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PSYCHOLINGUISTIC MECHANISMS IN TRANSLATION

In the 60's and 70's, translation studies, embedded in linguistics, were preoccupied with the analyses of the source and target language texts (SL and TL texts). What was attracting the scholarly attention was the concept of translation equivalence¹. All the research was orchestrated around the performance model that would ultimately direct the translator towards obtaining formal equivalence. What is vital to notice, that product-oriented approach rejected the human aspect, that is, the author, the translator and the receiver of the original and the translated texts. Any subjectivity was excluded.

First references to psycholinguistic aspects in translation were found in the book of the influential German theorist Wolfram Wilss (*The Science of Translation* 1982). In his book, Wilss devoted his attention to such issues as psycholinguistics, creativity and intuition in translation. It was only at that time that the first references to a translator as the subjective quality transmitter were made in translation studies. However, at that time, the psycholinguistic considerations about the process of translation were in their infancy. The synchronisation of the psycholinguistic concepts and the translation theory took place in the 80's when the Think-Aloud method of data elicitation was borrowed from the cognitive science (Think-Aloud protocols – TAPs). The new approach to translation (represented by such scholars as Hans Krings, Wolfgang Lörcher, Paul Kussmaul, Riitta Jääskeläinen or Sonja Tirkkonen-Condit) resulted in a considerable shift from the product-oriented to the process-oriented (dynamic) perspective.

In this paper, I intend to show the major achievements of psycholinguistically-minded scholars within translatology with special attention given to the notion of the expert behaviour in translation. It is worth noticing here that the practical aspect, that is the pedagogical help, constitutes a great advantage of the fusion of those two sciences.

¹ Introduced by Roman Jakobson in his article, *On Linguistic Aspects of Translation*, first published in 1959.

1. Psycholinguistics as an independent field of study

Today, some psychologists investigating linguistic behaviours, do not accept the fact that psycholinguistics, having reached a proper maturity, gained a scientific autonomy. Voices like that of the Polish psychologist Ida Kurcz claiming that "psycholinguistics is a branch of psychology" (translation mine), still can be heard (Kurcz 1992: 5). Although, the inspiration to create a new branch of study came from psychology (cf. Puppel 1998: 183), for the time being, psycholinguistics has been functioning as an independent field of research. The fact that psycholinguistic considerations bring about the new perspective in a number of autonomous linguistic areas, translation theory being one of them, constitutes the evidence for it. Besides, more and more scientifically valid theories, models and assumptions are crystallising within this area, which provide the material for further, long-term research.

While confronting such problems as linguistic processing, the mapping of the mind or the ways in which the information stored in the cognitive system is utilised in the production and understanding of expressions, psycholinguistics proves to be an interdisciplinary field of research; it is a hybrid of such sciences as psychology, linguistics, sociology, neuropsychology, anthropology and artificial intelligence (cf. Puppel 1996: 138).

2. A translator's expert role

Recently, the psycholinguistic research has comprised the area of Artificial Intelligence. Scientists are curious whether a computer is able to pattern the human problem-solving process. In addition, they want to find the limits of AI. Among the issues which are of particular interest for linguists, are expert systems that is, "specialised software packages which are intended to allow users to benefit from the knowledge of an expert human consultant [...]. Expert systems are used to give advice to users, to communicate knowledge contained in the database to them and to organise that knowledge in novel ways" (cit. Bell 1993: 39). So far, expert systems have not been applied to translation. However, their application is but a matter of the nearest future. I have outlined the issue of the expert systems to show the origin of another concept which will be presented here, namely, the expert role introduced by Paul Kussmaul in his monograph on translation training. Kussmaul focuses his attention not on software products as such but on that human expert consultant standing behind. According to the scholar, a professional translator is characterised not only by his or her translation skills, but also by the self-awareness and self-confidence he or she shows with regard to his or her professional activities. Professionalism equates superior content

knowledge but also the sense of the relevance of information, the ability to assess the translation situation and one's strengths and weaknesses, last of all, good monitoring skills. To control the process of translation, a translator must act as an expert. What is significant, expert behaviour is not a personality characteristic. Rather, it is a role acquired as a consequence of one's ability to give profound and well-grounded explanations to one's translation decisions. In short, a broadly understood translation competence including the psycholinguistic and general world-knowledge plus proper training, decide whether a trainee translator will eventually adopt the expert professional role (cf. Kussmaul 1995: 32; LeMaistre 1988). The methodological implications for training of translators will be demonstrated in the concluding section of this paper.

3. The dynamics of language

Before the model of the translation process is discussed, in which all the mental mechanisms are nicely presented, I shall elucidate the question of the dynamic character of language, as advocated by mentalists. In contrast to traditionally-minded linguists who saw language as an abstract entity, psycholinguists point to the subjective character of every linguistic operation. Linguistic activity is subjective in the sense that, while analysing it, we have to take into account a number parameters such as the time and place, the purpose and the target audience of the message. Even more vital are the cognitive storage systems of the sender and the receiver of the message. Each of the participants of the linguistic exchange projects his or her own cognitive patterns on the message. Consequently, both the original and the derivative understanding is of subjective and productive (rather than receptive) nature. Each reading of the linguistic message can produce new, original approaches to the text (see the below sections of this paper in which the unfolding of the language processing will clarify these issues).

All the above enumerated parameters constitute the variables and dynamize the linguistic act. What can be universally attributed to all languages and all linguistic operations, are the mechanisms that orchestrate those parameters and can be accounted for by the same performance models.

4. Mediating across languages

There is no total symmetry between language systems, as far as such formal aspects as lexicon, syntax or semantics are concerned. Numerous contrastive analyses have provided the documentation for it. Also, languages being embedded in some culture-specific environment, can differ radically in terms of pragmatic and functionalist parameters. At this point, a fundamen-

tal question arises, namely: why is translating across languages possible at all? While trying to find the answer to it, one should focus one's attention on the mechanisms that lay at the bottom of all language performance (the translation act being one of its variations) and may be attributed universally to all human language systems, regardless the culture or geographical position. In the below presented model of the translation process one will easily notice this twofold character of the linguistic processing (that is, universal occurrence and environment-specific modelling).

5. The translation process

As concerns the model of the creative translation process, it has the following structure:

- preparation,
- incubation,
- illumination,
- evaluation (cf. Kussmaul 1995: 40).

The model being the theoretical construct, encapsulates the distinct, mental in nature phases of the process. In practise, however, the dividing lines between these phases are not clear-cut. As Kussmaul notices (1995:49), there are moves forward and backward in the process and the phases tend to overlap.

Below, the next phases in the process will be briefly discussed. I also intend to present the report on a study conducted for the purpose of my M.A. thesis. The Think-aloud experiment was orchestrated to confirm the hypotheses put forth by psycholinguistically-minded scholars within the translation studies. Much attention was devoted to the psychological profiles of the subjects as translators. My intention was to check whether those translators-to-be assumed the expert roles and how their attitudes affected the translation performance. I found the results interesting enough to present them briefly in this paper.

5.1. Preparation

Preparation is the phase where cognition is involved. The SL text is being read, analysed and comprehended. One's linguistic and world knowledge are being activated. First hypotheses about an optimal translation are being formed, these are both: the consciously made rough drafts and the subconscious expectation structures (cf. Lörcher 1991: 81). All of these reflections are based on one's subjective in character, cognitive patterns projected on the SL text. So, the process of comprehension involves some creative effort on the part of the translator. What is also noteworthy, creative comprehension naturally

presupposes creative miscomprehension, when mental processing leads to a comprehension failure and results in an unsuccessful translation.

In my Think-aloud experiment, the text chosen to be translated from Polish into English was fairly difficult. It included word-play, a number of culture-specific elements requiring "special treatment"; also, it included legal terminology. The text was deliberately chosen to cause translation problems and, consequently, to bring the mental processes to surface. Unproblematic translation is automatic, so, takes place at the unconscious level to which the access (by means of the Think-aloud method) is not possible. Facing the problems, the subjects (five Polish students of English philology, completing their studies at Poznań University) had to refer to their strategic competence. At this point, the retrieval and comprehension strategies could be of great help. In the experiment, the translation was done from the native language, as a result, the comprehension problems were reduced to several critical moments, such as the lexical asymmetry between the Polish word 'adwokat' and the English lexemes 'lawyer', 'barrister' and 'solicitor'. The lack of symmetry between the semantic componential features of the Polish and English corresponding words also turned out to be troublesome. What proved to be the most popular strategy was intuition. One of the most interesting cases when intuitive thinking was employed involved the Polish legal term 'powód' (Eng. plaintiff). The very word turned out to be problematic for one subject, and neither searching via paraphrasing nor looking at the context were employed by her. Instead, she decided on the intuitive choice: "Teraz zastanawiam się nad słowem »powód«, którego nie znam. Powód to jest ten co wezwał do sądu, tak? [...] Nie, to jest ten wezwany" (Eng. Now, I'm thinking about the word 'powód' – which I don't understand. Powód – this is the person who undertakes a legal action against somebody, is it? [...] No, this is the person sued). It seems that, not knowing the meaning of 'powód', she associated its form with the Polish verbs 'wodzić kogoś' or 'powieść kogoś' which convey the idea of leading or dragging somebody somewhere. The error of understanding was caused by incorrect phonological and graphic association, which led to forming a delusive mental scene with 'powód' being the person 'dragged' to court.

As concerns the retrieval strategies, the subjects limited the register to one simplest (and most tricky) strategy of dictionary use. As any handbooks were forbidden in the experiment, the subjects could not help 'yearning' for them throughout the Think-aloud sessions. The record holder did it three times. To illustrate, I will quote one subject who said: "Bez słowników nie wymyślę nic więcej" (Eng. I'm stuck without dictionaries). And later on: "Wydaje mi się, że bez słownika absolutnie nie uda mi się tego przetłumaczyć; żeby było tak ładnie, jak tu jest napisane; i w ogóle wydaje mi się, że jak przetłumaczę, to i tak nie będzie oddawało do końca tego, co tutaj jest i mogę to nawet zakłamać" (Eng. I guess, I won't translate it without a dictionary so

that it reads as nicely as here; actually, I think even if I 'll translate (the text) it won't contain all that is in the original; and I even may distort it). As it was later on established, the problem lay not so much in the linguistic or translation competence (the resulting texts were quite good, taking into account all the limitations imposed on the subjects), but in the lack of self-awareness and self-trust on the part of the subjects. They felt so insecure without the supportive help of dictionaries that all their top-down (that is, cognitively-driven) processing was blocked. They could not free themselves from the source language text itself (bottom-up approach) – in terms of Lörcher's dichotomy their translation was sign-oriented (see 5.3.1).

Coming back to the theoretical shape of the translation process, while talking about cognitive perception, it is inevitable to look at the process of concept formation which requires introducing such terms as concept schema, script and frame (being the networks of concepts); later on, there are models and modes of concept formation (that is, the top-down and bottom-up process). All of those theoretical constructs help to present the architecture of cognition, consequently, they have a considerable practical implication as they make the translator realise what is going on in his or her head while reading and, later on, translating a given portion of language. The very awareness, in turn, makes it possible to control the translation proceedings, as a result, produce a good translation.

5.2. Incubation

In the process of translation, the incubation phase crystallises next, being the search for preliminary solutions to the translation questions spotted. First associations, not necessarily the most happy ones, receive a translator's cognitive attention, as a result, some of them are rejected immediately, others are generated in the subsequent stage of illumination. However, while discussing the incubation as such, Paul Kussmaul stresses several times the significance of physical and psychological relaxation that should accompany it. In order to let 'a free flow' of thoughts enter a translator's mind, he or she must create a necessary attitude within himself or herself. While, at a conscious level the mind is relaxed, subconsciously the mental processes are going on (cf. Kussmaul 1995: 44). In my TAPs, the very phase was noticed and nicely characterised verbally by one of the subjects who commented on the longish pause in her monologue: "Trwam ogólnie w skupieniu" (Eng. I'm in a state of conscious attention).

On this level, first problems may arise in the process of translating. It may happen that a person tries hard to grasp some word or phrase which is almost at the tip of the tongue. As a result, the person blocks mental processes. The illumination phase is obstructed.

5.3. Illumination

This phase in translation conveys the generation of logical alternatives to the problematic portions of the SL text. The phase comprises the processes of solution-finding. Before an optimal solution is grasped, a translator has to move away from the SL text and employ paraphrases and shifts, classified together by Kussmaul as 'divergent thinking'.

5.3.1. Sign-orientedness in the TAPs

The text to be translated into English was about the legal action undertaken by the Polish leftist politicians against the journalists of "Wprost" Polish weekly; the journalists claimed to have hit upon some dirty business of the left. The translation assignment accompanying the text informed about the source of the text, the purpose of the translation (informing English or American readers about the scandal) and the target audience (English or American educated readership without a profound knowledge of the Polish political scene). A translated text reads smoothly and naturally, if its overall organisation is adjusted to the TL conventions. So, apart from controlling grammar, lexicon and syntax, a translator should focus his or her attention on the pragmatics, semantics and stylistics of the text. Ideally, the organisation of the information in the text should be modified as well, to produce a high-quality, dynamic (in Nida's terms) translation. However, the subjects of the experiment seemed to be preoccupied mostly by lexical asymmetries. Two of them (Ela and Ala) started their test by reading the whole text and trying to establish the main ideas. The remaining three restricted themselves to the analyses of subsequent sentences and the lexical problems included in them. "Na razie jeszcze tego nie czytam, tylko patrzę, jakie są słowa" (Eng. I'm not reading it now. I just look at the vocabulary) – the words opening the protocol, uttered by one of the subjects illustrate what Lörscher calls sign-orientedness in translation (as opposed to sense-orientedness, dominant in professional translating where the translator's attention is focused mostly on transmitting the sense). Those three subjects have remained consistent to the very manner of translating and throughout their tasks, devoted much attention to the search for formal or functional equivalents of the SL lexical items. In the psycholinguistic terms, they concentrated too much on the bottom-up material (that is the surface structure) neglecting the top-down knowledge and their meta-knowledge.

5.3.2. Errors of application

In the article entitled *Deciding before you think: relevance and reasoning in the selection task* Evans (1996) distinguishes between errors of understanding and errors of application, the second being the cases when the translator

knows the rule or procedure but does not apply it when the need arises. The very dichotomy is well-visible in my TAPs, moreover, the errors of application are in the majority. As an illustration, let me cite the statement uttered by one of the sign-oriented subjects (Dorota) while overcoming a mental block caused by some lexical problem: "W ogóle widzę, że tłumaczę tak dosłownie po kolei, słowo po słowie; jakoś nie umiem tego inaczej zrobić". (Eng. Actually, I know that I'm translating literally, word by word; somehow, I can't help it). What she seems to lack, apart from practice, is self-confidence and self-awareness as a translator.

5.3.3. Fear of interferences

So far, it was false friends that students were warned against. Paul Kussmaul sees an opposite tendency, which seems to generate numerous translation errors. In the text to be translated in this study, there was one potentially tricky phrase which could, and ultimately did, cause problems. Namely, the Polish word 'formalnie' which in the TL text could safely be translated into English 'formally', conveying the idea of a formal or official action. However, only Dorota and Ala confidently reached for the English equivalent. Iwona ignored the word completely and the remaining subjects gave voice to the fear of interferences and, to prevent the error, Ela employed the strategy of reduction, and Gosia paraphrased 'formalnie' into 'oficjalnie' (Eng. officially).

5.3.4. Cultural colouring in translation

At the basis of all human thought processes (understanding being one of them) lies the individual's cognitive system. Cognition involves a variety of mental mechanisms and patterns crystallised throughout one's years of mental development. The cognitive system develops under a decisive influence of the environment one is interacting with. As a result, the mental patterns and models through which one perceives the world, are subjective and vary across cultures. In the text chosen for the purpose of this study, there were a number of such cultural peculiarities, the political parties with their social reception, or the Polish weekly "Wprost" displaying pro-reformist and rightist preferences, to mention but these elements. A translator, first of all, should be aware of the typically Polish character of the original which will probably be full of exoticisms for an English or American reader. Out of five subjects in my experiment, none noticed the necessity to guide the foreign receiver of the translated text through those cultural peculiarities. One of the subjects, Ela, remained completely indifferent in this respect and, referring to the "Wprost" weekly as 'magazine', said: "Nie napiszę weekly magazine, bo wiadomo, o co chodzi" (Eng. I won't write weekly magazine – everybody knows what it is all about). She depicts a lack of distance towards her own subjective world knowledge. Such a distance should characterise a professional translator.

5.4. Evaluation

The phase of evaluation completes the translation process. The model presented above but indicates certain features of the process. So, it is vital to understand that the stages are not arranged in order of their successive appearance in the model. In fact, there is no linearity here. The four phases can appear simultaneously, they correlate closely, consequently, evaluation occurs after incubation when the preliminary ideas are verified and the alternatives gathered for further analyses. What is interesting, a translation failure often can be accounted for the ineffective or defective evaluation phase, where the best translation solutions are lost somewhere at the incubation or illumination stages, having received hardly any attention on the part of a translator. In brief, the evaluation phase manifests itself throughout the translation process, as well as at the end of the translation task.

As has already been mentioned, at the preparation stage the expectation structures with regard to the TL text are being formed. These are the assumptions and visions of a translator about the optimal shape and content of the TL production. What is of particular significance, these mental constructs, on the one hand, develop the process of translating, on the other, they control it, directing towards the final goal. By means of the expectation structures, a translator checks and evaluates his or her work (cf. Lörcher 1991b: 268)

My subjects signalled several times the existence of such ideal versions of their translations. To exemplify, Ela quite straightforwardly expressed her thoughts: "Ewenement to jest coś rzadkiego [...] a unique event... chociaż to mi śmierdzi" (Eng. Ewenement – this is something unique [...] a unique event... but it stinks somehow). Ultimately, she chose 'a unique event in Europe'. Gosia, in turn, after translating the first sentence, stated critically: "To pierwsze zdanie jakoś mi nie wyszło" (Eng. This first sentence came out badly).

6. Guidelines for future translators

The practical aspect, which refers to the vital methodological implications, constitutes a great advantage of the mentalistic considerations within translatology. As, today, the standards imposed on translators are enormous, the need arises to formulate concrete methodological guidelines for translators-to-be. Psycholinguistic considerations may help those inexperienced, first, to preserve good solutions to translation problems that are lost somewhere along the translation process; second, to monitor and steer the mental processing, so that potential errors or mistranslations are ultimately avoided. Putting it in more general terms, the psycholinguistic orientation in translation studies helps the translator to shape his or her expert behaviour. As Paul Kussmaul states in his monograph, even those with

weak personality features may eventually become competent, self-assured translators (cf. Kussmaul 1995: 32).

In the below sections of this paper, I will present some practical tips and suggestions which, if followed, may facilitate considerably translation procedure. This pedagogical help has been collected from the research papers and monographs of the psycholinguistically minded scholars – Kussmaul, Lörcher, Jääskeläinen, Tirkkonen-Condit and Krings. Also, my own preliminary study confirmed the importance of these ‘tricks of the trade’ in the translator training. Below, the following notions will be briefly discussed: the balance between top-down and bottom-up processing, self-monitoring skills, the sufficient degree of precision, last of all, emotions in cognition.

6.1. The balance between the bottom-up and top-down processes

A university training is usually focused on teaching English as a foreign language, as a result, the emphasis in the curriculum is put on extending students’ lexical repertoire, while the fact that texts are always embedded into some extralinguistic context, seems to be neglected.

Today, commonly it so happens that a teacher provides his or her students with a pile of lists containing vocabulary to memorise. The results are pitiful: first, the students ‘translate’ these items into their native language, usually taking into account one or two ‘meanings’ given in the dictionary; second, this searching for formal equivalence often becomes their linguistic habit; in the psycholinguistic terms, the bottom-up approach is favoured in the training, which, later on, dominates in a translator’s procedure and contributes to the translation failure.

From the functionalist perspective, foreign language learners should be exposed to contextualised English. Paul Kussmaul suggests that students of translation should be taught to keep the balance between their focusing on the textual data of the original and their referring to the world or extralinguistic knowledge. Here, again, problem arises, as Polish educational system promotes the autocratic teacher as the leader in the classroom instruction. He or she has no intention to activate a student’s world knowledge (which means creativity). Consequently, as early as at school bottom-up processes are dominant.

Coming back to translatology, the imbalance between these two types of processing brings translation inadequacies, if not errors such as false friends, faulty one-to-one correspondents, based on one’s interlanguage, or the misuse of dictionaries.

6.2. The maxim of the sufficient degree of precision

As a result of the long-lasting discussion within the field of translation, a formal equivalence has been established to be a utopian concept. The one-to-one correspondence between the elements of the two different languages

seems not possible (except standardised technical terminology). What may be found, however, is the partial overlapping of meaning of the two items. This is a relevant linguistic information which should be taken into account by the translator (cf. Kussmaul 1995: 93). Paul Kussmaul advocates replacing the traditional maxim saying that there should be a complete reproduction of all the componential features of a word, by the maxim of the sufficient degree of precision, which says that one should aim to preserve in the translation (of a given text) only those semantic features of TL lexical elements which are relevant in a given context. Sometimes, it is recommended to foreground those most prominent and suppress those irrelevant ones.

6.3 Self-monitoring

Monitoring is perceived by Wolfgang Lörcher as one of the most vital retrospective procedures in strategic translating. In his view, monitoring refers to processes of going back and taking the antecedent information which may be needed to go on with translation, or to polish the portion of the produced translation in light of the new data. Besides, intensive thinking often causes mental blocks or, simply, tiredness. Professional translators put their translations aside and, next day, look at it critically again. Trivial as it sounds, this advice is not always so obvious for trainee translators.

Catherine Le Maistre, in turn, sees self-monitoring as involving the awareness of one's own strengths and weaknesses. Having recognised one's own aptness to certain errors, one may invest more energy into controlling this aspect of the procedure. So, again, the translator and his or her procedure is of primary importance here. It appears that the process (as performed by the translator) and the product are interdependent and should be examined together.

6.4. Emotions in cognition

For a long time, psychologists and methodologists believed in a human being as consisting of three domains: the physical domain, the cognitive domain and the affective domain. The affective domain, that is the emotional side of human behaviour, was contrasted with the human cognitive system. Today, more and more scientific efforts are undertaken to prove that these two dimensions are not complementary but interact or even overlap. According to the latest hypotheses put forth by cognitive psychologists, an individual's cognitive patterns are crystallised with a significant participation of emotions. Emotions are believed to form one's outlook upon life and cognitive representation. They partake in creating the input mechanisms. For the time being, it seems too early to present any scientifically valid models of the interaction between cognition and emotions. The research in the area is being conducted. But, if it was finally proved that, in fact, emotions lay at the basis

of the human cognitive system, would it mean that future translators would be supposed not only to develop their linguistic and strategic skills, but also **empathy**? Regardless the ultimate direction towards which the research will go, the subjects in my experiment did lack the very ability to solidarise or identify themselves with the reader of their translations.

7. Conclusion

To conclude, there seems to be agreement on the assumption that verbal reports are suitable to gather hypotheses about the translation process. The results obtained through Think-Aloud protocols need further verification. The theory, at this stage, cannot be taken for granted and applied universally. However, the above presented considerations sound seriously enough to continue this research, which is the more vital as today the expectations translators must face are tremendous. As Mary Snell-Hornby observed, the translator of the future is "a talented multicultural expert who is not only a language specialist (...) but needs to be an expert in other fields, too" (Snell-Hornby 1992: 11). One may risk a statement that, at this stage, there is no return to the traditional purely linguistic approach to translation.

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