

Relevance-Based Approach to Translation of Contemporary Popular Science Texts

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Abstract. In the present paper, the authors analyze a translation process implemented within the framework of Relevance Theory using Adaptation Theory as a tool to ensure relevance in the translation of popular science texts. The paper is part of ongoing research dedicated to the development of methodology for translation of popular science texts on architecture, ICT, and economics, focused here on translating from English into Latvian. Recognizing that relevance in translation is a qualitative category, the authors suggest measuring it along two dimensions: the plane of content and the plane of expression. Having defined four categories of relevance, the authors have developed a grid that may be recommended as a guide in a translator's decision-making process for selecting a particular adaptive strategy and translation method.

Keywords: Relevance Theory, Adaptation Theory, relevance of translation, translation of popular science texts

Mokslo populiarinimo tekstų vertimo analizė remiantis relevantiškumo teorija

Santrauka. Šiame straipsnyje vertimo procesas analizuojamas taikant relevantiškumo teorijos sistemą. Pasinaudodamos adaptacijos teorija kaip priemone užtikrinti relevantiškumą verčiant mokslo populiarinimo tekstus, straipsnio autorės kuria šių tekstų vertimo iš anglų kalbos į latvių kalbą metodiką. Straipsnyje pristatoma medžiaga yra šiuo metu vykdomo platesnio architektūros, IKT ir ekonomikos sričių mokslo populiarinimo tekstų vertimo tyrimo dalis. Laikomasi nuomonės, kad relevantiškumas vertime yra pamatuojama kategorija – autorės siūlo jį vertinti dviem pjūviais: pagal relevantiškumo laipsnį ir pagal relevantiškumo lygį, t. y. turinio ir raiškos lygmeniu. Tuo remdamosi autorės sukūrė tinklėlį, kurį rekomenduoja taikyti vertėjui priimant sprendimus, kai reikia pasirinkti tam tikrą procedūrą ar vertimo būdą.

Pagrindiniai žodžiai: relevantiškumo teorija, adaptacijos teorija, vertimo relevantiškumas, mokslo populiarinimo tekstų vertimas

1. Introduction

In recent decades, translation studies have been increasingly adopting the theoretical and methodological framework of cognitive science for the study of cognitive processes underlying translation as a complex mental activity. Application of interdisciplinary approaches to translation analysis has contributed to the development of new translation models, revision and re-formulation of the set of necessary translator competences and development of new translation methods. At present, methodological innovations and the development of sound theoretical basis for an analysis of translation as an intellectual endeavor (Shreve and Angelone 2010: 6–7) have become major foci of cognitive translology, linking the process of translation with translation product analysis.

More and more translation scholars address cognitive aspects of translation influencing both translation as a product and translation as a process that involve complicated decision-making procedures. As Shreve and Diamond (1997: 246) observe, “translation is the result of the complex integration of a variety of common cognitive mechanisms acting over specific configuration of neural sites”. Awareness of such complex cognitive mechanisms as thinking, understanding and perception underlying the process of translation may promote the development of efficient translation strategies. According to Verschueren (1999: 55), language use consists of “the continuous making of choices, consciously or subconsciously, for language-internal [...] and/or language-external reasons”. Bell (1991) also views translation as an entirely mental process, which should be analyzed through the prism of cognitive linguistics. Translation scholars adopt cognitive approaches to translation to analyze the role of translators as decision makers, problem solvers, experts and interpreters (cf. Nord 1997; Krings 1986; Kiraly 1995). Thus, the main goal of cognitive translology is to investigate the development of “the mental processes that make complex cognitive behavior like translation possible” (Thagard 2005: 3).

Sperber and Wilson’s (1986) Relevance Theory, emerging at the crossroads of cognitive linguistics and pragmatics, has also contributed to the development of cognitive translology. Gutt (1991; 2005) has integrated Relevance Theory into translation studies establishing a theoretical framework for a relevance-based translation approach. Within this approach, the concept of equivalence-based relations between the source and the target texts is abandoned, this relationship is rather considered to be based on “interpretative resemblance” between the two. Thus, translation process should involve translation strategies that might ensure the optimal degree of relevance of the communicated message for the intended readership producing translations that require “the lowest possible processing effort” on the part of the target reader.

Adaptation Theory was originally developed by Piaget in 1964, who considered adaptation as one of the important processes guiding cognitive development. Analyz-

ing the mechanism how cultural characteristics are reflected at every possible level of language structure and language use, he has demonstrated that very often cultural differences cause restrictions on the choices of lexical meanings. Nowadays, Adaptation Theory has gained new momentum having adopted the theoretical framework of cognitive science resting on similar premises as the Relevance Theory. Both theories formulate the principles of meaning making, focusing on the type of information that is relevant, deserves attention or needs explanation. Within these theories, the translator should adapt translation strategies ensuring the necessary degree of relevance of the transferred information so that the communicative intention of the author of the original text can be properly conveyed to the target reader.

The aim of popular science texts is both to educate and entertain (edutain), that is, communicate novel, frequently complex information in an accessible and interesting way. Therefore, within the relevance-based approach, translation of popular science texts is a particularly complicated process, because as a rule the cognitive environment of the author of the original text *a priori* does not match that of the intended readership. Thus, the task of ensuring relevance becomes the focus of translator's effort and the main challenge to overcome.

In the present paper, the authors analyze a cognitive approach to translation process implemented within the framework of Relevance Theory and using Adaptation Theory as a tool to ensure relevance in translation of popular science texts. The authors focus on translator's decision-making process, taking into account the purpose, function and potential readership of the target text within a particular linguacultural setting. The current paper is a part of the ongoing research dedicated to the development of efficient methodology for translation of popular science texts from English into Latvian with a special focus on representation of the elements of foregrounding and culture-specific lexis inherent in popular science texts on architecture, ICT, and economics. Integrating the premises of Relevance Theory and Adaptation Theory in the translation process allows producing texts that remain entertaining, appealing and reader-friendly without compromising their content precision and information load.

2. Adaptation as a strategy ensuring relevance in translation

The study of cognitive processes in translation is an emerging theoretical perspective, which analyses translation as a series of information processing, problem-solving and decision-making activities. Van Dijk (2001) argues that text production and comprehension cannot be separated from cognition, as texts exist as mental representations in the individual who forms a representation of the context in his or her mind. In the process of text decoding and comprehension, contextual information influences the way

utterances are interpreted and perceived. Croft and Cruse (2012: 98) state that words do not really have meanings, nor do sentences have meanings: meanings are something that we construe, using the properties of linguistic elements as partial clues, alongside non-linguistic knowledge, information available from context, and knowledge regarding the readers' state of mind.

Within Sperber and Wilson's Relevance Theory (1986: 183), pragmatics is seen as a capacity of the mind, a kind of information processing system, a system for interpreting a particular phenomenon in the world, namely, human communicative behavior. Context is defined as "psychological construct, dynamic and not pre-determined", as "the set of premises used in interpreting" representing the recipient's assumptions about the world (ibid, 15). Thus, contexts shape cognitive structures or mental models within an individual's "cognitive environment" that stores everyday experience in a wide range of conceptual and thematic domains.

Mey (1993) maintains that the pragmatic approach is closely related to cognition, society and culture. Pragmatic analysis within the Relevance Theory usually considers two types of context: the context of collective knowledge and the context of social and cultural knowledge that are employed when interpreting the text. According to Sperber and Wilson (1986: 141), "the selection of a particular context is determined by the search for relevance", to be more exact, relevance which is based on two principles: a Cognitive Principle (that human cognition is geared to the maximisation of relevance), and a Communicative Principle (that utterances create expectations of optimal relevance). The degree of relevance of the texts for its interpreter will be greatly determined by the interaction of two dimensions, namely, contextual effects, otherwise defined by Sperber and Wilson as positive cognitive effects, and a processing effort, or ease of access. Thus, the more contextual effects are triggered in the process of text decoding, the more relevant the text seems to the reader, in addition, the less processing effort is required on the part of the reader, the higher the degree of relevance.

Within relevance-based translation framework, Gutt (1991; 2005) considered translation as a process of inferential communication and discussed the problem of endless circles of inferences in terms of relevance, arguing that the transfer of relevant meaning involves a wide range of cognitive activities. The inferential nature of translation implies that the translators have to use their inferential abilities to make context-based assumptions and ensure the optimal relevance in translation achieving interpretive resemblance between the source and target texts. It is the main premise of the translation process, i.e., perception of the source text through understanding of the writer's intention.

For the text to be relevant, the readers should be able to understand the communicator's informative intention, intuitively selecting the meaning according to the princi-

ple of optimal relevance. Often, the translators cannot simply use their own cognitive environment when trying to understand the original; rather they have to share the mutual cognitive environment of the author and target readers. Stolze (2003: 244–245) argues that translators should take into consideration the situational background, the field, the conceptual world of key words and the predicative mode of a text in order to adequately interpret it. Further, Stolze notes, “By comparing the cognitive environments of source and target language communities, translators would infer the relevant schematic reduction for their mental representations of the source language text, such that the maximally relevant and new information emerges for the target language text.” (Stolze 2003: 355).

Thus, translator’s cognitive environment becomes the key factor ensuring successful communication between the author and the target reader. The linguistic and intercultural competences of translators enable them to interpret relevant information in the source text and produce the target text in a new socio-cultural context (see Francis and Gallard 2005 for discussion).

According to the Relevance Theory, the translator should convey as much information as needed in any given context for communication to minimize the processing effort on the side of potential target readership. However, it should be taken into account that a significant amount of relevant information might be implicit, and considerable background knowledge is needed to infer the meaning conveyed by a non-restricted natural language. In this regard, Wilss (1996: 31) states that cognitive and associative way of thinking is required in the process of translation as it involves a specific form of linguistic information processing.

The gap between cognitive environments of the author of the source text and the perspective target reader may be bridged successfully by applying different forms of adaptation. Adaptation is seen as a continuous process of making choices in linguistic forms and communicative strategies; these choices should be made in agreement with the communicative environment, all parties concerned, as well as the purpose and function of communication. The Adaptation Theory distinguishes between creative adaptation, cultural adaptation, pragmatic adaptation, all of them involving imaginative practices. Adaptation as a translation strategy should be used with extreme caution because if applied without proper heed of the cognitive environment of both text producer and text processor, it may result in misinterpretation of the original message due to the misunderstanding of the pragmatic and cultural differences between the source and target languages.

In the present paper, adaptation is considered a general translation strategy, which involves application of such translation methods as lexical addition, synonymy, para-

phrase, functional analogue, explanatory translation, etc. When the content of the source text undergoes adaptation, it is subject to a variety of factors, which are determined by the nature of the source text, relevance, the reason for adapting the text, medium, and cultural environment into which it is adapted. Adaptation Theory explores the continuous development of creative adaptation and states that the practice of adaptation is central to the story telling and image creation (cf. Hutcheon 2006). Adaptive strategies interact with the relevant elements of the translator's background knowledge: critical awareness of the style and content of texts, linguistic conventions, the register and intuition about what constitutes the target language (Seguinot 1989: 39).

As mentioned above, relevance in translation is considered scalable and thus a measurable category – a lower or higher degree of relevance may be ensured in translation. However, there is no commonly accepted method for measuring relevance in translation in general and of popular science texts in particular. Moreover, the very nature of popular science texts may pose barriers on the way to ensuring relevance in their translation. It means that those stylistic and rhetorical tools, which are used to promote relevance, bridge the gap between the cognitive environments of the author and the reader and facilitate text processing in the monolingual communicative setting of the source language, in an interlingual setting may seriously impede text decoding not only on the part of the target reader, but even on the part of the translator. The elements of foregrounding that are used to enable content in the source language may block understanding in the target language. Therefore, a translator adopting the Relevance Approach should consider relevance at various levels – both at the level of content and at the level of expression and respectively select the type of adaptation to be applied in translation of a particular utterance.

To illustrate the stages of translator's decision-making process within the relevance-based translation approach, the authors suggest using the following grid (Table 1) that may help translators classify the levels and degrees of relevance, as well as select the methods that may be used to ensure relevance in translation of popular science texts. The degrees and levels presented in the grid are proposed for practical purposes: though they can hardly be measured or boxed, they provide a visual illustration of how content and expression may be conveyed by means of translation methods taking into account the relevance of content and expression and depending on the character of adaptation. It should be noted that the list of translation methods that may be applied within each adaptive strategy is not limited to those presented in the grid, as any translator may use a custom-fit approach to suit particular communicative needs.

Table 1. Procedures to Ensure Relevance in Translation

	Degree of relevance	Type of adaptation	Translation methods
Level of content	High	Cultural	Explanatory translation; Lexical addition; Synonymy; Paraphrase
	Low	Pragmatic	Generalization; Omission
Level of expression	High	Creative	Functional analogue; Compensation; Paraphrase
	Low	Pragmatic	Loss of stylistic coloring; Neutralization; Omission

Thus, for practical purposes, the authors suggest distinguishing four categories of relevance, namely, (1) *high* relevance at both plane of content and plane of expression; (2) *high* relevance at the plane of content and *low* relevance at the plane of expression; (3) *low* relevance at the plane of content and *high* relevance at the plane of expression; (4) *low* relevance at the plane of content and *low* relevance at the plane of expression. Category (1) is seen as an optimal outcome of translation process that is nevertheless difficult to achieve; Category (2) is reached when content precision is given priority in translation at the expense of loss of expressiveness; Category (3) is sought for when the aesthetic value of the original is more important than its information load, whereas Category (4) comprises translation products of obviously low quality.

The degree of adaptation, that is, deviation from the source text depends on the degree of familiarity with the source text concepts among the members of the target culture. Texts are “[...] configurations of multidimensional meanings” (Steiner, Yallop 2001: 3); thus, the translator should consider text-genre, text-context, text-culture, text-knowledge as the elements of the relevant cognitive environment. In this regard, Snell-Hornby (cf. 1988: 41) notes that the extent to which a text is translatable varies with the degree to which it is embedded in its own specific culture, also with the distance that separates the cultural background of the source and target texts in terms of place and time. Thus, reconciling the relevance and adaptation approach, a translator may determine the degree of translatability of each particular text measured in terms of the level and the degree of relevance, and select the most suitable type of adaptation considering the distance between the source and target culture.

3. Empirical data

As discussed previously, relevance-based translation of popular science texts is a particularly challenging process due to the obvious gap between the cognitive environments of the text producer, i.e., the author, and text processors, i.e., translator and target readers. Another potential challenge in translation of popular science texts is that they are often highly stylistically marked. Authors frequently bring some novel information into focus using various foregrounding techniques. Leech (1970: 121) points out, “Foregrounding, or motivated deviation from linguistic or other socially accepted norms, has been claimed to be a basic principle of aesthetic communication”. Since the foregrounding devices can be introduced at different levels, they are used to activate different layers of knowledge ensuring that the new information does not go unnoticed or missed. Thus, relevance in translation should be ensured not only on the plane of content, i.e., communication of specific field knowledge, but also on the plane of expression, i.e., reproduction of stylistic effects intended by the author.

The elements of foregrounding the authors often use to bring novel information include metaphors, allusions, idioms, proverbs, and other forms of intertextual reference. A number of examples have been chosen from translation practice of popular science texts to demonstrate translator’s decision-making process within the relevance-based translation approach and the type of adaptation and the methods translators applied to ensure relevance both at the level of content and at the level of expression.

Example 1 (economics) illustrates the challenges translators may face if due to the lack of certain background knowledge they fail to decode intertextual references made by the author of the source text on banking and finance.

- (1) **ST:** Larry Summers, the Treasury secretary in the Clinton administration, noted that “starting in the 1970s, the finance industry was transformed from a field that was dominated by people who were good at meeting clients *at the nineteenth hole* to people who were good at solving very difficult mathematical problems that were involved in pricing derivative securities”. (Enrich 2017: 11)

TT: Lerijs Samerss, Valsts kases sekretārs *jeb Finanšu ministrs* Klintona administrācijā, reiz ir sacījis, ka „kopš septiņdesmitajiem gadiem finanšu nozare, kurā tolaik noteicošie bija cilvēki, kas prot *veiksmīgi risināt sarunas golfa klubā*, ir pārvērtusies par nozari, kur priekšplānā izvirzījušies cilvēki, kas spēj risināt ārkārtīgi sarežģītas matemātiskas problēmas saistībā ar cenu noteikšanu atvasinātajiem vērtspapīriem”.

BT: Larry Summers, the Treasury secretary *or finance minister* in the Clinton Administration, once noted that “starting in the 1970s, the finance industry, which at that time was dominated by people who were good at *negotiating at a golf club*, was transformed into a sector where people were good at solving extremely complicated mathematical problems related to pricing derivative securities”.

The expression “at the nineteenth hole” may appear ambiguous to the Latvian readers who are only superficially familiar with the game of golf as a sport rather than a social activity. An unexperienced reader might know that there are eighteen holes in the golf course, and understanding of the inference made by the author concerning the role of social networking practices in doing business in finance may pass unnoticed. The author implies that the players meet after the game in a restaurant of an elite golf club to communicate over business matters; direct implicatures are that the players belong to the same social class, fall into the same income bracket, and share the same interests. This implicit information is expected to be understandable to the source text reader; however, the target reader may experience difficulties in making relevant context-based assumptions about the message communicated by the author. If the translator opts not to employ some adaptive strategy in translation of this expression, the contextual effect intended by the author will be lost; moreover, understanding of the expression will require considerable processing effort on the part of the reader diminishing the degree of relevance of the translated text. As the expression in question bears a significant informative load, relevance should be established primarily at the level of content. Thus, to ensure relevance, the translator may employ such methods as explanatory translation and paraphrase, losing some stylistic effects not to compromise content precision.

Although the *level of content* is given priority in the majority of cases, the level of expression should not be disregarded in translation, and ensuring relevance at this level is a more challenging and creative task. The translator striving to achieve interpretive resemblance between the source and target texts should employ more focused types of adaptation, i.e. creative and cultural adaptation to facilitate the ease of processing of text contents. Example 2 (architecture) taken from a popular book on the history of architecture illustrates that relevant transfer of the elements of foregrounding may require application of several adaptive strategies at a time. The author of the text uses foreignisms – *chateau* and *schloss* – to create a certain stylistic effect, to demonstrate cultural and geographic distance between various forms of architecture.

- (2) **ST:** The consequent emergence of new typologies, in the English manor-house, the French château and the German schloss, provided new possibilities for architectural expression that borrowed and adapted elements of the Gothic from its ecclesiastical contexts. (Hopkins 2014: 44)

TT: Tam sekojošā jaunu ēku tipu parādīšanās – angļu muižas, franču *château* un vācu *schloss* tipa pils – sniedza jaunas arhitektūras izpausmes iespējas, kas aizguva un piemēroja gotisko baznīcu celtnu elementus.

To reproduce the effect intended by the author and ensure relevance, the translator opted to ensure relevance at the level of expression making the text more difficult for

the target reader to process. Foreign words are retained in their original form and the footnote explaining that these words mean *castle* in French and German is provided. Thus, the reader has to apply greater processing effort to decode the message. Apart from the explanation provided in the footnote, the translator employed lexical addition (from LV: franču *château* un vācu *schloss* tipa pilis back translated to EN: *castles of the type of the French chateau and the German schloss*), paraphrase (EN: adapted elements of the Gothic from its ecclesiastical contexts – LV: piemēroja gotisko baznīcu celtnu elementus – back translated to EN: adapted *the elements of Gothic church buildings*). Example 2 presents an interesting case of the application of three adaptive strategies, one of which, i.e. footnote, is aimed at ensuring relevance and the level of expression, and two others, i.e. lexical addition and paraphrase, aim at promoting relevance at the level of content. Thus, the translator may ensure interpretive resemblance between the source and the target texts using different adaptive strategies.

Allusions and allusive references are frequently used as the elements of foregrounding in popular science texts because allusions allow communicating a large amount of information in a relatively concise form, activate background knowledge and help drawing parallels between the known and new information. Allusive references to national or cultural symbols differ with respect to the degree of translatability. In order to interpret allusions, the users should share language and cultural traditions (cf. Perri 1978: 300), or, in terms of the Relevance Theory, share the cognitive environment. The more culture-specific is the symbol, the more opaque the meaning of allusion is (see Iljinska et al. 2015 for comprehensive discussion).

Examples 3 and 4 (ICT) have been selected to demonstrate that allusions to classic literature belonging to the general heritage of the Western civilization may be successfully used in popular science texts to create the intended contextual effects and explain the new in terms of the known.

- (3) **ST:** In all classical tragedies, *from Aeschylus to Shakespeare, and from Sophocles to Schiller*, the tragic failure of the leading figure has been his inability to change. This is seen, for example, in *the destiny of Oedipus as well as in that of Hamlet* and (nowadays) myriad companies that, by failing to reinvent themselves, have *gone down the drain* (Chorafas 2011: 116).

TT: Visās klasiskajās traģēdijās – *no Aishila (sengrieķu dramaturgs) līdz Šekspīram un no Sofokla (sengrieķu dramaturgs) līdz Šilleram* – galvenā varoņa traģiskā neveiksme bija nespēja mainīties. Tas ir vērojams, piemēram, *Edipa, kā arī Hamleta liktenī* un (mūsdienās) lērums uzņēmumu, kas, nespēj sevi pārorientēt, *izput*.

BT: In all the classical tragedies – *from Achilles (ancient Greek tragedian) to Shakespeare and from Sophocles (ancient Greek tragedian) to Schiller* – the tragic failure of the main

character was the inability to change. This is the case, for example, *in the fate of Oedipus as well as in that of Hamlet* and (nowadays) a myriad of companies that fail to reorient themselves *go bankrupt*.

The relevant perception and decoding of allusive references depend on the cultural thesaurus of readers and their background knowledge. Considering the constellation of allusions in Example 3, it may be implied that the author addresses the educated readership capable of making the relevant inferences. Each of the six allusions presented may potentially pose translation problems if the target readers do not share the cultural thesaurus with the intended readership of the original text. It is interesting to note that the reference to the prominent play writers, which is supposed to belong to collective knowledge, can be easily omitted in translation without considerable loss at the level of content as their relevance is realized mainly at the level of expression. However, failure to reproduce allusions to the fate of Oedipus and Hamlet, the knowledge that may be seen as more specifically cultural or social, may seriously impede inferential communication of the author's message. Ideally, the translator should use some form of explanation, either incorporated in the body of the text or added in the footnote, to ensure relevance at the level of content.

- (4) **ST:** Although it may take some effort to reach this *holy grail*, we hope you're encouraged to begin exploring these new technologies and services and use them to make incremental improvements to the way your team builds and tests software (Rosenberg, Mateos 2011: 168)

TT: Lai gan ir krietni jāpiepūlas, lai sasniegtu *šādu līmeni*, cerams, ka jūs esat apņēmības pilni sākt izpētīt šīs jaunās tehnoloģijas un pakalpojumus, kā arī izmantot tos, lai uzlabotu programmatūras izstrādāšanas un pārbaudes procesus.

BT: Although it may take some effort to achieve *such a level*, it is hoped that you are determined to begin exploring these new technologies and services and use them to improve software development and testing processes.

Reproduction of the expressive and informative load borne by the allusion *holy grail* should not pose any particular difficulties in translation into Latvian, as the general understanding of this allusion coincides in the source and target languages, i.e. it belongs to collective knowledge. Different traditions describe the sacred object *Holy Grail* as a golden bowl, cup, dish, or stone possessing miraculous powers that provide happiness, prosperity and eternal youth. In contemporary English, the expression has lost its connection with the Arthurian legend, has become a form of cliché that is used to describe a practically unobtainable, but highly desirable object, goal or prize in any area of life. Therefore, this allusion serves as a useful tool for writers to communicate

the required message in any types of contexts and in different linguacultural settings. Thus, relevance can be relatively easily established both at the level of expression and at the level of content.

Text in Example 5 (architecture) is characterized by high information density and thus requires considerable processing effort from both the source and target reader. For a text to be relevant, a reader should be familiar with Hegelian philosophy, understand the notion of the architectural style, be aware of the origins of architectural history as an independent discipline. At the level of expression, the reader should associate the use of a German word *zeitgeist* instead of the English *spirit of the time* with the context of sentence – reference to a German philosopher Hegel and the concept coined by a Swiss art historian Wölfflin.

- (5) **ST:** *Moreover, his theory tended to overlook content in favor of form, while ignoring the social, economic or material factors that determined the creation of a building or a work of art. In Wölfflin's essentially Hegelian conception, 'style' had its own life and its own trajectory, with artists and architects relegated to mere actors performing from a script pre-ordained by the zeitgeist. (Hopkins 2014: 5)*

TT: *Turklāt viņa teorija deva priekšroku formai, nevis saturam, ignorējot sociālos, ekonomiskos un materiālos faktoros, kas noteica ēkas vai mākslas darba radīšanu. Būtībā Volflīns vadījās pēc Hēģeļa filozofijas principiem, uzskatot, ka "stilam" ir sava dzīve un attīstības trajektorija, kā ietvaros mākslinieki un arhitekti darbojās vienīgi kā aktieri, spēlējot lomas, ko noteica laika gara scenārijs.*

In translation into Latvian, the degree of adaptation will depend on the inferences a translator makes with regard to the level of background knowledge of the perspective readership. "Hegelian conception of style" may be either transferred directly, supplied with an explanation, or paraphrased. The translator decided to add an explanation in the footnote, specifying that Hegel was a German philosopher, and used lexical addition in the body of the text adding the words *philosophical principles* to the philosopher's name (LV: *Hēģeļa filozofijas principi*, backtranslated to EN: Principles of Hegel's philosophy). Ensuring relevance the translator also decided to substitute a German expression *zeitgeist* with its literal translation into Latvian – *laika gars* (spirit of the time).

Considering the interim results of the analysis of the examples presented above, it can be concluded that ensuring relevance in translation of the source text both at the level of content and at the level of expression may be a challenging and time-consuming task. The gap between the cognitive environments of the source text author and target readership may be bridged applying various adaptive strategies characterized by a greater or lesser degree of creative transformation of the source text.

4. Concluding remarks

Nowadays, relevance-based approach has been increasingly adopted in translation of popular science texts. Recognizing that relevance in translation is a qualitative category, the authors suggest measuring it along two dimensions: the degree of relevance and the level of relevance – the plane of content and the plane of expression (both categories having different kinds of conditionality). Having defined four categories of relevance, the authors have developed a grid that may be recommended as a practical guide in translator's decision-making process selecting a particular adaptive strategy and translation method.

Translation of popular science texts may pose challenges if relevance should be ensured at both levels taking into consideration specific characteristics of this genre – extensive application of stylistic and rhetorical tools to create the intended contextual effects and promote ease of processing. As it has been demonstrated, the elements of foregrounding that are aimed at promoting relevance in the source language setting may become the barrier to text decoding in the target language environment if there is a considerable distance between the source and target culture and collective and culture knowledge of the source and target readerships do not match.

The results of the present research can be applied in both translation quality assessment and translator training. The novelty of the suggested methodology is that novice translators can be trained to identify and decode relevant explicit and implicit information at both level of content and level of expression in the source text and make well-grounded choices in selecting the most appropriate adaptive strategies and methods for ensuring relevance in translation.

Thus, the translator has to analyze the scope of relevance that might be ensured in translation at both levels of text organization – the level of content and the level of expression (high-high; high-low; low-high; low-low). If the optimal degree of relevance – high on both levels – may not be ensured, the translator has to determine the level that might be compromised – either the level of expression or the level of content. In translation of popular science texts, it is exactly the level of content that is dominant. In most cases, it is put into the fore at the expense of the loss of expressiveness. To avoid violation of the communicative intention of the source text author – to edutain the reader – the translator has to select the relevant type of adaptation. Efficiency of translator decisions with regard to the degree of relevance to be established in translation will greatly depend on the strategic, thematic, and methodological competence of each particular translator, which translator trainees should develop and advance.

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