult literature, features of young adult literature, young adult literature in translation

Literatura młodzieżowa w przekładzie. Stan badań

Abstrakt

Celem artykułu jest zdefiniowanie pojęcia literatury młodzieżowej (*young adult literature*), nakreślenie jej ram czasowych, identyfikacja głównych elementów, a następnie omówienie zjawiska tłumaczenia literatury młodzieżowej poprzez zaprezentowanie stanu badań. Po zanalizowaniu pojęcia *young adult* (młody dorosły) artykuł przedstawia krótką historię literatury młodzieżowej, którą konkluduje stwierdzeniem, iż książki *Buszujący w zbożu* J. D. Salingera oraz *Outsiderzy* S. E. Hinton w ogromnej mierze przyczyniły się do uznania gatunku, jakim jest *young adult*. Artykuł omawia styl powieści dla młodzieży – najczęściej stosowanym zabiegiem jest tak zwane *code-switching*, czyli mieszanie i przenikanie się kodów językowych. Zjawisko opisane przez Penelope Eckert i Chucka Wendiga stanowi jedno z największych wyzwań tłumaczeniowych, o czym możemy przeczytać w dwóch pracach dyplomowych: *Translating Young Adult Literature. The High Circulation Rate of Youth Language and Other Related Translation Problems in "The Catcher in the Rye" and "The Outsiders"* autorstwa Saskii Tempert oraz *Translating Young Adult Literature: Problems and Strategies. John Green`s "An Abundance of Katherines"* autorstwa Loany Griguty. Obie rozprawy analizują język powieści młodzieżowych i opracowują listę strategii umożliwiających adekwatne przełożenie go na język holenderski (Tempert) i rumuński (Griguta). Wymienione prace sygnalizują rosnące zainteresowanie obszarem tłumaczenia literatury młodzieżowej. We wnioskach autorka wyraża nadzieję na pojawienie się większej liczby opracowań akademickich, gdyż koncept zdecydowanie wart jest głębszego zbadania.

Słowa kluczowe

literatura młodzieżowa, historia literatury młodzieżowej, cechy literatury młodzieżowej, tłumaczenie literatury młodzieżowej

1. Introduction

Young adult literature, though not named as such, has been present in the literary consciousness for at least five decades, shaping the minds of young audiences ever since J.D. Salinger's *The Catcher in the Rye* paved the way for the emergence of a genre that revolved entirely around adolescent struggles. Fast-forward to the present day where teen fiction is becoming increasingly popular, and although it is inherently designed for readers between 12 and 18, it is widely appreciated among other age groups, including, surprisingly, adult audiences over the age of 25. This makes it even more difficult to define the genre and unequivocally establish its real target readership. The article's aim is to discuss the notion of a young adult, to provide young adult fiction's historical timeframe, to demonstrate its main characteristics, and, finally, to analyse it in translation, tracing prevalent trends present in modern English-language YA literature and translations into different languages (focusing on European languages).

2. The recognition of a *Young Adult*

As mentioned by Michael Cart, the term *young adult* itself was not in use before World War II, as society did not recognise the need to acknowledge the developmental stage between childhood and adulthood. This view resulted from a political and economic situation in which children were forced to grow up essentially overnight (Cart 2010: 3). In such circumstances, youth culture was virtually non-existent, as teenagers, preoccupied with work and other adult responsibilities, simply did not have time to pursue education, let alone read for leisure. To put it simply, “until 1900 we were a society with only two categories of citizens: children and adults” (Cart 2010: 4). Luckily, in 1904 psychologist G. Stanley Hall coined a new category which he described in detail in his seminal publication entitled *Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education*. Though controversial, Hall’s work was eye-opening and extremely influential in its time. Despite not using the term *young adult*, his definition of *adolescence* agrees with our modern view on young adults, placing them between the ages of 12 and 19, and even stretching the age category to include the early twenties. Hall’s actions inspired the pursuit of education amongst teenagers, which eventually led to the emergence of youth culture in high schools, where larger groups of young people were being forced to spend time in each other’s company on a daily basis (Cart 2010: 5). Thus, a new social group was born, one with its own issues and struggles, mainly focused on such matters as love and dating – concerns that are still very much present in the lives of modern teenagers and, of course, remain visible in today’s young adult literature. Interestingly, even at the dawn of youth culture, it was already clear that it was a male-centered culture, so much so that a social worker at YMCA, H. W. Gibson, dubbed the adolescent psychology “boyology” (Kett 1977: 224). This stands in opposition to the present-day promotion of diversity which is especially apparent in the modern YA books’ choice of protagonists, which include more and more female, as well as LGBTQ characters. Influenced by G. Stanley Hall, two scholars: Robert James Havighurst and Erik Erikson, published their psychological works on the stages of human development, and both covered the stages of adolescence and young adulthood, the former identified as 13 to 18 years old, and the latter – 19 to 30 (Cart 2010: 7). Cart states that the acknowledgment of young adults was long overdue, and whether or not we agree on the nomenclature – the *young adult* versus *adolescent* debate is heated to this day – we cannot deny that the recognition of this separate stage of life opened up numerous opportunities for therapists, youth workers, educators, and, naturally, teenagers themselves.

3. The emergence of Young Adult literature

Sadly, the more positive attitude towards young people and their struggles did not result in publishing houses catering to this particular age group, largely due to the fact that teenagers were still mainly regarded as children (Cart, 2010: 8). However, as noted by Nilsen and Donelson, over the first four decades of the twentieth century public opinion started recognising the distinct needs of this new age category, and books for adolescents began to emerge (Nilsen and Donelson, 2009: 42). A new type of book, a story for teenagers about teenagers, finally landed on the shelves, and in this new genre one could find *The Hardy Boys* series (for boys) and *The Nancy Drews* series (for girls), written in 1927 and 1930, respectively. When the Little, Brown and Company publishing house published *Sue Barton: Student Nurse* by Helen Boylston in 1936, the market for teenage stories exploded, and Boylston's work became one of the most popular books in the history of YA literature (Cart 2010: 9). Though numerous publications followed, the one worth mentioning is definitely *Seventeenth Summer* by Maureen Daly (1942), which, as the author herself said, was not meant to be a juvenile novel, but a full adult novel (Berger 1994: 216). Yet, due to the author's young age at the time of publication and the publisher's decision to target the book at a younger demographic, it entered the market as part of the teen fiction genre. A love story written in first person, *Seventeenth Summer* resembles contemporary young adult novels, and though now outdated, the book certainly set a trend for future generations of writers to follow. Even Daly's contemporaries derived from her formula, writing and publishing innocent romances revolving around female protagonists. These became the staple young adult reads throughout the forties and fifties (Cart 2010: 15). And then, like a breath of fresh air, came *The Catcher in the Rye*, the absolute opposite of its prim and proper predecessors. Published in 1951, originally for adult readers, the book quickly resonated with adolescent audiences, largely due to its first-person narration, which contemporarily constitutes a prevalent trait of young adult fiction (Wendig 2013). Interestingly, it is Salinger's piece that established the tradition of a first-person narrative, even more so than Daly's *Seventeenth Summer* (Cart 2010: 27). But there was more to *The Catcher in the Rye* than just its narrative voice. Its adolescent tone and the choice of themes, including the depiction of various rites of passage, made the protagonist, Holden Caulfield, exceptionally relatable for teen readers. Cynical, funny, and troubled, Caulfield became an icon – the symbol of rebellion – and to this day he is considered an archetypal teenager (Legan 2012). Salinger's book sparked interest in real adolescent problems, and the answer to these problems lay in S. E. Hinton's *The Outsiders* (1967), which touched upon issues such as social class and family problems. Hinton herself commented on the fact that authors of teenage books are "fifteen years behind the times" (Hinton, 1976: 26), calling for authors to stop focusing on writing romances and depict reality instead. The critics expressed the same view, pointing out the general lack of realism in teenage novels (Cart 2010: 26). Hinton's book was innovative – it was praised especially for showing violence and inserting it into the daily lives of her characters. The author's rejection of norms changed the status quo and facilitated the birth of a new type of literature. Though a bit outdated now, *The Outsiders* paved the way for modern YA novels that deal with violence and defiance.

4. Modern adolescents and their needs

Young adult literature has come a long way, and nowadays is truly "coming into its own" (Crocker 2003: 76). As noted by the authors of the textbook entitled *Young Adult Literature: Exploration, Evaluation, and Appreciation*, well-written YA books can do much more than merely bring enjoyment to adolescent readers – they foster understanding and assist in self-development, as well as allow readers to explore different life experiences (Bucher and Hinton 2014: 1).

In order to understand the literary needs of a modern teenager, it is crucial to note that today's young adult differs substantially from the adolescent from a couple of decades ago. It has been proven that contemporary adolescents mature faster, have more cognitive knowledge, and face issues that previous generations have not been familiar with, such as eating disorders, substance abuse, sexually transmitted diseases, peer pressure and anxiety (Bucher and Hinton 2014: 2). Although each individual is different and, naturally, deals with their own distinctive problems, these concerns serve as a guideline not only for writers, who touch upon these topics in their writings, but also teachers and educators who work with teenagers and establish their relationships with the youth through literature.

Since the contemporary young adult is more mature, contemporary young adult literature is more mature as well – it incorporates more complex themes and serious subjects (Cart 2001: 95). The most pivotal difference is the polyphony of today's YA, the multitude of perspectives, especially the emergence of previously unheard voices – those of gays and lesbians, the disabled, black communities, as well as different ethnicities and religions. The abundance of perspectives is meant to ensure that every adolescent relates to and identifies with at least a small number of YA books, allowing the teenagers who used to feel underrepresented to finally see themselves (or rather their reflections) on the pages of a book. Though often downplayed by the critics as one-dimensional and less complex, adolescent literature gained recognition and due respect circa 2000s, largely owing to Michael Cart, who devoted his career to promoting books written for youth that felt neglected and overlooked because of their sexual orientation, national origin, religious beliefs, physical appearance, *et cetera*. Cart remarks that "something wonderful has happened to young adult literature" (Cart, cited in Donelson and Nilsen 2009: 5), as it not only exploded in quantity, but also greatly improved in quality, and can no longer be dismissed as a genre, for contemporary YA authors truly offer an amazing insight into the minds of modern teenagers, simultaneously granting young readers the chance to learn tolerance, empathy, understanding, kindness and compassion.

Youth will inevitably grow up, hence we should start educating younger generations from the very beginning.

According to Bucher and Hinton, young adult literature deals with issues, problems and experiences that contemporary adolescents relate to (family relations, romantic relationships, illness and death, peer pressure, substance abuse, sexual experimentation) and it considers contemporary world perspectives, including cultural, social and gender diversity, as well as sociocultural and political aspects (Bucher and Hinton 2014: 9-10). Adolescent books usually revolve around one central plot, narrated from the teenage perspective (not necessarily in first-person narration), mostly focusing on the life of one main character. Interestingly, under the general name of 'young adult literature' there lies a multitude of genres and categories, some of which include fantasy, science fiction, realistic fiction, romance novels, dystopia, adventure, mystery novels, short stories, and many more.

When it comes to style, YA novels are often sophisticated and compelling (Christenbury 1997: 11). They tend to include a specific adolescent language. As noted by Ignacio Palacios Martínez, this characteristic sociolect consists of reductions and simplifications (*wanna*, *gonna*), negative forms (*ain't*, *dunno*; an abundance of negatives such as *never* and *none*), quotatives (*like*), insult words and colloquialisms, intensifiers (*totally*, *absolutely*), vague expressions (*loads of*, *thingy*), non-canonical tags (*yeah*, *right*, *okay*, *eh*), and more (Palacios Martínez 2011: 110-1200). While another scholar, Penelope Eckert, agrees with Palacios Martínez to some extent, she argues that such a diverse group cannot be treated as a homogenous category, as every adolescent has their own unique type of speech (Eckert 2004: 386). Chuck Wendig, on the other hand, remarks that teenagers in YA fiction "sound like adults" (Wendig 2013). He mentions the adult-like speech as one of the prevalent features of adolescent literature, which in turn may be linked with Loana Griguta's observations on code-switching – the alteration of more than one style, dialect or register (here: blending youth and adult language) – which poses difficulties for the translators, as it requires them to achieve semantic and stylistic equivalence and convey the source function (Griguta 2013: 28). This brings us to the next concern of the article.

5. Translating young adult literature

That being said, even though young adults are such a prominent social group and nowadays the literature addressed to them occupies a high and respectable position in the publishing market, the academic interest on the topic of translating YA literature is only beginning to grow. Before the boom for modern YA books started in the 2000s, the notion of translating young adult literature was only mentioned in works concerning translating children's literature (CL). Even though there are a great number of comprehensive sources on translating CL (Gillian Lathey, Ritta Oittinen, Reinbert Tabbert and Emer O'Sullivan, to name a few), I would like to focus on texts devoted solely to translating YA. The texts written specifically on that topic consist mainly of various dissertations and articles published on the Internet.

There are, however, some extensive academic sources, one of which is Kristana Miskin's piece entitled *YA Literature in Translation: A Batch of Batchelder Honorees*. The article draws a parallel between teenagers and translated literature, discussing how they both do not fit into fixed categories – teenagers are stuck between childhood and adulthood and translated literature belongs simultaneously to multiple languages and to no language in particular (Miskin 2011: 67). Connecting adolescents to translated literature creates an opportunity to explore personal and national identity, and allows readers to learn more about the world. Given the size of the American publishing industry, the United States publishes much fewer translated works than other developed countries. Miskin remarks that a solution to this problem may lie in searching for books in the list of nominees and winners of the Mildred L. Batchelder Award – a prize awarded to publishers who print the most outstanding children's or teen book "originally published in a foreign language in a foreign country," then translated into English and published in the U.S. (ALA 2018). The aim of the award is to promote cross-cultural understanding, and the committee thoroughly examines the English translations in terms of theme, style, presentation, plot and character development (Miskin 2011: 67). The committee members stress that the readers should be able to tell that the book comes from another country. At this point it is crucial to highlight the role of the translator, who shapes the target version and decides which foreign elements should be retained, explained or adjusted in order to teach young readers something new without alienating and overwhelming them. Well-translated books have the power to broaden the readers' perspective and educate them on life in different parts of the world. Here we can draw another parallel between young adult literature and translated literature, as they both offer new perspectives and help develop empathy towards those with different experiences. Miskin mentions that translated literature can become a tool for educators and may be used to teach about specific geographical areas or historical periods from a different point of view (Miskin 2011: 68). She goes on to describe the winners of the Mildred L. Batchelder Award and remarks that the list is dominated by Western-European languages (especially French and German), which may be the result of these countries' long-standing literary traditions for children and young adults, or perhaps the publishers' narrow-mindedness and tendency to exclude translated works from their publications. The author concludes the article by expressing the hope that publishing houses will grant the American readers access to worthy titles from all around the globe.

The case is quite the opposite for the rest of the world, where the books translated from English have maintained a steady position in the publishing markets; in Poland, for instance, they constitute 56% of all the translated texts (which in turn constitute 21% of all the published books) (Biblioteka Narodowa 2016: 31-32). Interestingly, the percentage of translations in the young adult books published in Poland amounts to as much as 62%, thus holding the second place in the number of translated publications after comic books (80% of which are translations), which one could arguably insert into the adolescent category as well.

Having established that translated literature, or translated young adult literature, to be exact, occupies a prominent position on the literary markets around the world, we may now focus on the issues connected with translation itself. For the purpose of this part of the article we will concentrate on translation from English into different European languages.

Translating for adolescents poses many difficulties and challenges, some of which are characterised in Cristina Chifane's adequately titled *Old and New Challenges in the Translation of Young Adult Novels*, an article that deals with translations of Andy Brigg's books *HERO.COM* and *VILLAIN.NET* into Romanian. The author begins with highlighting the importance of the titles, one of which includes an acronym (Higher Energy Research Organization) that may be considered the first translation challenge. Chifane explains that the titles (and therefore the names of the fictional websites) have been preserved, while the subtitles (*Rise of the Heroes* and *Council of Evil*) were translated into Romanian. Surprisingly, Andy Brigg's message to the readers in the form of an email was entirely deleted and not included in the Romanian publication, much to Chifane's disappointment. Chifane goes on to talk about other deviations, this time at the linguistic level. She mentions five deviations: phonological, graphological, lexical, grammatical and semantic (Chifane 2014: 80-85). Phonological deviation occurs in intense situations in the books, where the English version is very expressive and the Romanian version follows normative structures. Graphological deviation is connected with the visual elements on the page, such as capital letters or parentheses and their retention or lack thereof. Lexical deviation includes malapropisms, colloquialisms and vulgarisms, as well as language novelty (creative nicknames, for example) and their rendition into Romanian (which is not always possible). Grammatical deviation involves numerous morphological and syntactic changes, which are not seen as ignorance, but as a deliberate stylistic choice. Semantic deviation concerns the transference of meaning, especially when it comes to metaphors, similes and hyperbole in this specific case. Chifane also points out that due to the target reader's familiarity with the English terminology, English words were preserved and adapted to the Romanian linguistic structure, hence the translation includes many Anglicisms. The author concludes the article by stating that the translation process for the series resembles the confrontations in the novels and involves a linguistic confrontation, which means that it deals with instances of linguistic deviation or cases of non-equivalence. She suggests that translation strategies chosen by the translator should perhaps be revisited in order for the target version to meet the modern market requirements (Chifane 2014: 285).

Although Chifane's article points out some problematic elements when it comes to translation and provides theoretical framework that other scholars may derive from, the article does not answer the question "How should a translator treat young adult literature?," which is the exact question posed by Saskia Tempert in her master's thesis *Translating Young Adult Literature. The High Circulation Rate of Youth Language and Other Related Translation Problems in "The Catcher in the Rye" and "The Outsiders"* (Tempert 2013: 26). Tempert admits that little research has been done so far, hence it is rather difficult to pinpoint the exact translation problems of young adult literature. She notes that YA is often treated as children's literature and translators employ strategies and techniques usually attributed to translating children's fiction. Despite the similarities between these two genres, the approach towards translating them, even though sometimes imposed by the publisher, may be different (as noted by Tempert, publishers may demand that translators omit certain more mature themes while translating children's literature, which would not be the case when it comes to young adult literature) (Tempert 2013: 28). Tempert mentions the non-standard variety of youth language, also noted by Loana Griguta (2014). She writes about deviations from standard language and code-switching – alternating between different linguistic registers within the same utterance (Tempert 2013: 29). Another interesting point brought up by Tempert is the fact that language can date a young adult book. She cites Lawrence Venuti, who wrote that the original is eternal, whereas translation will always be a copy, and remarks that this may be the reason why *The Catcher in the Rye* in English continues to be a timeless classic, while it already has three different Dutch translations. As a consolation, Tempert explains that even though the translation may become dated, it does not necessarily become completely obsolete. However it might lose its relevance, particularly to adolescent readers.

Both Tempert and Griguta mention translation strategies in their dissertations. The former makes use of Michal Mašlaň's model, which includes neutralising, substitution with a target language equivalent, substitution with a target language non-standard element, and amplification; the latter employs the methodology by Van Coille (copy, exonym [replacement with a TL counterpart], phonetic adaptation, literal translation, substitution with a synonym, omission, addition, compensation and rearrangement). One minor strategy provided by Göte Klingberg and mentioned by Tempert is particularly worth noticing: modernisation, that is a more radical form of adaptation (it involves altering the whole text to fit a more recent time or place) (Tempert 2013: 37). A key to employing this strategy is the translator's competence and great knowledge of both the source language and the target language non-standard variety, which is essential in order to make appropriate translating decisions.

Even though Tempert's and Griguta's works gather some basic information on translating young adult literature which may help enhance future research, scholars, as well as working translators, would definitely benefit from a higher number of extensive resources on how to translate YA literature, especially in the form of academic texts. As proven by the first three sections of this article, adolescent fiction is immensely valuable for young readers, and the need for identifying key translation problems and pinpointing strategies for tackling them should definitely be answered. It is certainly a topic that I wish to explore and elaborate on in the future.

6. Conclusion

There is no denying that young adult literature has been a crucial part of people's literary experience for more than fifty years now, however it truly exploded in the 2000's with the multitude of voices and perspectives that enabled every teenager to identify with characters on the pages of books. Teenage fiction touches upon such important issues as identity, sexuality, family, relationships, illness, death, and many more. It is written in a unique style that often includes a characteristic blend of registers or code-switching. The issue of translating YA literature, however, is only now being recognised by scholars. Some of the works on this issue include Kristana Miskin's piece on the state of translated works in the United States (and the same author's dissertation on the transnational exchange between the U.S. and Germany, which was not discussed in the article), Cristina Chifane's review of two Andy Brigg's books translated into Romanian, and two dissertations, the first one by Saskia Tempert on the translations of *The Catcher in the Rye* and *The Outsiders*, the second one by Loana Griguta on the translations of *An Abundance of Katherines*. Both papers try to pinpoint the characteristic and unique translation problems encountered by translators of YA novels, conclude they mainly lie in the distinctive language of teenage fiction, and attempt to solve these problems by means of specific translation strategies. Even though these theses raise some important matters, the notion of translating young adult literature is a rich source, and I look forward to exploring this meaningful subject in the future.

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Dialectically-marked proper nouns in audiovisual translation: An analysis of the English subtitles to *The Peasants*[1]

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Abstract

The aim of this article is to analyze translation techniques used in the film translation of dialectically-marked proper names. Undoubtedly, the issue of rendering dialectical varieties constitutes one of the greatest challenges in interlingual translation. The applicable translation techniques, however, are frequently in conflict with the rules of reducing audiovisual target text to an indispensable minimum. The research material consists of the English subtitles to *The Peasants* (*Chłopi*, dir. Jan Rybkowski, Telewizja Polska S.A. 1973; English translation by Agata Deka, PolArt Video 2006). This article outlines the main theoretical approaches and translation techniques which can be used in the cases of dialects, proper names, and audiovisual translation. The research part aims at verifying the hypothesis's claim that these translation methods which require implementation of more complex procedures than, for instance, omission (e.g. replacing the source language

[1] This paper is based on a fragment of the author's MA thesis entitled "The Untranslatability of Dialects into the Language Used in Films: An Analysis of Translation Techniques Used in the English Subtitles to *The Peasants*", written under the supervision of Dr habil. Marek Kuźniak, Professor at the University of Wrocław.

dialect with a target text variation) are not applicable in the case of audiovisual translation. The conclusion consists of the outline of the main translation tendencies as well as the verification of the aforementioned hypothesis.

Keywords

proper nouns, dialect, audiovisual translation, *The Peasants*, Władysław Stanisław Reymont

Nacechowane dialektycznie nazwy własne w przekładzie audiowizualnym. Analiza angielskich podpisów do filmu *The Peasants*

Abstrakt

Celem niniejszego artykułu jest analiza technik tłumaczeniowych wykorzystywanych w filmowym tłumaczeniu nacechowanych dialektycznie nazw własnych. Nie ulega wątpliwości, że przekład dialektów stanowi jedno z największych wyzwań w przekładzie międzyjęzykowym. Niestety, techniki wykorzystywane przy tego typu tłumaczeniu często kolidują z zasadami przekładu audiowizualnego, które mówią o redukcji tekstu wyjściowego do niezbędnego minimum. Za materiał badawczy posłużyły angielskie podpisy do filmu *The Peasants* (*Chłopi*, reż. Jan Rybkowski, Telewizja Polska S.A. 1973; przekład na język angielski autorstwa Agaty Deki, PolArt Video 2006). W artykule przedstawione zostaną główne założenia teoretyczne oraz techniki tłumaczeniowe, które mogą zostać wykorzystane w przekładzie dialektów, nazw własnych i w przekładzie audiowizualnym. Część analityczna stanowi próbę weryfikacji hipotezy mówiącej o tym, że te metody przekładu, które wymagają zastosowania bardziej złożonych procedur niż, na przykład, opuszczenie (takie jak np. zastąpienie dialektu języka wyjściowego dialektem języka docelowego) nie znajdują zastosowania w przypadku przekładu audiowizualnego. W podsumowaniu przedstawiono główne tendencje tłumaczeniowe oraz weryfikację wyżej wymienionej hipotezy.

Słowa kluczowe

nazwy własne, dialekt, przekład audiowizualny, *The Peasants*, Władysław Stanisław Reymont

1. Introduction

In accordance with Berezowski (1997: 9), “People seem to have been aware of language diversity ever since,” the earliest surviving dialect-related records can be traced back to the biblical Book of Judges or, in English literature, to William of Malmesbury (1080–1143) and his complaints on the harshness of speech in Yorkshire (Berezowski 1997: 7–9). Nevertheless, the study of dialects developed no earlier than the 19th century, and it examined lexical items which occurred in the scholars’ places of residence. Within the last few decades, the constantly growing interest in dialects resulted in the development of several narrow-field studies, e.g. descriptive linguistics and phonetics (Dejna 1974: 16) and, finally, gave rise to dialectography (dealing with lexicographic, phonetic, and grammatical features of a given variety) and dialectology (a “study of dialects as language types distinguishable by a complex of dialectical features”; Szwedek and Koerner 2001: 134). As far as the Polish language is concerned, Dejna believes that the standard variety of Polish is a cluster of its dialectical variations or, more precisely, a “collection of mutually intelligible dialects[2].” Therefore, the term of *dialekty języka polskiego* (“dialects of the Polish language”) should be replaced with *dialekty polskie* (“Polish dialects”; Dejna 1974: 26; cf. Chambers and Trudgill 2004 [1998]: 3).

In contrast to the above study of dialects, studies on audiovisual translation (hereafter referred to as “AVT”) can be traced back a few decades. Despite the fact that AVT is a relatively new mode in translation studies, one may find numerous studies discussing its peculiar character. Nevertheless, the issue of

[2] All translations, if not otherwise stated, are mine: A.D.

dialect translation in AVT remains an uncommon topic in academic papers. In AVT in general, translators most frequently use techniques aiming at shortening and simplifying the TT, such as the methods of omission and adaptation (cf. Tomaszkiewicz 2006: 155-168; more on this issue in section 2.3. of this article). However, to the author's knowledge, no clear-cut set of translation techniques applicable to AV substandard translation has yet been proposed.

Consequently, this article will analyze the translation techniques which may be useful in the process of translating substandard proper names in AVT. The theoretical part is therefore divided into four sections. The first section provides a description of the notion of dialect, listing adequate translation techniques used in literary translation [on the basis of the two prominent Polish works on this matter, which are: *Dialect in Translation* by Leszek Berezowski (1997) and *Iluzja przekładu* by Krzysztof Hejwowski (2015), respectively]. In the second section, the issue of proper names ("PNs") is examined. By analogy to the previous section, this part also aims at outlining the most popular translation techniques used in PN translation. The third section illustrates the phenomenon of AVT and corresponding translation techniques. The fourth section summarizes what has been said so far, juxtaposes the sections on dialects, PNs, and AVT, and tries to evaluate the usefulness of each of these techniques in AVT of the substandard PNs. The third subchapter of the article is the research proper. This section analyzes substandard PNs derived from the subtitled screen adaptation of Władysław Stanisław Reymont's *Chłopi* (*The Peasants*; dir. Jan Rybkowski, Telewizja Polska S.A. 1973; the version distributed on the American market with English subtitles provided by Agata Deka, PolArt Video 2006). Finally, the fourth subchapter summarizes the research outcomes and draws conclusions regarding the applicability of the translation techniques while dealing with AV substandard translation.

2. Theoretical framework[3]

2.1. The concept of dialect and corresponding translation techniques

It seems reasonable to state that it is not an easy task to define the term "dialect." As observed by W. N. Francis:

> Any language spoken by more than a handful of people exhibits this tendency to split into dialects [...]. Actually there is no positive and clear-cut way to establish criteria by which separate dialects can be distinguished from separate languages. It thus appears at the outset that we cannot precisely define our subject matter.
>
> (Francis 1987 [1983]: 1)

Generally referred to as a "language variety" characterized with a tendency of undergoing constant gradual changes (Baker 1992: 15; Dejna 1974: 13-14; Shuy 1971: 5 among others), dialect is defined as a "substandard, low-status, often rustic form of language, generally associated with peasantry [...] or other groups lacking prestige" (Chambers and Trudgill 2004 [1998]: 3, 105). The aforementioned observations imply that non-standard varieties have their currency within local speech communities (Baker 1992: 15; Shuy 1971: 4). One may speculate, then, that every language is an "artifact" used by "human beings to impress their individuality upon their surroundings" (Chambers and Trudgill 2004 [1998]: 102). Dejna (1974: 16) supports this view, stating that distinctive speech contributes to a given ethnic group's unity. Nevertheless, a user of a rustic language variety is frequently considered "provincial, uncultivated, uneducated, and even stupid" (Francis 1987 [1983]: 8-9). This trend was intensified a few decades ago, when one observed a significant educational gap between the working class and an elitist society (Francis 1987 [1983]: 8-9). Finally, Shuy notes: "Dialect

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[3] The article makes use of the following abbreviations: SL/SC/ST – respectively: source language/culture/text; TL/TC/TT – respectively: target language/culture/text.

is a frequent source of humor; it can also lead to reinforce prejudice. But most people find it interesting and are curious about its origins and distribution" (Shuy 1971: 7).

Despite various views on the subject matter, one fact seems to be indisputable: a dialect variation differs from its standard counterpart in many respects. Many theoreticians point at the distinguishing lexical, grammatical, and phonological features of dialects (Shuy 1971: 4; Chambers and Trudgill 2004 [1998]: 5 among others). As for other views on this matter, Catford defines the issues of "common core" and "markers," the former of which provides a set of aspects unified within all varieties, whereas the latter defines all unique features conditioning a given variation's separateness (Catford 1965: 86). Consequently, all standard varieties are commonly regarded as "unmarked" and thus "can usually be translated in an equivalent unmarked TL dialect" (Catford 1965: 86). It may be concluded, then, that the analyzed obstacles in dialect translation may result from their "markedness". In light of the theory above, the phenomenon of preiotation (observed in several anthroponyms examined in the research part of this paper) may be considered as a Polish dialectical "marker".

Translating substandard varieties may be viewed as an especially challenging task for translators. Pondering over the issue of dialect translation in literature, many theoreticians underscore the possibility of either replacing a ST dialect with a non-standard TL variation or smoothing ST's "illegible" expressions by neutralizing or omitting them (more possibilities of this kind of opposition are examined later on in this paper). Consequently, one may distinguish a TL geographical equivalent usage, which, in principle, is supposed to correspond to a "dialect related to the same part of the country" (Catford 1965: 87). Although advocated by Lebiedziński, who states that the ST effect can be at least approximated in this manner (Lebiedziński 1981: 91 qtd. in Berezowski 1997: 33), this method is frequently blamed for not taking into account the accompanying linguistic and cultural factors (Wojtasiewicz 1992 [1957]: 90).

Still, in discussing theoretical approaches towards substandard language varieties, one should not forget about the two important works on this issue in Poland, which are, respectively, *Dialect in Translation* by Leszek Berezowski (1997) and *Iluzja przekładu* by Krzysztof Hejwowski (2015). Therefore, the following paragraphs aim at outlining the theories presented by these two scholars, list the translation techniques which, in their respective opinions, are applicable in substandard lexical items translation, and give insight into a critical view provided by the latter towards the assumptions of the former.

Berezowski suggests using one of the following techniques: *neutralization* ("smoothing" the ST linguistic peculiarities by translating them to the TL standard variety); *lexicalization* (containing "some traits of the SL text dialect, although the traces are few" Berezowski 1997: 52); *partial translation* (similar to lexicalization; preserving the third language's lexical items in the TT); *transliteration* (conveying ST phonological units in TL graphological form); *speech defect* ("a procedure foregrounding defects in speakers' phonology as a vehicle of translating the social deixis of the original" Berezowski 1997: 62); *relativization* (characterized by the "reduction of the SL dialect into the TL forms of address and honorifics" Berezowski 1997: 66); *pidginization* (replacing the ST with a TL pidgin variation); *artificial variety* (involving a hypothetical, non-existing TL dialect); *colloquialization* (making use of colloquial TL features) and *rusticalization* (translating ST to a TL regional variety; Berezowski 1997). Berezowski believes that the neutralization procedure is the most radical way, as it "strives to guard the integrity of the text undergoing translation against any distortions at the cost of forgoing its social deixis altogether" (Berezowski 1997: 89-90). The subsequent three techniques, in turn, limit translation of social deictic meaning, whereas the relativization technique aims at conveying social hierarchy. Finally, the four remaining solutions "rely on full nonstandard TL varieties, running thus the risk of replacing the original intertextuality with associations not latent in the SL text" (Berezowski 1997: 89-90).

Hejwowski, in his *Iluzja przekładu* (2015), criticizes Berezowski's assumptions. While emphasizing the importance of *Dialect in Translation* for dialect studies in Poland as a "must-read" for all literary translators, Hejwowski suggests supplementing it with additional information and corrections (Hejwowski 2015: 221). For instance, Hejwowski criticizes the use of the term "strategy" in Berezowski's work. In Hejwowski's opinion, a translator typically chooses between several trans-lation techniques which can be used throughout one text. Among other things, this may result from the fact that – very often – the author of a dialectically-marked text is not a speaker of a given substandard variety (Hejwowski 2015: 232-233). Moreover, Hejwowski comments on Berezowski's method of examining "dialect markers" on four language levels (Hejwowski 2015: 225-226) and provides his own classification of translation techniques applicable in the case of translating substandard varieties. These are: *transfer*; *transfer with additional explanations*; *transcription*; *transcription with additional explanations*; *neutralization*; *neutralization with translator's comments* (either given in a text or in a paratext); *functional equivalent*; *stylization* (which includes colloquial; slang; over-standard; rustic; and urban stylizations); *relativization*; and *omission* (Hejwowski 2015: 226-246[4]).

However, it has to be noted that many of the translation techniques listed both by Berezowski and Hejwowski supplement the text with additional comments, substitute a given phrase with a description, *etc.*, in short – make the TT longer. However, the mode of AVT examined in this paper does allow for text extensions. Yet, before this mode is considered, the following part describes the phenomenon of PNs, along with listing the most frequently used translation techniques in this regard.

[4] Apart from the above, Hejwowski states that, in Berezowski's work, the functions of applying language varieties in literary texts were analyzed too briefly (Hejwowski 2015: 221). Consequently, he lists his own classification of language functions, which are: mirroring social differences; displaying ethnic belongings; reflecting the speaker's poor knowledge of language; the speaker's characteristics; showing the speaker's belonging to given subculture or professional group; pointing at time distance; and a language joke (Hejwowski also notes that frequently these functions overlap; Hejwowski 2015: 221-225).

2.2. The concept of proper names and corresponding translation techniques

The *Oxford Advanced Learner's Dictionary* (2010) defines PN as a "word that is the name of a person, a place, an institution, *etc.* and is written with a capital letter." Therefore, a PN is frequently contrasted with a CN, described as "a word […] that refers to an object or a thing but is not the name of a particular person, place or thing" (*Oxford Advanced Learner's Dictionary* 2010). Additionally, Hejwowski notes that a PN is constructed of a given word or group of words, which are used to identify a specific item – either in reality or only as an imaginary object; PNs show signs of repeatability; and they, unlike adjectives for instance, typically do not call for any additional traceability forms (Hejwowski 2006 [2004]: 88).

As observed by Särkkä (2007; Internet source), there are many distinctive features distinguishing PNs from CNs. For instance, PNs are not preceded by a demonstrative pronoun (e.g. "this John just bought a car" is not common, unless several people share this name) nor do they usually accept "restrictive adjectives" or "restrictive relative clauses" (e.g. "old Shakespeare" refers to a particular time in Shakespeare's life and, from the grammatical point of view, the word in question shall be treated like a CN). Moreover, it is generally accepted that PNs are used for the "identification" of people, places, objects *etc.* As stated by Vermes, "The translation of proper names has often been considered as a simple automatic process […] due to the view that proper names are mere *labels* used to identify a person or a thing[5]" (Vermes 2003; Internet source; emphasis mine). Therefore, despite the existence of numerous theoretical frameworks regarding the issue of translating PNs (some of which are examined later in this part), there are scholars who claim that PNs should not be taken into consideration while translating a given text. For instance, Newmark believes that the lexical

[5] Newmark (1988) distinguishes between three types of PNs, namely: people's names, object's names, and geographical terms.

items in question should not be translated, unless they have well-known TL counterparts, e.g. names of monarchs (Newmark 1988: 214), whereas Särkkä notes that the issue of leaving PNs untranslated shall be regarded as the "basic rule" of interlingual translation (Särkkä 2007; Internet source). However, Nord observes that in real life "proper names may be non-descriptive, but they are obviously not non-informative" (Nord 2003; Internet source). Additionally, Nord implies that the "mono-referential" character of PNs (as compared to CNs) does not necessarily exclude their wide functionality (Nord 2003; Internet source). Similarly, Tymoczko holds that PNs are "dense signifiers" of "racial, ethnic, national, and religious identity" and thus are "the most problematic to translate, in part because their […] significance is often culturally specific and dependent on cultural paradigms" (Tymoczko 1999: 223-224). The view that PNs should be translated is also supported by Hejwowski who rejects many prevailing opinions on this group of words, stating that PNs are meaningful lexical units which are able to carry connotations with certain phenomena (e.g. the PN of "Kubuś Puchatek" is typically associated with a popular character known from A. A. Milne's books; Hejwowski 2006 [2004]: 86). Moreover, Hejwowski observes that the meaning of a given PN depends on its mental representation in the speaker's / listener's mind (Hejwowski 2006 [2004]: 86-87). Hejwowski also observes that all PNs used to be meaningful lexical units, but they undergo the process of conventionality (Hejwowski 2006 [2004]: 88).

Regarding the issue in question, a wide range of translation techniques has been proposed so far. Hervey and Higgins (2002), for instance, claim that translators can choose between the renowned options of domesticating (*i.e.* translating the ST lexical items in a way in which they are better understandable by the target audience) or foreignizing (*i.e.* leaving the strange-sounded lexical items as they are presented in the ST thus showing the target reader that TT was originally constructed in a foreign speech; cf. Gottlieb 1997: 317, among others) PNs. Hermans elaborates, stating that PNs can be

> *copied*, i.e. reproduced in the target text exactly as they were in the source text. They can be *transcribed*, i.e. transliterated or adapted on the level of spelling, phonology, *etc.* A formally unrelated name can be *substituted* in the target text for any given name in the source text. And insofar as a name in a source text is enmeshed in the lexicon of that language and acquires 'meaning,' it can be *translated*.
>
> (Hermans 1988: 13; emphasis mine)

Davies (2003) supplements the aforementioned set of procedures with: *addition* (in cases in which translators "decide to keep the original item but supplement the text with whatever information is judged necessary"; Davies 2003: 77); *omission* (in which a translator omits problematic PNs, "so that no trace of it is found in the translation"; Davies 2003: 79); *globalization* ("the process of replacing culture-specific references with the ones which are more neutral or general"; Davies 2003: 83); *localization* (occurring in cases in which the translator "tries to anchor a reference firmly in the culture of the target audience"; Davies 2003: 83-84); *transformation* (involving "alteration or distortion of the original"; Davies 2003: 86); and *creation* (inventing a radically different PN in TT, which frequently makes use of compensation; Davies 2003: 72-89). Finally, Meyer (2008) identifies the techniques of substituting a PN with a *corresponding pronoun* (with reference to the past events) and replacing it with an *explanatory comment*. Hejwowski also contributes to the theory of translating problematic PNs by listing the following six techniques: *reproduction* (*i.e.* leaving PN in its original form, either without additional comments or with a footnote at the bottom of a page or an explanation in a text); a subtle *retouching*, bringing PNs closer to the TL grammatical and lexical rules (by removing diacritical marks from PNs); *transcription* (applicable in the cases in which two different writing systems are used); *translation* (here, Hejwowski distinguishes between replacing a source text PN with a chosen equivalent; replacing a source text PN with an equivalent coined by translator; and replacing a source text PN with a TT lexical item which is not a PN – like, for instance, a superordinate or a description); *replacing* *a source text PN with a non-equivalent target language PN*; and *omission* (which may also occasionally affect the context of the PN; Hejwowski 2006 [2004]: 92-93[6]).

However, it should be noted that the procedures in question deal with PNs in general, as those lexical items which are directly ascribed to given phenomena (people, geographical areas, *etc.*), thus referring to a standard language rather than to its substandard varieties. This paper, however, focuses only on specific types of PNs, which are substandard anthroponyms, and geographical areas.[7] These items, connected with rural areas and their long-lasting traditions (which, frequently, significantly contributed to cultural and linguistic legacy of the whole country) may be viewed as even more deeply rooted in the SC than their standard counterparts, and thus more problematic to translate. To make matters worse, this kind of lexical items is more and more frequently used in AVT productions, which directly results from AVT's rapid development and occurrence at a worldwide level. The following section of this paper discusses this mode in detail, presents its main characteristics and, by analogy to the previous subchapters, lists the most popular translation techniques.

2.3. Uniqueness of AVT and corresponding translation techniques

Despite its popularity, AVT has not been scientifically examined until recently. One may note, however, that the vast majority of scholars seem to share the same view. As a mode constrained by a number of specific requirements (e.g. time and space limitations), AVT focuses on the maximal TT reduction while simultaneously aiming at preserving the indispensable ST message

[6] What is more, Hejwowski states that it is also possible to mix the techniques listed above, e.g. in the places names which are constructed of more than one word: here, one part may be translated by means of its equivalent, whereas the other part – modified or left without any changes (Hejwowski 2006 [2004]: 93).

[7] Therefore, the term "PN" used in this paper should be considered only in this regard.

(Tomaszkiewicz 2006, Díaz-Cintas and Anderman 2009 among others). The film's semiotic composition consisting of "written and spoken linguistic elements, still and moving pictures, sounds, and music" (Tomaszkiewicz 2006: 102) is also at issue. As Díaz-Cintas and Anderman observe, "Translating only the linguistic component without taking into account the value of the other semiotic dimensions of film […] would certainly be a recipe for disaster" (Díaz-Cintas and Anderman 2009: 9). Díaz-Cintas and Anderman also believe that the problems resulting from film translation can even be strengthened by "the use of unknown dialectical and sociolectal variations" (Díaz-Cintas and Anderman 2009: 4).

While discussing the most popular translation techniques used in AVT, one may make use of the theory presented by Teresa Tomaszkiewicz, who in her work entitled *Przekład audiowizualny* (2006) lists: *omission* (deleting problematic phrases from the text); *direct translation* (literal translation; making use of either calques or borrowings); *explanatory periphrastic substitution / paraphrasing* (adding explanatory information to the problematic phrases); *equivalence* (aiming at replacing the ST item with its TT closer equivalent[8]); and *adaptation* (in accordance with Tomaszkiewicz, constituting an "extreme example" of the equivalence technique, aiming at making TT as much familiar to the target receiver as possible. Here, one may list: *deictic substitution*, which replaces the TT problematic phrase with an item appropriate to the general context, e.g. demonstratives; *allusions*, for instance, historical ones; and *references to the TC-bound phenomena*, which are well-known to the TT receiver; Tomaszkiewicz 2006: 155-168).

Again, the theory described above refers to AVT in general. Still, little is known about the dialect translation in AVT.[9]

[8] The notion of equivalence constitutes both a complex and disputable term in translation studies. However, this notion is not the subject of this paper. For more information, see: Jakobson (2000 [1959]); Nida (2000 [1964]); Newmark (1981); Venuti (2000), among others.

[9] Among relevant studies on the subject one may distinguish, for instance, the study on Italian dubbing conducted by Ranzato (2010). Still, to the author's knowledge, this is one of very few studies on this issue so far.

Consequently, as it was previously indicated, the following subsection summarizes assumptions described in the previous subsections, providing evaluation of the main translation strategies and techniques listed so far and assessing their usefulness in AV substandard translation.

2.4. Dialectically-marked PNs in AVT

The subsections above aimed at describing and listing translation techniques applicable to the following three phenomena: dialect; PN; and AVT. However, it may be reasonably stated that none of these three sets of techniques thoroughly covers the topic of this paper: those translation techniques which were listed in the parts dedicated to dialects and PNs are applicable mainly in literary translation. AVT, however, is apparently distinct from literary translation. Consequently, it may be claimed that the majority of translation techniques (used either in the case of dialect or in the PN translations) cannot be applied to the AV mode. What stands in the way are the aforementioned film aesthetics and the juxtaposition of its semiotic systems. Audiovisual TT, due to its supposed succinct yet comprehensive character, does not allow for elaborate and long explanations added to culture-specific lexical items in the forms of, for instance, footnotes.

This section aims at evaluating the validity of translation techniques while dealing with dialectically-marked PNs in AVT. Consequently, the main translation strategies and techniques listed in the previous sections on dialect, PNs, and AVT (*i.e.* in the sections 2.1. "The concept of dialect and corresponding translation techniques;" 2.2. "The concept of proper names and corresponding translation techniques;" and 2.3. "Uniqueness of AVT and corresponding translation techniques") are listed below, with an adequate comment added to each of them: "yes" – for confirming the applicability of a given technique to translate dialectically-marked PNs in AVT; and "no" – for rejecting it as inapplicable in this respect:

1. Dialect – main translation techniques listed in section 2.1.:
   a. Berezowski (1997)
      – *neutralization* – yes; due to the character of AV products, this technique – next to omission, as will be shown below – may be even considered to be the preferred option while translating dialectically-marked PNs in AVT;
      – *lexicalization* – yes / no; in the case of subtitling, any creation of simplistic, phonetically-transcribed items in AVT may be occasionally difficult to read and thus incomprehensible to the TT audience;
      – *partial translation* – yes / no; depending on the complexity of the target product, one may claim that mixing partially translated or neutralized phrases with original ST lexical items in AVT may cause confusion, as the TT receiver may not be able to decipher strange-sounded terms put next to well-known phrases while watching a film;
      – *transliteration* – yes; this technique may be especially useful while translating dialectically-marked lexical items in AVT, as it contributes towards simplifying both written and spoken text;
      – *speech defect* – yes / no; as in the case of lexicalization, certain complex speech defects (*i.e.* consistent deletion of given letters / sounds throughout the text) may be incomprehensible in fast-paced AV products. Based on observation, one may claim that this technique is more frequently applied in dubbing rather than in voice-over or subtitling, as in the last two modes it may seem to be unprofessional;
      – *relativization* – yes; limiting dialect translation to, for instance, honorifics, allows for marking the ST rustic sound without creating any excessive distortive effect in the TT;

- *pidginization* – yes / no; as in the cases of lexicalization / partial translation;
- *artificial variety* – no; it may be stated that introducing a completely new language throughout an audiovisual product would not be effective, as it requires even more time from the TT audience to understand the text than it was in the cases of lexicalization / partial translation / pidginization;
- *colloquialization* – yes; using a colloquial register should not confuse the receivers to an extent which would make it impossible for them to understand the TT;
- *rusticalization* – yes, provided that only those rustic lexical items which are well-known to wider TT audience would be applied (without involving rarely-used structures requiring comments, footnotes *etc.*).

b. Hejwowski (2015)
- *transfer* – yes, definitely applicable to AVT;
- *transfer with additional explanations* – no; any additional explanations added to the AV text would most probably result in lowering the level of TT's understandability;
- *transcription* – yes; as in the case of Berezowski's transliteration;
- *transcription with additional explanations* – no; as in the case of Hejwowski's transfer with additional explanations;
- *neutralization* – yes; as in the case of Berezowski's neutralization;
- *neutralization with translator's comments* – no; as in the case of Hejwowski's transfer / transcription with additional explanations;
- *functional equivalent* – yes, provided that the condition of "smooth AVT comprehension" is fulfilled;
- *stylization* – yes, as in the case of Berezowski's rusticalization;

  - *relativization* – yes; as in the case of Berezowski's relativization;
  - *omission* – yes; as it was already noted above, this technique is definitely useful while dealing with problematic, dialectically-marked lexical structures. Nonetheless, the rustic sound of the ST would be completely lost.

2. PNs – main translation strategies / techniques listed in section 2.2.:
   a. Hervey and Higgins (2002)
      - *domestication* – yes; this strategy would definitely improve the TT comprehension, although depriving it of the original rustic sound to a greater or lesser extent;
      - *foreignization* – yes / no. Usefulness of this strategy most frequently depends on the degree of foreignness in the TT, thus it should be considered on a case-by-case basis.

   b. Hermans (1988)
      - *copy* – yes; this technique allows for maintaining the original, dialectically-marked lexical items in a text;
      - *transcription* – yes; as in the case of Hejwowski's transcription;
      - *substitution* – yes; as in the case of Berezowski's rusticalization;
      - *translation* – yes, if understood as replacing the SL dialectically-marked lexical items with their closest TL equivalents.

   c. Davies (2003)
      - *addition* – no; as in the case of Hejwowski's transfer with additional explanations;
      - *omission* – yes; as in the case of Hejwowski's omission;
      - *globalization* – yes; as in the case of Berezowski's neutralization;
      - *localization* – yes / no; this technique is successful,

provided that it does not involve any excessively complex structures;
- *transformation* – yes; as in the case of Berezowski's rusticalization;
- *creation* – no, as – in Davies' opinion – it frequently calls for compensation.

d. Meyer (2008)
- *substitution with a corresponding pronoun* – yes; as it was in the case of Berezowski's rusticalization;
- *replacement with an explanatory comment* – no; as in the case of Hejwowski's transfer with additional explanations.

e. Hejwowski (2006) [2004]
- *reproduction* – yes / no, depending on its form:
  - reproduction without additional comments – yes;
  - reproduction with a footnote at the bottom of a page or explanation in a text – no; as in the case of Hejwowski's transfer with additional explanations.
- *retouching* – yes; especially useful in the case of subtitling;
- *transcription* – yes; as above;
- *translation* – yes / no, depending on its form:
  - replacing a source text PN with a chosen equivalent – yes, as in the case of Hejwowski's functional equivalent;
  - replacing a source text PN with an equivalent coined by translator – no; this technique would most probably result in the receiver's confusion;
  - replacing a source text PN with a TT lexical item which is not a PN – yes, provided that PN would be replaced with an easily understandable lexical item, e.g. a pronoun;

- *replacing a source text PN with a non-equivalent target language PN* – yes; as in the case of Hejwowski's functional equivalent;
- *omission* – yes; as above.

3. AVT – main translation techniques listed in section 2.3.:
   a. Tomaszkiewicz (2006)
      - *omission* – yes; as in the case of Hejwowski's omission;
      - *direct translation* – yes, as in the case of Hermans' copy;
      - *explanatory periphrastic substitution / paraphrasing* – no; as in the case of Hejwowski's transfer with additional explanations;
      - *equivalence* – yes; as in the case of Hejwowski's functional equivalent;
      - *adaptation* – yes / no, depending on its form:
        - o deictic substitution – yes, as in the case of Hejwowski's replacement of a source text PN with a TT lexical item which is not a PN;
        - o allusions – yes / no, provided that only widely-known allusions are used;
        - o references to the TC-bound phenomena – yes / no, the same as in the case of allusions.

Initial studies showed that the majority of translation strategies and techniques described in sections 2.1., 2.2., and 2.3. may find their application in the case of dialectically-marked PNs in AVT. In general, they are translation strategies / techniques which do not call for complex translator's actions and simultaneously simplify the TT (e.g. omission and neutralization). However, a couple of the techniques listed above are only applicable if translators use them with respect to the AVT requirements, *i.e.* they would not use complex TT structures which would not be comprehensible in the case of fast-paced dialogues or subtitles. Finally, the analysis showed that translation techniques which result in applying additional comments to the TT most probably cannot be used in the case of AVT.

The aim of the following study is to examine the distribution of the aforementioned translation techniques in practice. Consequently, the research part is divided into two sections. The first section, analyzing anthroponyms used throughout the text, examines various phenomena related to their translation. The second section deals with the issue of geographical terms, verifying the translation techniques used in this regard. The article makes use of the lexical items derived from the English subtitles of the movie based on *Chłopi* by Władysław Stanisław Reymont (*The Peasants*).

3. Research[10]

This part of the paper analyzes chosen translation techniques, verifying their usefulness while translating substandard lexical items in AVT. In total, the research material consists of 19 lexical items divided into two main subsections. The first subsection deals with anthroponyms and consists of 17 examples gathered into six groups. The second subsection analyzes geographical terms, which are listed in one set of two examples. The outcomes of the research are presented in the fourth section of this paper.

3.1. Anthroponyms

The first group of analyzed research material consists of two examples, listed in (1) below:

(1) a. *Jagna*: Skoro **Maciej** mi je dali [korale: A.D.], to są moje!
Jagna: **Maciej** gave them [the beads: A.D.] to me. They are mine.
b. *Priest*: A kogoż to chowacie dzisiaj, kogo? **Macieja Borynę**, powiadacie.

[10] Each example is composed of two passages: the first taken from the original Polish dialogue list, and the second rewritten from the English subtitled version. The speakers' names are written in italics, whereas the examined lexical items are bolded.

> *Priest*: Whom are you burying today? **Maciej Boryna**, you'll say.

At this point, one may make use of the theoretical assumptions outlined by Hejwowski who stated that PNs are meaningful in the sense that they are attributed to a specific cognitive background by the speaker/receiver (Hejwowski 2006 [2004]: 86). Indisputably, the novel *Chłopi* is a classic of Polish literature and thus is well-known by Polish people – and not only by those who read it. Consequently, everything connected with this piece of literature – plot, character names *etc.* – is highly evocative of village surroundings and rustic language variations. Consequently, the name "Maciej," although frequently given to people living in towns, is frequently associated with rural areas due to the popularity of the novel in question. A similar effect may be observed in the case of the surname "Boryna," which evokes direct connotations with *Chłopi*. As it can be seen from the examples above, the protagonist's name both in (1a) and (1b) did not undergo any changes at all. This effect results from the techniques applied here, which may be classified as, for instance, Herman's copy and Hejwowski's transfer (noticeably, these techniques found their application in the case analyzed in this paper, although neither of them were specified by their authors as applicable strictly to this subject matter). It may be stated that the TT contains some element of the original sound, as the names in question were not changed in translation. Nonetheless, the TT receiver is definitely deprived of the aforementioned cognitive background possessed by the audience in Poland and, consequently, carries only a small part of cultural connotations in the TC.

If the translator's aim is to familiarize the target audience with the translated text, then the aforementioned "foreignness" effect can also be mitigated by replacing the PN with an adequate pronoun (as suggested by Meyer and Tomaszkiewicz) or simply by the technique of omission (Hejwowski, Davies, and Tomaszkiewicz) and neutralization (Berezowski and Hejwowski):

(2) a. *Mateusz*: **Jagna** musi uciekać!
Mateusz: **She** must run!
b. *Józka*: **Jambroży** puszczał krew, i nic!
Józka: **They** bled her, but no good.
c. *Mateusz*: A tak to mnie witasz, **Jaguś**?
Mateusz: Is that how you greet me?
d. *Maciej*: Dla **Jędrycha**?
Maciej: For **your brother**?

The final result may also agree with the assumptions of Berezowski's and Hejwowski's neutralization techniques, as well as with Hejwowski's method of PN translation, assuming replacement of a source text PN with an item which cannot be classified as a PN. Again, the findings of the initial research led in 2.4. are confirmed in practice. It cannot be denied that the issue of cultural barrier was efficiently overcome. One may argue, however, whether "efficiently" equates to "successfully." The method of "ironing out" PNs is referred to by many theoreticians as taking the easiest way out of the problem. On the one hand, the reduced TT meets the aforementioned AVT technical requirements. On the other hand, however, the target audience is deprived of any connotations with the SC. One thing is for certain: these procedures, by eliminating problematic lexical items, improve the general understanding of the TT, especially while reading fast-paced subtitles, when the audience needs to split its attention between the text and the picture.

Nevertheless, an additional comment should be made on (2d). Despite using those techniques which were initially rejected as inappropriate in the case of dialectically-marked PNs in AVT (*i.e.* Meyer's explanatory comment usage or Tomaszkiewicz's explanatory periphrastic substitution), a similar effect as in (2a) – (2c) was achieved: the expression of "your brother," as deprived of any culture-bound marks, can be easily comprehended by the target audience. This can be explained by the fact that the "extension" of the ST item was not too excessive: in fact, the final effect reminds one of the technique of neutralization or Hejwowski's translation. Consequently, this kind of concise explanation can be successfully used in subtitling, as it would not harm its aesthetical character.

In the following set of examples, the ST lexical items were deprived of Polish diacritical marks:

(3) a. *Hanka*: **Józia**!
Hanka: **Jozia.**
b. Antek: **Józka**! Witek! No, chodźta tu!
Antek: **Jozka**, Witek, come here.

In these cases, the techniques of Berezowski's transliteration, Hermans' transcription, and Hejwowski's retouching were used. Again, as it was in the case of (1), one needs to emphasize that – although the name of "Józefa" used in its diminutive forms in both (3a) and (3b), is widely recognized also among people living in towns, it is frequently attributable to the rural areas. Consequently, the transcribed lexical items still do not allow the target receiver to experience the whole cognitive background possessed by the Polish audience. Additionally, it is valid to speculate if the translator's efforts are not in vain with this respect, as the analyzed PN – although converted to the basic Latin alphabet thus domesticated in spelling – still causes the "strangeness effect." Finally, it should also be noted that the translator's inconsistency in translating this name may result in the target audience's confusion.

The following set of examples expounds the translation of an anthroponym, which is frequently used throughout the text, "Piotr:"

(4) a. *Hanka*: **Pietrek**, a chodźże i ty do ojca!
Hanka: Come to daddy, **Piotrek**.
b. *Hanka*: **Pietruś**, powiedz: "tata"!
Hanka: **Piotrek**, say: "daddy."
c. *Hanka*: A bo to mało razy przykazywałam **Piotrkowi**?
Hanka: I kept telling **Piotr** to put it [the cart: A.D.] into the shed.

Both *Pietrek* and *Pietruś*, “dialectically-affected” diminutive variations of the PN in question, were neutralized to a standard *Piotrek*. This form, in turn, contrasts with the translator’s choices presented in (3a) and (3b). The translator’s strategy may be substantiated by the fact that the examples in (4) refer to two persons of different ages. Consequently, (4a) and (4b) refer to Hanka and Antek’s son. The example of (4c), illustrating the standard form of this name put in for the sake of comparison in this set, refers to the couple’s farm-hand. This example was also neutralized – in this case, however, the translator decided to use the basic form of the analyzed name instead of one its diminutive forms. The conclusion that the translator used diminutive forms for children and the basic form for the adults is not of much help, as the TT receiver may fail to associate the various TT forms with the same ST name.

Finally, as it was already indicated, this article discusses various instances of preiotation. This phenomenon, adding a non-syllabic [j] at the beginning of the word (e.g. ^{J}Agata), is currently considered to be a dialectically-marked linguistic relic (Karaś, Internet source), bringing connotations of 19th century rural areas. The following sets of examples examine the corresponding instances of PNs:

(5) a. *Hanka*: **Jagna**! Wy tak ze mną nie igrajcie!
Hanka: **Yagna**, stop playing pranks with me.
b. *Jan*: Jakbyście mnie, **Jaguś**, nie poznali!
Jan: Don’t you recognize me, **Yagna**[11]?

In reference to the theory outlined above, the translator had a choice between several translation techniques, e.g. Berezowski’s transliteration or Hejwowski’s retouching. An attempt

[11] Apart from showing strong rural linguistic traits, this female protagonist’s name seems to raise controversies among theoreticians. In their studies, a few scholars believe that “Jagna” served primarily as a diminutive form of “Agnieszka”, “Agata” and “Jadwiga”, turning into a separate name later on (cf. Malec 1995). Noticeably, the time of events presented in *The Peasants* is restricted to the unspecified end of the 19th century. Therefore, it may be stated that the protagonist’s name was intended to be a diminutive form.

at adjusting the ST lexical items to the TL's phonetic and grammatical rules may be most useful in this situation. Consequently, in examples (5a) and (5b), Deka transliterated the initial "J" to "Y." However, taking the other preiotated PNs into account, one may doubt whether the translator's choice of technique was unified in any way:

(6) a. *Michał*: Niech **Jankiel** powie.
Michał: Ask **Yankiel**.
b. *Villager:* **Jambroży**, zamknijcie wrota, żeby to nikt nie wchodził.
Villager: **Jambroz**, shut the gate to keep them away.
c. *Jagustynka*: **Jagata**!
Jagustynka: **Agata**!
d. *Kuba*: Albo **Jagustynki** zawołaj, może co poradzą.
Kuba: Or call **Agustynka**. She might help.

Unfortunately, the translator's choices with respect to the phenomenon of preiotation leave much to be desired. Jankiel, a diminutive form of "Jakow;" Jambroży, the iotated version of "Ambroży;" Jagata, derived from "Agata;" and Jagustynka, stemming from "Augusta" or "Agustyna" – the iotated anthroponyms listed in (6) were translated by means of various techniques, which most probably results in the TT receiver's confusion. Although the first example stands in line with (5a) and (5b), the TT name shown in (6b) was transliterated in both inconsistent and erroneous ways. Moreover, although the initial "Y" would be most probably pronounced as /j/ by an English native speaker, leaving the preiotated "J" in subtitled version brings risk of pronouncing the PN with /dʒ/, whereas leaving "A" – with, for instance, /ə/. Last but not least, the translator's aim in the cases of (6c) and (6d) was most probably to neutralize the analyzed lexical items. Nevertheless, these PNs were not thoroughly domesticated, as they still evoke strangeness in the TT reception.

3.2. Geographical terms

The last set of examples gives an insight into the case of geographical names:

(7) a. *Maciej*: Ludzie z **Modlicy**! Ludzie z **Rzepek**! I skądta jeszcze jesteśta!
Maciej: Villagers from **Modlica**! From **Rzepki**! And wherever you come from!
b. *Priest* [funeral speech: A.D.]: A któż ci to? Borynam z **Lipiec**!
Priest: Who is there? Boryna from **the Lipce Village**.

Once again, these PNs used among SL speakers most frequently bring connotations with rural areas. "Modlica" and "Rzepki" illustrated in (7a), although copied to the TT, seem to be thoroughly understandable due to the context and synchronized film picture. Still, the term "Lipce" from (7b) was supplemented with an additional comment. As it was in the case of (2d), the number of signs added to the original item allowed for putting it to the subtitled line, thus leaving the TT audience little chances of misunderstanding.

4. Conclusion

In total, there were 19 PNs given in the form of seven sets of examples. The study showed that three passages were foreignized, five were domesticated, and eleven could not be unequivocally classified into one of the aforementioned strategies. This effect may be ascribed to the translator's specific choice of domesticated activities, which – either as a consequence of her inconsistency or excessive knowledge – resulted in foreignizing rather than domesticating the TT. When it comes to the translation techniques applied, one may list: transcription/trans-literation/retouching (eight instances); neutralization (six instances); copy/transfer (three instances); and additional comment (two instances).

Despite the fact that – as it might have been concluded from the statistical data above – the transcription/transliteration/retouching techniques occur most frequently in the text, it has to be emphasized that – even when involving changes in the ST's form, for instance, by removing diacritical marks from the lexical units – the transliterated TT product remained a "foreign culture bearer." One may conclude, then, that taking the "easy way out," *i.e.* copying PNs in their original forms, would certainly be equally effective, as it would allow for preserving the ST culture-specific background in the language as well. Fortunately, the translator's inconsistency and doubts regarding the choice of an appropriate strategy while translating a given linguistic phenomenon (e.g. preiotation) is "rescued" by the aforementioned audiovisual "semiotic complex" (more precisely, by the actors' dialogues dispelling all doubts concerning the pronunciation).

To sum up, the conducted study most probably confirmed the hypothesis that dialectically-marked items are reduced in AVT. Berezowski's solutions of reconstructing the whole ST by means of, for instance, pidgin or rustic TT variations, as well as Hejwowski's technique of stylization were not applied in any of the instances, appearing to be too elaborate and inappropriate to the analyzed mode. One may reasonably state, then, that the "over-sophisticated" translation techniques aiming at converting the ST to completely different TT rustic variations may do more harm than good in AVT. On the other hand, the techniques used in AVT and listed by Tomaszkiewicz (omission, deictic substitution, and adaptation) appear to be more applicable here. Last but not least, a comment on the assumptions put forth in the initial study in 2.4. should be made. As it was shown above, many of the translation techniques – although not classified by their authors as applicable in the case of dialectically-marked PNs – were successfully used in this film's translation. On the contrary, however, the research showed that those techniques which supplement the TT with additional comments and explanations (e.g. Tomaszkiewicz's explanatory periphrastic substitution) and were initially rejected as inappropriate to translate dialectically-marked PNs, found their application in *The Peasants* [however, only if the quantity of added letters / words would not harm the product's perception; compare (2d) and (7b)].

Finally, it can be observed that – despite the translator's actions – the original linguistic sound of *Chłopi* and the 19th century Polish village was lost in the TT. Fortunately, AVT allowed for this loss to be compensated via its other semiotic dimensions, *i.e.* by means of picture and sound. Consequently, it may be claimed that AVT does not require the application of sophisticated, literary translation-like translation techniques, as its other semiotic dimensions successfully fill in the "gaps" created by means of using simplifying translation devices. Finally, to quote Johann Wolfgang Goethe, whose age-old words fit surprisingly well with AVT mode: "If you want to influence the masses, a simple translation is always best" (Goethe qtd. in Lefevere 1992: 5). It seems reasonable to conclude that the TT audience has not changed much since Goethe's times and the AV requirements of smooth TT comprehension seem to support this view.

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