An adequate measure of translation transformations is a distinctive feature of a good translation. It allows to realise the two major requirements to the target text – equivalent regulatory effect of source and target texts and maximum possible semantic and structural similarity of source and target texts. A faithful translation should be made in keeping with the three principles determining the adequate measure of transformations in translation: the motivation principle, the minimalism principle and the boundedness principle. A particular research interest is taken in the degree of translation transformations in the science text in conformity with these principles. To produce a quality translation with (an) identical pragmatic effect, the translator should clearly define the measure of translation transformations – when certain translation modifications are necessary and admissible. It is important for translators to be knowledgeable about the functions of each determinant principle and avoid unmotivated transformations, reasonable but excessive modifications, and motivated transformations that go beyond the admissible translation limits. The translator should also avoid extremes – literal and free translations, which hamper the perception of the text. The adequate measure of translation transformations is in the middle between literal and loose translations. To take an appropriate translation solution, the translator of a science text should be trained in using translation techniques and bring the source text in conformity with the norms of the language of science. A specific admissible measure of transformations in translation is impossible to determine as it varies in different text genres and different contexts. The translator should be competent enough in the branch of knowledge the translation text belongs to. Our analysis of the Ukrainian translation of the history (historical) monograph "The Celts: A Chronological History" by Dáithí Ó hÓgáin, aims to establish the degree of semantic and structural divergences between the source and target texts and to evaluate the translation solutions that were used to achieve the pragmatically equivalent translation.

**Keywords:** measure of translation transformations, determinant principles, motivated transformations, unmotivated transformations, minimal deviations, pragmatic impact, translation solution, translation technique.
Generally, a translation, which is semantically precise and structurally close to the original, very often hinders achieving the equivalent impact of the source and target texts. In other words, the two criteria of faithful translation – the equivalence of regulatory effect of the source text (ST) and target text (TT) and their semantic and structural similarity can contradict each other [13, p. 34]. And this conflict is settled by deliberate deviating from structural and semantic parallelism of ST and TT, to achieve their impact equivalence. These deviations are called transformations in translation.

This contradiction may be explained by a number of reasons related to the text and the man. Man’s response to the text is not only determined by the text features but also by preconditions a man should have to adequately perceive and interpret the text. These include habits for certain language standards and stereotypes, knowledge of source language and background knowledge. And these factors that ensure successful language communication are called communicative competences [13, p. 36].

A correlation of text features and (the) reader’s communicative competence helps (to) define the impact produced by the text on its reader, which is the key notion in the conception of measure in the use of translation transformations offered by the prominent translation theorist L. Latyshev [13]. The conception of measure provides a solid base for understanding the nature and necessity of transformations in translation.

To render the source text regulatory impact, it is necessary to ensure approximately similar correlations – a correlation of TT features with the communicative competence of the TT native speaker and a correlation of ST features with the communicative competence of the ST native speaker [13, p. 36]. Significant divergences in communicative competences of the ST and TT native speakers and the necessity of their levelling or «smoothing» aimed at achieving the equivalent ST and TT impact bring about transformations in translation.

The theme of transformations in translation is not new in the field of translation studies. Translation transformations have been variously considered in the works of classical translation theorists and contemporary scholars (J. P. Vinay and J. Darbelnet [24], E. Nida and Ch. Taber [18], J. Catford [6], P. Newmark [17], A. Fedorov [7], V. Komissarov [11], L. Barhudarov [3], J. Retser [21], A. Shweitser [23], L. Latyshev [13], L. Nelyubin [16], N. Garbovskiy [8], A. Pym [19], M. Baker [2], S. Basnett [4], B. Hatim and J. Munday [10], R. Bell [5], I. Alekseyeva
A transformation is the base of most translation techniques or translation solutions used to achieve the pragmatic equivalence of the source and target texts. Translation solutions depend on the translator’s expertise, particularly, on the ability to make necessary lexical and grammatical transformations in solving practical problems that arise in the process of translation.

The translation theory suggests various definitions and classifications of translation transformations. In the broadest sense, translation has always been a transformation, the term being borrowed from Z. Harris’s transformational grammar. As viewed by O. Selivanova, translation transformations is the translator’s creative activity in transforming the original text into the target text by using special techniques aimed at achieving the translation equivalence as a balance of different types of information. Narrowly defined, a translation transformation means modification of form, or semantics and form in a translated text, to reach a balance of various information types and the pragmatic impact on the translation recipient, if compared to the original text. Such transformations are caused either by systemic divergences of two languages (systemic transformations) or by differences in cultures, ontologies of two peoples, interpretation program of readers of source and target texts (functional transformations). With this in mind, for the purpose of our research, we used the following definition of translation transformations that are viewed as deliberate deviations from objectively possible language parallelism aimed at achieving communicative and functional equivalence of source and target texts.

A central issue in the discussion of translation transformations is to what degree they are necessary and admissible. Very often, translation transformations are missing in cases when they should be used. They can also be insufficient or excessive, or needless at all. And here we deal with the two traditional translation notions – literal and free (loose) translations. Literalisms appear when the translator renders the text too close to the original, without performing necessary transformations:

Some Celts may even have crossed the Pyrenees at this time, but if so they are likely to have done so as a constituent part of the Ligurian sphere of influence [26, p. 5]. – Дехто з кельтів міг перетнути Піренеї вже у той час, але тільки у складі лігурійської сфери впливу [25, с. 9].
The opposite extreme point here is free, or loose, translation – when transformations are excessive or irrelevant, and the translator can convey the meaning of the source text closer to the original without any loss in quality:

*The archaeological record shows a cultural break at the beginning of the fifth century BC to the west of the Rhine, indicating that the displacement of these chiefdoms by La Tene newcomers in that region was largely the result of military conquest* [26, p. 7]. – *Археологічні дослідження свідчать, що культурний прорив на початку V ст. до н.е. на захід від Райну відбувся внаслідок завоювання і заміщення цих племінних утворень латенськими прибульцями* [25, c. 10].

As the above examples show, literal and loose translations hamper the perception of the text in its semantic, emotional, aesthetic and other aspects.

An adequate measure of transformations is in the middle between literal and free translation. It is this measure that characterises a high-quality translation. In practice, this measure is ensured by translator’s professional flair. Theoretically, to find the adequate measure means to find a faithful translation variant in conformity with three criteria offered by L. Latyshev: motivation of transformations, minimalism in the use of transformations and principal boundedness of transformations [13, p. 47].

A transformation must be motivated by the necessity of achieving the regulatory effect of ST and TT. Unmotivated transformations are called free translations and are thus rejected. Translation minimalism suggests the idea that, with several possible transformations, the translator prefers the one that achieves the equivalence of regulatory impact with minimum walkouts from semantics and structure of the original. With the third criterion, a greater divergence in communicative competences of ST and TT native speakers requires a greater degree of transformations. However, in some cases, the levelling of the communicative competences may need transformations that are inadmissible in translation as their application turns the translation into a different type of language mediation [13, p. 47].

To some extent, limitations in the size and depth of compensational deviations between the ST and the TT depend on the style and genre of the original text – deviations that are common for literary translation may not be admissible in rendering a science text.
The goal of our study was to analyse the measure of translation transformations in a science text – a foundational history research «The Celts: A Chronological History» by the Irish scientist Dáithí Ó hÓgáin, translated into Ukrainian by T. Boiko. We took a close look at the translator’s solutions (in selected text fragments) and evaluated the degree of semantic and structural divergences between the source and target texts, with regard to the translation solutions that were used to achieve the pragmatically equivalent translation.

In his science monograph, Dáithí Ó hÓgáin, the well-known Irish folklore researcher, investigates the history of Celts, whose civilisation had long powered all over Europe and made a significant impact on the subsequent development of European nations.

Generally, a monograph assumes rather long accumulation and interpretation of scientific material. An essential characteristic of a monograph is subjective and objective features introduced by a creative author. Author’s personality and his academic authority influence the scientific and communicative importance of the monograph. One-author monographs are generally peculiar of the human sciences, they are freer and less regulated in expressing subjective views and estimates, less standardized in compositional and stylistic features. And the knowledge of genre and stylistic characteristics of the text – the so called «rules of the genre» – is a key to successful translation, which is possible due to the translator’s good command of the language of science, appropriate and skilful use of various translation devices.

Our analysis has shown that the translation solutions were generally motivated – the translator Taras Boiko used a broad arsenal of translation techniques to achieve the pragmatic equivalence of the original and translated texts. The target text abounds in transformations, though there were, as we feel, inadmissible semantic and structural deviations from the original text, which should be analysed with respect to translator’s motifs.

Fragment 1 is an example of minimal motivated transformations, which are quite rare in the translated text:

1. Their most developed groups were the Hittite empire in Asia Minor, and the Minoan-Mycenaean civilisation of the Aegean which developed into the Greek culture [26, p. 1]. – Найрозвиненішими групами були Хеттська імперія у Малій Азії та Мінойсько-Мікенська цивілізація на узбережжі Егейського моря, що розвинулася у Грецьку культуру [25, c. 5].
Fragments 2-5 illustrate motivated translation transformations, with apt contextual replacements and structural changes:

2. The name Belovesus meant ‘slaying-knower’, and Segovesus meant ‘victory-knower’, and although these may not have been real historical characters, such prestigious titles would reflect a mythical memory of great leaders [26, p. 7]. – Імена Беловез – «умілий убивець» та Сеговез – «умілий переможець» хоч, можливо, не належали справжнім історичним особам, проте є втіленням міфічної пам'яті про великих провідників [25, c. 10].

In Fragment 2, the translator demonstrated a creative approach in rendering names («умілий убивець» та «умілий переможець») and made appropriate syntactic modifications.

3. This is the type of development to be expected, not just along the Rhine but eastwards also for some distance along the Danube, for the great migrations from the sixth century BC onwards were carried out by La Tene groups or by groups in which the La Tene element was predominant [26, p. 7]. – Такий хід розвитку подій можна припустити не тільки вздовж Райну, але також на східних обширах Дунаю, оскільки латенські групи або ж групи з латенським домінуванням здійснювали великі переходи вже з VI ст. до н.е [25, c. 10].

The translation solutions in Sentence 3 are generally grounded, the translator finds interesting emotionally coloured equivalents, what demonstrates his rich native vocabulary. However, the name of the Rhine River should have been transcoded as Рейн, according to the phonetic tradition.

4. As the Stone Age drew to a conclusion towards the end of the third millennium BC, a variety of population groups inhabited that large area, representing what must have been a range of different languages and cultures [26, p. 1]. – Із завершенням кам’яного віку під кінець третього тисячоліття до н.е. на території Європи проживали різноманітні групи населення, представляючи цілу низку різних мов та культур [25, c. 5].

In general, Fragment 4 suggests interesting translation solutions: an economical syntactic modification (drew to a conclusion – із завершенням...), a clarifying addition (that large area – на території...).
Европи), a transposition (a variety (of population groups) – різноманітні (групи населення)). However, the translator failed to convey modality in this text fragment – must have been is an essential semantic component here and it should have been compensated if omitted. Though, in Fragment 5 the translator was more attentive and found a faithful equivalent of the modal verb by adding the adverb очевидно:

5. In reality, the migrations, which were mythologised in the persons of Belovesus and Segovesus, must have begun in the sixth century BC and continued for well over a hundred years [26, p. 8]. – Переселення, міфологізоване в образах Беловеза й Сеговеза, насправді відбувалося, очевидно, в VI ст. до н.е. й тривало понад сто років [25, c. 10].

However, there are cases (Examples 6 and 7) of unmotivated modifications in the translated text, for instance, unreasonable omissions of words, word combinations, clauses, etc. In Fragment 6, unrendered is the meaning of contrast expressed by the adverb however. Besides, the translation features intensive syntactic changes, which have no clear purpose and hamper the perception of the text:

6. The centre of gravity was, however, shifting gradually from the east to the west, which culminated a hundred years later in the situation whereby Herodotus could refer to ‘the country of the Celtoi’ as the area where the Danube rises [26, p. 4]. – Наслідком поступового зміщення центру ваги зі сходу на захід стала «країна Кельтой» (Keltoi) – саме так назвав Геродот сто років потому землі навколо витоку Дунаю [25, c. 7].

7. The older pronunciation – as we shall see – continued in the form of the plosive velar k among Celtic groups who did not come under the immediate influence of the expanding La Tene culture [26, p. 6]. – Давніша вимова зберігалася у формі проривного задньопіднебінного к серед тих кельтських груп, які не одразу підпали під вплив панівої латенської культури [25, c. 9].

In Fragment 7, the translator left out the clause as we shall see, and used no compensational devices. The translated sentence could also benefit if the meaning of the -ing form had been rendered: the expanding La Tene culture – латенська культура, що розширювала свій вплив.
But the greatest number of unmotivated transformations falls to unnecessary paraphrases (Examples 8 and 9), which hamper conveying the communicative effect of the original text:

8. **This is known as the ‘La Tene’ era,** from the discovery of a large collection of such products at a village of that name on the shores of Lake Neuchatel in western Switzerland [26, p. 6]. – *Латенська культура стала відомою* саме завдяки виявленню великої кількості таких виробів у містечку Ла-Тен на берегах Невшательського озера у західній Швейцарії [25, с. 9].

In Fragment 8, we observe an unreasonable paraphrase that changes the meaning of the sentence – the *‘La Tene’ culture* is mentioned in the source text for the first time and what the translator needed to do is to keep closer to the original in rendering this meaning, without unnecessary structural changes.

9. **Iron had been available since the ninth century BC or earlier,** and the use of it for weapons had gradually increased [26, p. 6]. – *З IX ст. до н.е. вони [кельти] вже вміли виплавляти залізо і дедалі частіше виготовляли з нього зброю* [25, с. 9].

In Fragment 9, nothing prevented the translator from rendering the meaning of this sentence more accurately and closer to the original. Besides, the translator should have also been more attentive to the original text and convey all the elements of sense without omissions – *or earlier* has been left unrendered.

The translated text abounds in cases of free translation – for a science text, there are too many of them, and most often they are unreasonable:

10. **For instance, whereas ordinary four-wheeled wagons had been in general use for a long time,** an increased use of bronze and iron parts, added to rich decorations, now adorned special wagons for ceremonial use [26, p. 6]. – *Скажімо, спеціальні обрядові чотириколісні вози, які були у вжитку впродовж тривалого часу, тепер усе частіше оздоблювали бронзовими та залізними прикрасами* [25, с. 9].

As the textual analysis shows, the source text is largely humanitarian, it contains no specialised scientific vocabulary, no narrow history terms but rather expressive lexis. At first sight, the text admits higher freedom of deviations from the original. However, the translator should
be guided first of all by the minimalism criterion in finding the ade-
quate measure of his translation transformations.

In our view, the translator of a science text should first of all guard
the meaning of the text from any misrepresentations – distortions, inac-
curacies and unclarities in L. Latyshev’s classification of mistakes that
arise in rendering the sense of the source text [13, p.235]. Except the
above described translation inaccuracies, the target text also contains
distortions of meaning:

11. Large iron-working centres were established between the
Alps and the Danube, and these produced – in addition to weapons – a
wide variety of tools which greatly increased their technical capacity
[26, p. 6]. – Великі залізоплавильні центри були засновані
між Альпами й Дунаєм, і там крім зброї виробляли широкий
асортимент знайадь із високотехнічними характере-
ristиками [25, c. 9].

So, in the above clause which greatly increased their technical ca-
pacity the pronoun their definitely refers to the iron-working centres
that significantly enlarged their production load due to the manufacture
of tools, but not to characteristics of these tools. This example can be
classified as a translator’s mistake.

The translation of Fragment 12 also illustrates a serious distortion in
meaning – the translator failed to understand and thus interpret correct-
ly the cause-and-effect relationships in this sentence:

12. As the technically more advanced La Tene Celts began to ex-
tend their influence over a wide area, such pronunciation would
have been considered fashionable and would have spread [26, p. 6]. –
Технічно прогресивніші латенські кельти поширювали свій
вплив на інші землі, а оскільки така вимова вважалася модною,
то вона й набула широкого вживання [25, c. 9].

To our point of view, this sentence could be translated with minimal
structural and semantic deviations, with maximum proximity to the
original:

Оскільки технічно прогресивніші латенські кельти почали по-
ширювати свій вплив на велики території, така вимова могла б
вважатися модною та широковживаною на цих територіях.

Another distortion of meaning is observed in Fragment 13, due to
translator’s choosing the wrong dictionary equivalent of the noun work-
shop – виробничі потужності, instead of a more faithful цех, майстерня. Unrendered here is also the meaning of the word combination master smith – майстер-коваль:

13. From the sixth century BC a whole range of new designs, both aesthetic and functional, were developing, as the Celts of that area learned from other peoples and possessed their own master smiths and workshops [26, p. 6]. – Із VI ст. до н.е. починається виготовлення цілком нових виробів – як естетичних, так і функціональних; тамтешні культури, за наявності своїх власних майстрів та виробничих потужностей, переймали досвід інших народів [25, c. 9].

Apart from translation inaccuracies and distortions, in terms of L. Latyshev’s classification of translation mistakes, the target text also contains examples where the translator rendered the meaning of the sentence unclearly, using excessive generalisation («вид засобу пересування») and unmotivated syntactic modifications:

14. This kind of chariot – probably patterned on such vehicles used by the Etruscans of north-west Italy – gradually displaced the older vehicles in the burials of chieftains, thus showing its importance to the new elite of leaders [26, p. 6]. – Такий вид засобу пересування, можливо, запозичений в етрусків північно-західної Італії, поступово витіснив давні вози, вишановуючи нову знать у поховальних обрядах [25, с. 9].

Thus, an adequate measure of translation transformations allows to realise the second major requirement to the target text – in each specific case, it provides for maximum (but not at all minimum) possible semantic and structural similarity of source and target texts, if it only does not contradict the first major requirement of identical regulatory effect of the original and its translation.

Our study has proved that the translator of any text, and a science text in particular, should always restrict himself to the three principles which determine the adequate measure of a translation transformation. The translator should avoid pure unreasonable modifications, in keeping with the motivation principle, reasonable but excessive transformations, in conformity with the minimalism principle, and transformations that have a motif but go beyond the permissible limits, in terms of the principle of general boundedness of a translation transformation. The measure of trans-
lation transformations in the analysed text was not always adequate, due to frequent unmotivated deviations from the original text. This often marked down the pragmatic impact of the translated text. It is important for the translator to always find the golden mean – too radical transformations lead to loose translation and the non-use of transformations when necessary results in literal translation. In general, the target text demonstrates translator’s rich vocabulary, a broad arsenal of translation solutions, but very often fails to produce the identical communicative effect. The translator should strive for an adequate measure of transformations which is an important feature of a high-quality translation.

REFERENCES


76


**SOURCES**


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**МІРА ПЕРЕКЛАДАЦЬКИХ ТРАНСФОРМАЦІЙ У ВІДТВОРЕННІ НАУКОВОГО ТЕКСТУ**

У статті розглянуто особливості застосування перекладацьких трансформацій у відтворенні наукового тексту, з огляду на три принципи зна-
ходження адекватної міри – вмотивованості, мінімалізму та обмеженості міри, із метою дослідження перекладацьких рішень для досягнення тотожності комунікативного впливу текстів оригіналу і перекладу.

Ключові слова: міра перекладацьких трансформацій, принципи знаходження міри, вмотивовані трансформації, невмотивовані трансформації, мінімальні відхилення, прагматичний вплив, перекладацьке рішення, перекладацький прийом.

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ


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