

The Associative Experiment as an Investigative Method of the Translation Process

O experimento associativo como método investigativo do processo de tradução.

Igor Panasiuk 

Jacob-from-Paradise-Academy of Gorzów Wielkopolski- Poland

Abstract: This paper deals with the psycholinguistic cognitive process investigation methods of text reception and the translation process, the free associative experiment, which can be seen as a complex investigation method. Its application is, thus, to be embedded in the translational experiment, from the perspective of translation polyvariety: Two German novel translations „The Master and Margarita” by Mikhail Bulgakov and „Doctor Zhivago” by Boris Pasternak are to be analyzed in the frames of the psycholinguistic experiment. The source of the translation polyvariability is the subjective character’s meaning interpretation, which is based on probabilistic processes and associative meanings. Emotions play an important role here. The empirical data obtained will be used for didactic purposes in the prospective translators’ training.

Keywords: free associative experiment; translation process; psycholinguistic investigation method; probabilistic process; translation polyvariety.

Resumo: Este artigo trata dos métodos psicolinguísticos de investigação do processo cognitivo de recepção de texto e do processo de tradução, o experimento associativo livre, que pode ser visto como um método de investigação complexo. Sua aplicação deve, portanto, ser inserida no experimento tradutório, sob a perspectiva da polivariabilidade tradutória: duas traduções de romances alemães “O Mestre e Margarida”, de Mikhail Bulgakov, e “Doutor Jivago”, de Boris Pasternak, devem ser analisadas nos quadros do experimento psicolinguístico. A fonte da polivariabilidade da tradução é a interpretação do significado do caráter subjetivo, que se baseia em processos probabilísticos e significados associativos. As emoções desempenham aqui um papel importante. Os dados empíricos obtidos serão utilizados para fins didáticos na formação de futuros tradutores.

Palavras-chave: experimento associativo livre; processo de tradução; método de investigação psicolinguística; processo probabilístico; polivariabilidade de tradução.

Introduction

This paper is a test case for the hypothesis of investigating the translation process with the free associative experiment help, among other things for didactic purposes. The associative experiment application to the translation process description has not been undertaken so far in the context of process oriented translation science.

In the ideal-typical model of the translation process, which is the central aspect of his constructive translation conception, Hönig (2020 [1995]) speaks about the translator's grasp of the original language text, who is the first to remove it from its "natural" environment in real communication and project it into one's own mental reality. The text projecting to be translated into one's own mental reality takes place by switching on the translator's mental lexicon, in which the projected original language text becomes his mental processing processes object. Each text reception, thus, involves an immediate activation of the text recipient's mental lexicon. These understanding cognitive processes are mechanisms, in which expectation structures of a probabilistic character begin to build up in relation to the overall shape and the entire text content. Kiss (1968, 1969a, 1969b, 1975) considers the Mental Subjective Lexicon as a searching system for information based on stochastic processes. Such a view of the mental lexicon specifics is opposed to a passive information storage system and is intended to sharpen the view on the need to take into account the stochastic information processing by a human being. Kiss believes that a human's lexicon includes the words or larger verbal units representation that may have more than one meaning. However, each respective word meaning is linked to a term. In relation to its structure, the lexicon represents a verbal representation and connection network among them. Each word or its representation is characterized by a varying activity level. The connections transmit this activity from one word to another.

1. Theoretical framework

Each word is able to accumulate a summary activity that has been received from the word within a certain time period. Thus, the dictionary functioning can best be described by means of a stochastic, branching process. Transitions caused by changes in the word levels activity can be caused by the following factors: 1. Information obtained by means of perceptual mechanisms through the sensory organs; 2. thought processes; 3. the internal lexicon units interaction, when the system order changes if an external influence is absent. Kiss emphasises the transitions third type and he describes them as „free“. They are stochastic in nature, because one word activity can, under certain probability, be changed by the other word activity. If one considers the possible physiological mechanisms of this system functioning, the word representations represent a neurons selection, since they are connected by synapses, one neuron stimulus influences other neurons orderly rows (Kiss, 1969b, Shvedovskaya, 2005, 153). The two aspects – the meanings psycholinguistic organization in the mental lexicon and their neuronal representations – together provide an idea of the understanding and translation process course, which enhances the translator's activity conscious exercise.

The verbal stimulus naming while performing a free associative experiment indicates certain level of activity done by one or more word representations in the system. This proves to be an impetus for the system order change via free transitions, which contribute to the change of the system elements activity levels. At a certain moment, a subject makes a choice for an association, which is determined by a relative activity of the latter. Since decision-making is characterized by a stochastic character, the association choice varies, which offers the possibility for translation polyvariety (Panasiuk, 2016). When this experiment is carried out by a group of subjects, numerous factors determine the different basic structures transitions among the system elements. Despite all this, a considerable affinity is observed among different subjects' associative networks (Kiss, 1969a, Shvedovskaya, *ibid.*). This fact clearly and convincingly supports the free associative

experiment implementation with more than one subject (translator) in order to investigate the comprehension and translation process. The latter justifies the translatory experiment execution from the external perspective (translation process retrospective view) and from the internal perspective (introspective or prospective view of the translation process) with several translators in order to hypothetically reconstruct the translation process (Panasiuk, 2016).

The Associative Thesaurus of the English Language compiled by Kiss et al. (1972) makes it possible to judge the outgoing character and power (from stimulus to reaction) and the incoming (from reaction to stimulus) connections among the investigated words. The information presence about the recursive associations in the associative thesaurus, i.e. about which words can trigger a particular word as a reaction, gives a fundamentally new insight into the associative structure of the mental lexicon. According to Kiss et al. (1973), verbal associations are regarded as direct indicators of the connection degree among the terms. Therefore, the associative norms and the associative thesaurus provide an illustrative mapping of our knowledge about this aspect. This information possibility is beyond doubt, because the associative organization is considered to be an aspect of many, if not all, cognitive processes requiring subjective dictionary use. In the lexicon model developed by Kiss (1969b), the author starts from modern neurophysiology findings and constructs a lexicon model taking into account probabilistic laws that describe how a person's memory functions.

The material presented in the associative Thesaurus deals with associative fields, which are much broader than the semantic ones. An associative field is structured as a network of associations. Anderson & Bower (1973) assume that words can associate with each other if the corresponding terms are part of the propositions encoded in memory. According to its content, a proposition reflects a certain statement about the outside world. Therefore, human long-term memory represents a vast network of mutually overlapping propositional ramifications. Each branch includes a memory nodes specific selection

with marked connections. Anderson (1976) goes on to explain that each node of the propositional network presents a concept. This node is connected to all the information associated with the concept, which gives the propositional network the property that Anderson calls indexing over a term: If a term can be located in the memory system, then all the information we already know about it can be found there.

A similar view of the mental lexicon is also provided by Osgood (1980) and Osgood et al. (1957), in which it is considered one of the most important mechanisms for cognitive information processing. According to Osgood, the mental lexicon is more a process than an information store; it is considered a wide selection of connections between signs (percepts) and semantic characteristics codes. Osgood considers semantic features as mediative components that are inherently bipolar and have a variable zero intensity (neutrality, the absence of a feature in the code chain) and a maximum denominator on the scale.

A significant role is played by the need for an emotional-axiological attitude towards these characteristics bearers. The emotions influence on a person's cognition comes into play here. Grasping the text meaning to be translated, thus, enables the language probabilistic structure. Sensory recognition during text reception is carried out by the probability prediction mechanism, which functions on the basis of associative meaning. In his monograph *Psychologie der Sprache*, Hörmann (1967, 185) refers to Deese (1962, 163), who defines the word meaning as the word responses distribution produced after a verbal stimulus, appearing as a word to be compared. A network of verbal associations is important in this context. Hörmann further argues that the greater the associative meaning similarity between two words, the greater the probability that they occur in the same situational and verbal environment and vice versa: The more frames in which another word could be used instead of only one, the greater the similarity in meaning would be between the two words. Based on the associative similarity, the context evolves from the word (stimulus) to the response (verbal association to this stimulus).

Deese (*ibid.*) seeks to capture the associative meaning by describing the relationships between the responses to different stimuli. He assumes two stimuli being similar in their associative significance to the extent that their associations distributions are similar. The connection with and between the associative responses is, thus, the stimulus associative meaning in question. By the way, this is one premise for the translation polyvariety, because each response that has an associative relation to another one can also appear as one variant for the respective stimulus. Synonymy is already a response to a specific stimulus. Associative meaning, which is the synonymy basis, is also a basis for the variant relations development between the stimuli to be compared. As a result, associative meaning is actualized contextual meaning, because associations create relations between stimulus and response present in existing contexts. The function of the probability prediction mechanism can, therefore, be illustrated by the association mechanism. For Hörmann (1967), few acoustic characteristics are needed for the numbers in order to be able to determine, whether a certain number is involved. With a meaningful word, the listener is already dependent on its several acoustic characteristics, being able to receive it. If, for example, some of these characters were lost in noise, he would be able to supplement the missing information by knowing the contextual situation (top-down processes), but also the phonemes and words combination, common in the respective language. Context is given the primary role here, because isolated words would be less recognizable at a certain signal-to-noise distance than the same words at the same noise in sentences, i.e. in the context or co-text, „because the construction of the sentence also gives clues as to what is possible as a word at that particular place is” (Hörmann 1967, 86).

The author (*ibid.*, 87) speaks here about the probability of words in context occurrence, which depends on the message length in its connection, the message units and the number of possibilities per unit. According to the simultaneous interpretation situation, the information loss may depend on these factors, with

the more information lost per message unit: The greater the units number and the message, the greater the possibilities number per unit (*ibid.*).

The words occurrence probability is also contextually conditioned and it is also learned with the language. It, thus, forms the probability language profile (Hörmann, *ibid.*, 87). The human organism always strives to keep the average effort as low as possible in time. According to Hörmann (*ibid.*, 89) the word frequency in the language is also subject to this principle: „There are two opposing tendencies in language: a tendency to be brief and a tendency to make oneself understandable.” According to Hörmann (*ibid.*), the perception process of linguistic events, the learning act and psychological events occurring in memory are associated with the linguistic world frequency or probability structure.

Following Hörmann (*ibid.*, 97), the assignment step in choosing a translation variant will not give precedence to the argumentative weight of the actually understood object properties, but rather the object properties class will act as the driving force, which exerts an object „pulling” into this class, i.e., the contextually delimited semantic field. This pull force is all the stronger the more often the class has appeared in the language before. The language probability structure appears in its simplest form as the average values of certain units occurrence, collected over millions of word sequences. It is not about uncovering the entire language probabilistic laws, but about them, belonging to the individual language event, which, in the translation act, can be, for example, the translation unit (Hörmann, *ibid.*, 101).

The progression of the mechanism of probability prediction occurs by triggering syntagmatic and paradigmatic associations. The dimension of the similarity of meanings is shaped by the degree of approximation to real language, whereby syntagmatic and paradigmatic meanings are always used in the case of the comprehension and translation process. Syntagmatic associations are the contextual connections between words within a sentence paradigm, while paradigmatic associations are about the search for contextual relations of synonymy:

„Paradigmatic associations arise from the fact that the stimulus is a word that occurs in places for which the listener has provided this and some words. Associations to a certain stimulus word are thus (at least to a large extent) determined by the context...“ (Hörmann, 1967, 144).

Associative relationships are based on certain probability relationships between stimulus and response. Even in the case of translation, the probability relationships determine the degree of approximation to the original. According to Hörmann (ibid., 146), the meaning of a word is thus related to the associations that the word in question triggers. The context of a word can influence the meaning of that word by making certain associations of that word superior to others that are momentarily receding into the background and becoming less available (ibid., 147).

According to Hörmann (ibid., 116), the associative approach is not concerned with the relations between units that occur in a specific language event, but with a manifest unit and one or more latent, i.e. non-pronounced units. Therefore, the probability prognosis is primarily carried out by establishing associative relations between the already existing words (stimuli) and their associative responses. An associative relation is the relation at the cognitive level of the context, which is hidden in its depth structure. Unlike the syntactic relation, which is considered to be a relation *in praesentia*, the associative relation, according to de Saussure, unites notions *in absentia* to form a potential series (ibid.). With the help of the psycholinguistic associative experiment, the functioning of the mechanism of probability prediction can be demonstrated in a concrete word sequence.

According to A. N. Leontiev (1969/1975, 13), the choice of associations as a thought operation proceeds according to a plan composed of certain units that can be called rules for the organization of behavior. The execution of this plan may lead to disturbances, which Ejger (1990, 76) explains by the disturbance of the connection of control between the hemispheres of the brain. The mechanism of the „hitting the spot“

occurs through the interaction between the decision-making blocks of the left and right hemispheres in the brain. The linguistic structures, once they have been identified, are compared with those already present in the brain by transferring them from the decision-making block to the comparator device (ibid., 77). Shvedovskaya notes that when searching for a necessary word or term in the memory, man moves along the associative or logical structure lines that pierce the organizational system of the entire vocabulary. The choice of a variant is made by combining consistent and parallel comparative actions, while the detection task is solved by the consequent blocks activation, whereby each block functions according to the comparison parallelism principle. A relatively small patterns number within each block creates favourable conditions for their simultaneous activation in the comparison process. These parallel processes make it possible to assign the object to a specific class already in the first stage and thus to make the first decision.

The probabilistic association mechanism can also be explained through inferences, i.e. through implications and partly also in connection with abductions. The probability prognosis consists, too, of numerous inference processes. According to Siever (2010, 202), the two interpretative methods, implication and abduction, by which the signs reference to be translated to their interpreters in the semiosis process, i.e., their interpretation, takes place are the understanding and translating fundamental methods: Both can also be regarded as cognitive mechanisms of the translation process.

Translations are interpretations of the original text, each interpretation being an original translation variant. If there is an implication relationship between the source text and the target text, Siever (ibid., 320) considers the target text to be the source text interpreter. The translation variant is, thus, the original sign interpreter. Abduction always provides only possible inferences, whereas induction provides probable inferences and deduction is necessary (Gorlée, 2000, 163). According to this author, abduction is an explanatory method for generating an

acceptable hypothesis: „Abduction is an exploratory method to create a simple and attractive hypothesis which accounts for the external experience under investigation” (Gorlée, 2004, 118).

Chernov (1990, 132) also speaks in this context on sources of and limits on Variability in translation, seeing the message understanding in the inferences making about the message meaning. It is a matter of producing not just one inference, but several ones that can be linguistic, cognitive, deictic (or situational) and pragmatic. The probability prognosis course („a decisive factor of choice between possible alternative ways of understanding the utterance”) is, according to Chernov (ibid.), mainly determined by the situation choice (i.e. „verbal contextual situation, or verbal context of the utterance”), and once this choice has been made, the translator decides the word respective meaning to be conveyed to produce a final statement. The context length determines the meaning disambiguation to be explored in the translation process and thus the success of the probability prognosis course *par excellence*: According to Chernov (ibid.), different statements require different context lengths in order to be successfully disambigued. If the translator is dealing with a source text from another culture, the cognitive inference is less productive for him, but instead the deictic or situational inference becomes more important as probability („a matter of probabilities”). If the translator is dealing with a text by an unknown author, the pragmatic inference remains undefined.

Chernov (1990, 133) summarizes: Most variability sources are linguistic and cognitive in nature, while the limits of variability and the current possible alternatives choice are determined by situational inferences in the probability forecast course. The probability prognosis is thus continued through the context by making the situational inference. It is precisely the situational inference that determines the decisive variability in the first phase, which moves into the second phase, so that a complete picture of the variability sources and limits in the translator’s translation process can be created.

According to Chernov (ibid., 134), recognising the situative or contextual by reference sense means being able to determine the function of the context minimum length with which a translation unit can basically be determined. This cognitive process is based on situational inference. The main thing is to find out the right speaker and the right criteria for determining the minimum context that is essential for the anticipation course. Through abduction, the mental and inaccessible processes in the black box can be grasped during translation (Gorlée, 2000, 169). The probability prognosis is, therefore, characterized by the abductive-inductive character.

According to Serson (2000, 278), anticipations are probabilistic or probable conclusions, i.e. the induction and abduction conclusions. Chernov (1987, 19) continues to see in the stochastic or probable character of implication the multiplicity of translation variants law, which provides that any text translation is not possible in one, but in several variants. Chernov (ibid.) considers a speech message understanding both as a process and as a result of meaningful conclusions, whereby the heard message is interpreted

with the semantic-content structure of the message as a linguistic conclusion (a), with content components of one’s own long-term memory (knowledge of the world) as a thesaural conclusion (b), with factors of situational context as a situational-deictic conclusion (c) and with social and role-specific characteristics of the speaker and the addressee as a pragmatic conclusion. Since implication always results in difference, the latter indicates the distance between the translation variant and the original. The difference is thus expressed in the structure of the denotative meaning of the translation variant, which is considered to be the result of the implication, and can be measured by the semantic intensity of the lacuna. The classification of the polyvariety of the translation can be made according to the type of implication as well as the semantic intensity of the lacuna. The difference thus arises as a result of the probable nature of the implication relationship. (Chernov, 1987, 19).

The probability prognosis, even with the activation of the code-switching mechanism, is already carried out when reading the text to be translated, as Umberto Eco (1994, 143) points out. As the fable

unfolds, the reader makes implicit predictions or anticipations that assume the logical form of the abductive conclusion (the abductive inference). Eco concludes that the reader's anticipations participate in the fable, which in the translation case establishes the translator's fable interpretation. Anticipation can, thus, be understood as a semiotic-cognitive mechanism of the translation process, based on the semiotranslation principle, or translation semiosis, according to Goriée (2004, 226): For him (2004, 212), the translation is conventional semiosis („contractual semiosis”), whose conventional character is psychological in nature and is expressed by the convention probability. The semiotic conventionality determines the translatability. Therefore, there can be no semiosis static description. This also characterizes the translation process description in the sense that it can only be reconstructed hypothetically.

From a didactic point of view, it is important to draw up a list or types of inferences that can be practiced in translation lessons. According to Siever (2010, 319), abductive competence is also the communicative competence core and enables creative translation in the sense of Kussmaul (2000):

The processes of inference, abduction and implication are learnable and can be trained in translation lessons. According to inference processes, which make up anticipation, the organization of the internal structure of the translator's mental lexicon can be judged. They run in the conscious, are therefore consciously tangible and can therefore be made fruitful for translation didactics. The psycholinguistic experiment and, above all, the associative experiment are of enormous help in uncovering these cognitive processes: The cognitive processes of anticipation can thus be discovered behind the relations between stimulus and responses. (Kussmaul, 2000).

2. Methodological framework

This study methodology follows many psycholinguistics and cognitive linguistics as well as cognitive neuroscience guidelines, which theoretically underpin or strengthen the application of the experimental psycholinguistic research method. The psycholinguistic experiment is a complex method of investigating the human language consciousness. It

consists of three phases, whose focus is the contextually bound associative experiment. This is suitable for investigating the translation process in the sense that it investigates the associative meaning. According to Hönig (2020 [1995], 62), a translator needs the association competence, the translation processes real engine, the main aggregate in the uncontrolled workspace field.

However, the association competence had to be governed by a macro-strategy to achieve the defined translation goal. The association competence is not the same as the acquired translation competence, which belongs to the controlled work area, but it should be supported by it, so that it can be used consciously by the translator. However, the translator can translate better without a macro-strategy, but with a correspondingly developed association competence, than vice versa, with a macro-strategy but with a comparatively poorly trained association competence. The reason lies in the associative meanings involved in the translation process, which serve as a vehicle for the context course and make it possible to anticipate it.

Paul Kussmaul (2007, 176) provides evidence for this by unknowingly unconsciously describing the contextually bound associative experiment in the search for translation variants for the English ‚crime‘ in the sentence „How successful do you think government in [Country] is nowadays in controlling crime?“ carried out. As a result of a convergent relationship of meaning between the English ‚crime‘ and the German *Verbrechen* and *Kriminalität*, a decision should be made in favour of one of the translation variants. The choice between the two translation variants should be made according to the principle of prototypicality. In order to retrieve the prototypical scene elements from the crime scene, Kussmaul evaluates the preliminary translation „How successful do you think the German state is today in the fight against crime?“ in the form of a survey by: „So I said something like this: “For crime there are two equivalents in German: *Verbrechen* and *Kriminalität*. What do we mean by the word *Verbrechen*?” This is nothing else than the situation of the free context-bound associative experiment, into

which the participants are placed by Paul Kussmaul with the question. The word *Verbrechen* acts here as a stimulus for which the interviewees should name the prototypical associative meanings.

These associations are possible translation variants that could be considered for the stimulus ,crime', because their choice was made according to the principle of the prototypical representatives of the category ,crime'. The participants then gave the following responses: *Mord*/'murder', *Raub*/'robbery', *Vergewaltigung*/'rape', *Diebstahl mit Körperverletzung*/'theft with bodily harm', i.e. facts that contained violence as the main characteristic. They are, thus, the crime scene core. Furthermore, Kussmaul asked whether the above-mentioned associations covered the meaning of crime in the translation, to which a spontaneous reply was given, that the original text certainly had in mind economic crime and all theft kinds, i.e. petty crime. The decision was finally made for *Kriminalität* and the translation read: *Was meinen Sie, wie erfolgreich ist heutzutage der deutsche Staat bei der Bekämpfung von Kriminalität.*

The contextually bound associative experiment is carried out according to the prototypicality principle, i.e. the core ideas performing within a context. In addition, associative meanings are the basis of visualization in the translation process; as a result of their prototypical nature, they stimulate scenes that visually evoke certain contents in mind. This is a prime example of the associative experiment application to investigate and hypothetically describe the translation process. This fact is considered the justification for conducting the psycholinguistic experiment as a method for the translation process investigation.

The psycholinguistic experiment, thus, comprises three steps: In the text to be translated, the lexical key units are *first* selected using the method of translating units intuitive determination, according to Wolfram Wilss (1992, 85). This is a translational analysis method used during the reception of the text to be translated. The text is, thus, intuitively divided into individual sensory units. According to Jurij Stepanov

(2009 [1965]), the size of a sense unit varies according to the limits and rhythm of one's own understanding over time. A translation unit is, thus, the understood text section or the contextually or analogously captured text level that can be translated with a given translation method. This temporal difference magnitude between the original text recording and the translation production, which is defined as a translation unit, is cognitively determined in the reference phase of the translation process.

The reference-boundary phase is nothing else than this temporal distance itself, the black box in which the understanding or mental translation takes place. Thus, the translation unit cognitive determination takes place in the reference phase: the translation unit corresponds in a cognitive sense to the reference phase of the translation act itself. This temporal distance or difference is specific to each translation type. The relationship between the original and its translation is based on a difference, which is derived from the probabilistic nature of the understanding process and from the determination of the differentiation necessary degree, according to Hönig and Kussmaul (1982, 58), thus shaping the translation process course.

The definition of the differentiated necessary degree arises from the lacunated character of intercultural communication, whose products are literary texts. The difference thus indicates the understanding congruence degree among different cultures. The starting point for the successful course of intercultural communication is the difference (*lacuna*) consideration, i.e. cultural specificity. It is therefore considered as the starting point for the production of equivalence relations between original and translated, characterizing them semantically, which corresponds to the postulate of *equivalence in difference* by Roman Jakobson (1959, 232). To commit oneself to the differentiation necessary degree is nothing but to accomplish the translation act. The difference makes the translation process possible and necessary. It is its characteristics. The difference is both the translation process itself and its result. The consideration of cultural specificities is a guarantee or guarantee for the

successful translation process course. The translation unit is therefore a cognitive unit of the translator's individual thinking and understanding style. Its limits depend on each translator's individual capacity; it is the basis of the translation act. The translation units intuitive determination is based on stochastic implicative processes of meaning interpretation.

In the *second step*, the translational experiment is carried out: it consists of two approaches, the internal perspective (introspective or prospective view) and the external perspective (retrospective view of the translation process), described as so-called „stylistic experiment“ by Fëdorov (1970, 34) and Panasiuk (2016, 231). The stylistic experiment is, thus, considered an analogy of the translation process, barred to any static category. According to Fëdorov (*ibid.*), the translation process dynamics, as it takes place in the translator's consciousness and takes the form of accepted and rejected variants on paper, can hardly be represented with the aid of schematics and models, for the process forms are infinitely different.

The stylistic experiment application can, therefore, be seen in two ways, in relation to the translation process representation and in relation to the existing translations evaluation. It is therefore important to analyse translations in two directions: On the one hand, these are different original translation variants that were produced by a translator: This approach makes it possible to reconstruct the translation process by applying the stylistic experiment. On the other hand, this is the analysis of different literary text translations made by different translators.

In this way it is possible to show how the translation creativity can be shaped or achieved linguistically and how it can be described. The two approaches are related to each other, because both the first and the second allow to reconstruct the translation process intuitively. The two approaches establish the translational experiment in their entirety. For this reason, the translational experiment can be considered both as a translation process itself and as an analytical method. The translator carries out the translation process by unknowingly carrying out the stylistic experiment or the contextually bound associative

experiment based on the probabilistic processes of meaning interpretation. How this works can be traced both by studying translators' notebooks and several translation variants.

Two German translations of Mikhail Bulgakov's novel *The Master and Margarita* and of Boris Pasternak's novel *Doctor Zhivago* are to be subjected to the translational experiment. Within the scope of the internal perspective, two professional translators, who are supposed to carry out their own translation reflection, will propose some text sections containing the translation units for translation. The self-reflections are recorded simultaneously on an information carrier. The received recordings are then produced and analyzed in the form of a loud thinking protocol. The translation process retrospective view consists in the correspondences for the selected translation variants, which are related to the original and to each other in a translational field, determined in the two novels two German translations. The two perspectives results are, then, compared with each other. The two perspectives comparison should provide a hypothetical reconstruction of the translation process tentative course in the first step.

The translational field is the translation process result and is considered to be a translation polyvariety manifestation, which is based on the interlingual contextual synonymy relations. The presence of several linguistic expression forms for a certain invariant content places the translator in a choice or decision situation. According to Gauger (1972, 57), the synonymy effectiveness in the area of language expression lies in its verbal consciousness. Where the verbal consciousness enters, the synonymy takes effect. In other words, the language expression awareness triggers the choosing synonyms process that verbalize the intended language expression according to its meaning. The cognitive formation of a language expression is thus achieved through the synonyms activation that can be considered for this language expression meaning. Contextual synonymy, in turn, is based on associative meanings.

In the psycholinguistic experiment *third step*, the contextually use bound association proves to be

useful. The associative experiment is therefore carried out with the original translation units, acting as stimuli, with the other two professional translators. The contextually bound association results are then compared with the translational fields. The tentative course of the translation process can thus be hypothetically reconstructed. It is important to bear in mind that an experienced translator's mental lexicon is always structured in at least two languages: The translator thinks through the interlanguage semantic fields (Seměnova, 1989, 37), which are based on the cognitive mechanism, the code-switching relay (Min'jar-Beloručev, 1996). The interlanguage semantic field consists of only one source language lexical unit and several corresponding units of the analogue name field in the target language.

Within an interlanguage semantic field, several variants correspond to an original term, interlanguage synonyms for the original term. From a communicative point of view, this results in a quasi two fields overlap of the two languages same name. According to Seměnova (*ibid.*), an interlanguage field central segment consists of one or more target-language semantic field units, which are the most common equivalents for the original semantic unit. Seměnova sees the interlanguage field structure as a possible translational decisions model. The translational decision not only depends on which segment of the interlanguage field the chosen variant belongs to, but primarily on the functional (structural-semantic, stylistic and pragmatic) text invasion. This may explain the closest variant application to the central segment of the interlanguage field as undesirable and impossible. When working with the interlanguage semantic field, it is therefore important to investigate the translational decision logic and to uncover factors that force the translator to refrain from using structurally analogous and semantic-like units and to prefer variants with a different syntactic and semantic structure. The translator's intuition plays an important role in this process, with the help of which he can functionally assess the text sections that are being compared in the translation process.

The interlanguage semantic field, activated in each translation act, represents the process of searching for translation variants in the verification phase, during mental translation. The interlanguage fields existence provides for the translational decisions multiplicity, because interlanguage fields are characterized by the source language expressions multiplicity. The translator's mental lexicon internal structure consists of interlanguage semantic fields, trained by the mechanism as a code-switching translational skill.

This fact justifies the implementation of the contextually bound associative experiment, especially with translational fields. Associations to a specific stimulus word, in this case, a translational field, are determined by the context. Such contextually bound associations should usually occur more quickly than in the free association case. These are paradigmatic associations that underlie the inter-linguistic contextual synonymy. The word context can influence that word meaning by allowing that word certain associations to take effect through the context, while the others go into the background and become less available. The translator is thus presented with the translational fields for which he should write down his receptive reactions in the form of responses (associations), both source and target language, or both. According to Deese (1962, 163) and Hörmann (1967), the meaning of a word is defined as the distribution of the word responses produced to the stimulus. Thus, a network of verbal associations towards the stimulus is generated, which can be described as an associative field and at the same time as the meaning of the keyword. According to Hörmann (1967, 185) meaning is a field-like connection established by a set of associations. He sees meaning as a connection in two ways: A connection of the word with non-linguistic behavioural events and with other words that establish its verbal environment. So, the word meaning is captured in the responses it triggers. Deese captures the word associative meaning through describing the relations among the responses to different stimuli:

If the associative meaning of any stimulus is given by the distribution of responses to that stimulus, then two stimuli may be said

to have the same associative meaning when the distribution of associates to them is identical. Two stimuli overlap or resemble one another in associative meaning to the extent that they have the same distribution of associates. (Deese, 1962, 163).

The connection with and between the associative responses is the stimulus associative meaning. The associations distribution to the translational field to be investigated is intended to shed light on the hypothetical or possible course of the translation process. Finally, the associative context makes it possible to anticipate the context further course, i.e. to capture the overall context. Translational fields as stimuli offer the opportunity to grasp the sense unit contextual meaning. The translator as a test subject thus reconstructs the translational field associative networks. The contextually bound association results with the translatory fields are compared, in the third step, with the contextually bound association results in the second step and with those of the Think Aloud protocols in the first step. This should exacerbate the hypothetical overall picture of the translation process.

Emotions play an important role here. The study of the relationship between cognition and affect is considered to be a central problem both for the cognitive processes study and for the study of the human being developmental dynamics. Emotions increase the meanings variety. The words affective colouring influence on associative processes comes into play, because, under a meaning psychological structure, its associative structure is recognized (Brudnyj, 1971, Leontiev, 1971, Piaget, 1963). Emotions thus give the thought process a context and a direction which reduces its complexity, leading it in the right direction, and giving it contextual framework. The thought emotional meaning places thought above all in a relationship context. If the cognition relationship structure is massively impaired by structural disturbances, formal thinking experiences the flooding emotions effect. If the emotional excitement that causes the division processes reach its limits, they resort to cognition and, at the same time, to their linguistic expression. This also leads to the coherence

lack of the linguistic statements.

Daniel Goleman (2007, 49) focuses on the emotional aspect in the neuroscience context. Emotions therefore have an intelligence. The interplay of feeling (emotions) and rationality (cognition) controls a person's current decision-making. Emotions can be influenced by the thinking brain accordingly. Goleman (ibid.) considers the complementary relationship between the limbic system and the neocortex, the almond nucleus (amygdala), and the prefrontal lobe as instances that participate fully in the human emotional life. When applied to the translation process, it is important to observe the influence of emotions on the decision-making process for a particular translation variant during self-reflection.

3. Final remarks

How the translation process proceeds, when emotions are inflated, whether the process is speeded up or stalled, can often be observed, while interpreting in police interrogations. Often in such situations there are moments when minds on both sides are brought to boil emotions. This is reflected in the emotion-laden lexicon choice to be reproduced during interpretation. The emotional aspect sets the contextual framework, as the translator tries to reproduce the words emotional charge in the languages and cultures concerned. The emotional aspect usually speeds up the search for prototypical core ideas within a scene, which take the form of context-conforming translation variants. Finding the right translation variant facilitates emotions that stimulate the translator's association competence. Emotions are linked to a particular situation: they are experienced and suffered only in that situation and are linguistically „clothed” in accordance with that situation. Emotions frame the prototypical core ideas within a scene by giving them the contextual frame. Cognitive neuroscientific knowledge about the course of the translation process enables a translator to consciously control the translational activity. The presentation on the cognitive-neuroscientific organization of the comprehension and translation process will contribute to the optimization of translational activity. The influence of emotions on cognition has yet to be

experimentally clarified and investigated using psycholinguistic methods.

français: Apport au problème des synonymes. TBL.

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