

LATIP 2021**International Conference on Language and Technology in the Interdisciplinary Paradigm****LITERARY TEXT COMPREHENSION AND TRANSLATION: THE
ROLE OF DIFFERENT SENSORY MODALITIES INTERACTION**

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malukhm@mail.ru**Abstract**

The study empirically investigates the role of different sensory modalities interaction (kinesthetic, auditory and visual) in literary text comprehension and translation. Based on Interpretive Theory of Translation (ITT), the unity of the sensory system organization concept and modality as a thought feature theoretical framework, the modality predicates in 6 target language texts were compared with those in the source language text. A total of 6 translators with different preferred modalities (2 kinesthetic, 2 visual and 2 audio) participated in the research. The tests by Stolyarenko and Efremtseva were used to measure preferred modality. The results suggest 1) the modality of predicates in the source and target language texts are not necessarily the same; 2) text comprehension and translation are provided by the interaction of modalities and the thought switching to different modalities; 3) the images and ideas in the source text are not mainly translated into target language in a translator's preferred modality; 4) modality transformations used by translators reflect the peculiar nature of individual sense perception system organization. The role of modality interaction in literary text comprehension and translation is undoubtful.

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1. Introduction

To study the process of text comprehension is essential as it reveals the common mechanisms and individual peculiarities of a text understanding and translation performance. The problem is of particular relevance in connection with literary texts due to their peculiarity. One of the distinctive features of literary translation is the need to convey the hidden, implicit meanings of the source text. Many researchers stress the need for "creative transformation of the original text..., accompanied by the most complete conveying of the original literary features" (Kazakova, 2002, p. 6). Shevchenko (2005) identifies the text fragments or the semantic groups of words, where the translations is beyond mediation, as "zones of increased creativity".

1.1. Brief introduction to ITT

Translation as a creative process is viewed by French translators and researchers Seleskovitch and Lederer (1984). According to the approach a translator understands the source language, breaks away from external verbal form and then transfers the meaning and intentions in a target language. Hence the accuracy is achieved by expressing ideas, thoughts, emotions, and intentions (Bodrova-Gozhenmos, 2006). The essence of understanding the meaning in translation is also emphasized by Bakhtin (2000), he notes that "the idea and meaning of the utterance do not coincide with the purely verbal form of the utterance" (p. 83).

According to the interpretive theory, translation comprises three stages: comprehension, deverbalization, and reformulation. At the first two stages a translator grasps the meaning conveyed by the source language; their difference is that at the stage of deverbalization, the translator abstracts from the verbal forms of source language and stores the meaning in a non-verbal symbolic form. This point of view is shared by Leontiev (1999) in his psycholinguistic interpretation of the process of understanding the meaning. He states that understanding is "the process of transforming the meaning of the text into any other form of its consolidation" (p. 142). Continuing his argument, the scientist describes the forms of consolidation as individual-personal formations indirectly associated with the source text, the so-called "images of the text content". These images can be presented in the form of emotions, visual images or a situation, a representation of appearance, an emotional assessment of events, a set of actions, etc. At the third stage, the meanings of the source text are expressed by the means that may not coincide with the language forms in the source language. Deverbalization links comprehension and reformulation, and is difficult to observe due to the implicit nature of the cognitive process.

1.2. Interaction modalities: psychology perspectives

Traditionally, sensory modality is interpreted as a characteristic of the sense perception system (visual, audio, kinesthetic). Each of these representative systems participates in the perception of the basic qualities of an object, which include color, brightness, tone, volume, temperature, pressure, etc. In their theory of sensory perception processes and organization Ananyev and Luria emphasize the role of sensory modalities interaction and mutual influence in the cognitive processes. Distinguishing two groups of interrelated senses – intermodal (the interaction of two different modalities) and interamodal (the

interaction of two identical modalities), Ananyev affirms that the sensory perception organization of a human being is an integrated system including all sensory modalities without exceptions (Ananyev, 2001). Furthermore, the mechanism of temporary relations of senses predetermines the dynamics of different sensory modalities systems, one of the interesting samples of which is synesthesia (for example, color hearing), which occurs due to the intermodal images fusion and the mixing of communication channels (Ananyev, 2001). Analyzing the relations of the senses, Luria points out that the work of some sensory organs can either enhance or inhibit the work of the others, i.e. one modality can enhance another or suppress it (Luria, 2004). Thus, the author also provides the evidence of the unity of the sensory system organization. All the same, this idea is supported by Vasilyuk (1993); in addition he explains synesthesia not only as fusion of senses but as sensors interferences.

Discussing the process of how an image is transformed into a thought, Vekker (1998) considers it doubtful to exclude "modality" from mental representations. Defining "modality of thinking" as the transition of thought from one spectrum to another (for example, from visual to audio), the scientist points to the cross-modality (the interaction of all modalities) and intermodality (the interaction of two identical modalities) of thinking. Vekker confirms this idea with the facts that in a great plenty of cases blindness or deafness were not an obstacle to the normal cognitive development. Taking into account the intimate connection between language and thought, we can state that when translating from one language to another, "the visual and audio characteristics of an object are translated by the thought into the language of tactile-kinesthetic or tactile modality", the varieties of these transformations are quite numerous (Vekker, 1998).

1.3. Text comprehension studies

The mechanisms of different texts comprehension have been studied quite extensively by educationalists, psychologists, neuropsychologists, etc. Some recent research studies the factors that enhance text comprehension (Kreuz, 2001; Prinz et al., 2020); others explain the brain work (Lindenber & Scheef, 2007). Meanwhile, quite a number of recent research is devoted to the multimodal text comprehension (Songa et al., 2021; Shepard-Carey, 2020), though the role of different sensory modalities interaction in a text comprehension is less abundant.

2. Problem Statement

The interpretive theory of translation cast new lights on source language comprehension and translation performance, but mental processes at the stage of deverbalization still remain an important aspect to reveal. Thus, we suppose that at this stage the mental processes of translations involve interaction of different modalities based on integrative complex work of sense perception system (visual, audio, kinesthetic). So, the study focuses on the role of different sensor modalities interactions in literary texts comprehension and translation performance. To address the question, we consider two main aspects: first, literary text comprehension; secondly, literary translation.

3. Research Questions

The study addresses the following research questions:

- Are the implicit meanings, ideas and images in the source texts always reformulated into the target language in the same modality verbal form as in the source language?
- Do sensory modalities work independently of each other in text comprehension and translation performance?
- Do translators reformulate ideas and images mainly in their preferred modality?
- Are there specific types of modality transformations of visual, audio and kinesthetic translators?

4. Purpose of the Study

The objective of the research is to reveal the role of different sensory modalities interaction in literary translation performance at the stage of deverbilization, thus to describe the processes of literary text comprehension from the view point of unity of the sensory system organization and modality thinking.

5. Research Methods

In our research, we used an excerpt taken from the book "I've heard the vultures singing" by an American poet and writer Lucia Perillo, translated by the students and undergraduates for the annual translation competition, held in Novosibirsk State Technical University. A total of 6 translators with the kinesthetic, audio, and visual sensory-representational systems participated in the research.

We used the text analysis method, which consists of searching for "predicates" indicating a particular modality: visual (vision), auditory (hearing), kinesthetic (tactile sensitivity). In the text, we used abbreviations to indicate predicates that correspond to a particular modality: V – visual, A – audio, K – kinesthetic. To identify the preferred modality of every translator the tests by Stolyarenko (2005) and Efremtseva (Fetiskin et al., 2002) were used. The obtained data were subjected to a comparative analysis.

6. Findings

First of all, the data obtained was divided into three sections: kinesthetic, audio, visual modality, accordingly. Subsequently, we selected the fragments of the source texts, where the predicates modality of source language and target language is different.

The analysis of the source text showed that most of the metaphors and epithets in it are kinesthetic in modality.

6.1. The kinesthetic modality sample

In the kinesthetic sample the text fragments in kinesthetic modality are most often transformed into visual or audio intramodality, as well as into kinesthetics-visual and audio-kinesthetic intermodality.

The examples are presented in Table 1. Therefore, the source text meanings and images are processed by kinesthetic translators using the others than a preferred modality or a combination of a preferred and another modality. It was also observed that one and the same source text fragment can be reformulated in a different way by different kinesthetic translators. For instance, the kinesthetic image “cloying pathetic” is expressed either in kinesthetics-visual “Zhalkoe zrelishe” or audio-kinesthetic modality “zvuchit kak-to pritorno i zhalko” in the Russian language.

Table 1. Types of modality transformations in kinesthetic modality sample

Type of modality transformation	Source text	Target text
K → V	... I’m not immune to a hitch in my swallow whenever I cross paths (K) with the likes of me.	...moe gorlo vse eshe szhimaetsya, kogda ya vizhu (V) pohozhih na menya lyudej.
K → V	...which causes (K) any swaggering to possess a tinge of pathos (K).	...oprovergaetsya moej bespomoshnostyu, okrashivayushej lyuboe bahvalstvo i chvanstvo s moej storony v ottenki (V) pafosa...
K → V+K	...which causes (K) any swaggering to possess a tinge of pathos (K).	U menya ne vyjdet rashazhivat s vazhnym vidom (V+K), i eto dovolno ironichno.
K → A	... when they come from the mouths (K) of their intended targets.	... kogda zvuchat iz ust (A) samih obektov etih slov.
Neutral → V	I am a realist (neutral modality) about my body’s state.	...tem samym ya dayu lyudyam ponyat ..., ya realisticno smotryu (V) na svoe sostoyanie...
K → K+V	...though the expression the N-word is cloying pathetic (K)...	Zhalkoe zrelishe (K+V).
K → A+K	...though the expression the N-word is cloying pathetic (K)...	... N-slovo uzhe vsem nadoelo i zvuchit kak-to pritorno i zhalko (A+K).

Thus, in the kinesthetic sample, there are three types of intramodal and two types of intermodal (kinesthetics-visual and audio-kinesthetic) transformations. At the same time, the intermodal transformations are associated with the preferred sensory-representative system.

6.2. The audio modality sample

The audio translators reformulate the ideas and images into their preferred modality more often the examples are the following (Table 2).

For instance, the predicate “tough” indicates how the “bodily” perception of objects works nevertheless, in the Russian language the image is expressed in visual form. Meanwhile, the other examples show the transformations into visual and kinesthetic modalities, respectively. What is more, like the kinesthetic translators the audio translators represent the source text meanings and images using others than preferred modality.

Table 2. Types of transformations in audio modality sample

Type of modality transformation	Source text	Target text
K → A	I was not tough (K), only half a dago.	Vo mne tekla italyanskaya krov tolko napolovinu, da i volevym chelovekom trudno nazvat (A).
K → A	...was turned into a shield (K)...	... i glasnye v nashih familijah gromyhali, kak dosphehi (A)...

K → V	I have become hardened (K) to its connotations...	Ya libo pokazyvayu (V) svoe ravnodushie k ottenkam ego znacheniya...
V → A	Because cripple is one of those somewhat archaic words that describes (V) a population conventionally seen as oppressed...	«Kaleka» – odno iz arhaichnyh ponyatij, kotorymi nazyvaet (A) sebya chast naseleniya, pritesnyaemaya obshestvom...
A → K	... it now comes off as a slur when spoken (A) in the company of upright citizens. segodnya, kak pravilo, ono sletaet s gub (K) obychnyh grazhdan v kachestve oskorbleniya.
Neutral → V	I am a realist (neutral modality) about my body's state.	Ya trezvo smotryu (V) na svoyo sostoyanie.
Neutral → V	Our bodies house the worst sort of luck...	A chto, odin vid (V) nashih skryuchennyh tel otpugivaet udachu...
Neutral → A	We all know such words.	My vse naslyshany (A) o takih slovah.

So, in the audio sample the transformations are all intramodal, and are mostly in preferred modality, unlike the kinesthetic and visual samples.

6.3. The visual modality sample

As for the translators with the preferred visual modality, the types of transformation were distributed as follows in Table 3.

The visual translator sample shows the varied representations in non-preferred intramodality. Like in the kinesthetic sample there are evidences of how the source text images expressed in visual (preferred) modality are reformulated in forms of either kinesthetic or visual-kinesthetic transformations. So, the meanings and images of the source language are possessed with the help of interaction and integration of different modalities.

Table 3. Types of transformations in visual modality sample

Type of modality transformation	Source text	Target text
K → A	Each of these meanings enshrines some sort of little fib (K).	Chestno govorya (A), v kazhdom iz etih predpolozhenij est svoya dolya zabluzhdeniya.
K → A	... when they come from the mouths (K) of their intended targets...	...kogda prenebrezhitelnye rasistskie frazochki, kotorye my vse prekrasno znaem, proiznosyat (A) sami obekty travli...
V → K	...as a way of clarifying (V) intention...	...tem samym smyagchaya (K) ego znachenie i zavavlyaya...
K → K+A	...was turned into a shield (K)...	...stala zvukom udara ob shit (K+A)...
K → K+V	...though the expression the N-word is cloying pathetic (K)...	Odnako eto vse ravno vyglyadit zhalko (K +V).
K → K+V	...which causes any swaggering to possess a tinge of pathos (K)...	... kotoraya pridaet lyubomu nahalstvu pechalnyj ottenok (K+V) zhalosti...
K → K+V	So, etymologically, cripples are creepy (K)»...	Soglasno etimologii, kaleki – eto te, na kogo nepriyatno smotret (K+V).
K → K+V	...he looked (V) at me with horror and pity...	...vzglyad ego byl polon (K+V) uzhasa i zhalosti...

Hence, in the visual translator’s sample there is a tendency to use both intermodal and intramodal transformations. The intermodal transformations are most often represented by the interaction of the kinesthetic and visual modalities.

6.4. Comparing modalities interaction in all samples

Summarizing the data obtained, we found that in the translator samples (kinesthetic, visual, and audio), the kinesthetic and audio modalities are more often interrelated. Furthermore, the kinesthetic and visual-kinesthetic interrelations are more typical of the intermodal transformations. Concurrently, audio translators reformulate meanings and images mainly in their preferred intramodality, whereas visual translators use intramodal transformations in non-preferred modality. The data is presented in Table 4. However, the types of transformations and forms of modality interactions can hardly be considered typical of all kinesthetic, audio and visual translators. We suppose, it can be addressed as potentials for further studies of the modality interaction in literary comprehension and translation.

Table 4. Modality transformations in all modality samples

Types of modality transformation	Kinesthetics translators	Audio translators	Visual translators	Total
K → V	2	1		3
K → A	1	2	2	5
V → A		1		1
V → K			1	1
A → K		1		1
Neutral → V	1	3		4
V → KV			1	1
K → K+V/ V+K	2		3	5
K → A+K/ K+A	1		1	2
Total	7	8	8	23

In all samples the same source text fragments, reformulated into a different modality, were observed. These include the following phrases and word combinations: “...I am a realist (neutral modality) about my body’s state.”, “...though the expression the N-word is cloying pathetic (K)...”, “...which causes (K) any swaggering to possess a tinge of pathos (K).”, “...was turned into a shield (K)...”. Therefore, the fragments are probably the most difficult to understand and translate.

7. Conclusion

Thus, the finding of this study provides the insights into the role of modality interactions in literary text comprehension and translation performance. First, the obtained examples indicate that the implicit meanings, ideas, images in the source texts are not always reformulated to the target language in the same modality verbal form as in the source language. So, the translation goes beyond the adequate verbal equivalent selection. Second, the findings add to the increasing weight of evidence that in the processes of understanding, sensory modalities do not work independently of each other. The text comprehension and translation are provided by the interaction and the thought switching to different sensory modalities,

resulting in creating complex images that combine information in different modality about a certain property of an object or an image. Third, the images and ideas in the source text are not reformulated by translators mainly in their preferred modality. Finally, visual, audio and kinesthetic translators do not demonstrate the specific types of modality transformations. The range of modality transformations is wide, and the types of modality transformations described above can be explained by the peculiar nature of the individual sense perception system organization, translator's ability to grasp the meanings in the context in accordance with their own language system. Therefore, we conclude that the essence of modality interaction in literary text comprehension and translation is undoubtful, and the limitations of this study can be seen as potentials for further studies.

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