A Study of the Translation of Neologisms in Technical texts: a Case of Computer Texts

Masoumeh Yazdani Moghadam, Ahmad Sedighi

Abstract – In order to understand the style of the original author, the translation of the text should be the true reproduction of it. One aspect which helps translators to achieve the author style is accomplished by the translation of neologisms. Newmark [7] defined neologisms as newly coined lexical units or existing lexical units that acquire a new sense. The present study was an attempt to consider the most common translational norm and procedure applied in the translation of computer neologisms from English into Persian in 2000s. To achieve the aims, a parallel corpus of computer texts was selected; the instances of neologisms were identified in them and compared with their Persian counterparts. The findings of the research suggested that transference and lexical synonymy were the major translational norms and transference was also the most frequent translation procedure in the translation of neologisms in this specific period.

Keywords: computer texts, English language, Persian languages, translation procedures, types of neologisms.

1. INTRODUCTION

The effect and importance of translation as an activity and an interdisciplinary field is known at least to most educated people in general and those who deal with it in one way or another especially translators, translation trainers, and translation trainees in particular. So, Newmark [7] states:

As a means of communication, translation is used for multilingual notices which have at least appeared increasingly conspicuously in public places; for tourist publicity, where it is too often produced from the native into the 'foreign' language by natives as a matter of national pride; for official documents such as treaties and contracts, for reports, papers, articles, correspondence, textbooks to convey information, advice and recommendations for every branch of knowledge.

Nida and Taber [8] also define translation as "the reproduction in a receptor language of the closest natural equivalence of the source language message, first in terms of meaning, and secondly in terms of style."Therefore, when translating from one language into another, many factors (such as grammatical, lexical, and cultural elements) are involved which need great effort and accuracy on translators' side for the correct understanding and conveying of information. So, translation from English into Persian is not an exception from this point of view, and requires translators' competence in both languages. As mentioned before, translators should be armed with wide range of knowledge; one of them is the lexical one in both Source Language (SL) and Target Language (TL). Due to day to day development of science and technology, new words are always created and coined in languages which translators should be aware of them in the process of translating. According to Stein [9] "a characteristic of our modern world is the rapid development of technology and the sciences, and with it the influx of technological and scientific terms into the common core of the language is continuously increasing." "The changes are so rapid that it is difficult to keep up with the development itself and above all its terminology and neologisms."

Since new words or neologisms create problems for translators, this study aims to take them into account. In most cases they do not exist in dictionaries, and they do not have equivalent in the Target Language (TL). According to Newmark [7] neologisms are perhaps the non-literary and the professional translators' biggest problem. New objects and processes are continually created in technology. New ideas and variations on feelings come from the media. Terms from the social sciences, slang, dialect coming into the mainstream of language, transferred words, made up the rest. Newmark also defines neologisms as newly coined lexical units or existing lexical units that acquire a new sense. Delabastita [4] also distinguishes between neologisms created by: borrowing: integral borrowings (e.g. hobby [English → Dutch, French, etc.]), loans showing graphological or phonological adaptation (e.g. Hobby [German]), structural loans (also known as calques, e.g. skyscraper.shifting: existing words undergo semantic shifts (e.g. bug [concealed microphone]) or grammatical shifts (e.g. foreground, sideline [noun → verb]) combining: new formations through derivation (e.g. Thatcherite) and/or compounding (e.g. bubble-headed), or else new collocations (e.g. lateral thinking) coining: words are created out of the blue (e.g. Joyce's quark) imitating: words are formed by onomatopoeic imitation of noises or sounds (e.g. zoom)
blending: words are formed from the parts of two others (e.g. channel + tunnel → chunnel)
shortening: clippings (e.g. science-fiction → sci-fi), acronyms (e.g. AIDS).

Based on what was mentioned above, the objectives of the study are as follows: the first and the main one is to identify the processes which are involved in the translation of neologisms in computer texts from English into Persian, and provide a clear understanding of the translation procedures in the translation of neologisms in computer texts from 2000 to 2010. The second one is to describe translational norms in the translation of neologisms in computer texts during this time period. And finally, to present a model and way for the translation of neologisms in computer texts.

Translating from one language into another has its

own difficulties especially in the case of lexical items such as neologisms. Here, first the translator must be able to recognize neologisms, and then try to find correct translation equivalents for them. They form an important part of the meaning of each language which cannot be ignored when translating and analyzing texts especially technical texts such as computer ones. So, languages are different from each others in dealing with this aspect, and they use especial ways to show neologisms. In this study neologisms refer to new combination and collocations of words and also to the existing words carrying new meaning. Examples are given in the following English sentences in the field of computer:

    1. A sequence of instructions is known as a microprogram, or firmware.
    2. The low-order 16bits go to the datachip.
    3. The CAR is subsequently decoded to produce the next microinstruction address.

    In the example No. 1, microprogram is a derived neologism, and firmware is collocation one of solid compound. In the No. 2, bit is a type of neologism: internationalism and datachip is again collocation and solid compound, and in the 3, CAR stand for Control Address Register which is acronym, microinstruction is also derived neologism.

2. Neologisms

Newmark [7] defined neologisms as newly coined lexical units or existing lexical units that acquire a new sense. Cabré [3] also enumerates several parameters to determine if a unit is neologism or not. She states that "a unit is a neologism if it has arisen recently, if it is not in dictionaries, if it exhibits signs of formal instability (e.g. morphological, graphic, phonetic) or semantic instability and if speakers perceive it as a new unit." Cabré [3] also suggests that we cannot categorize neologisms based on single criterion. Thus, she identifies different types of neologisms according to what they are based on. Cabré phrases that "from the standpoint of their belonging to the general language, there is a distinction between two large groupings of lexical neologisms that behave differently: those present in the general language (true neologisms) and those present in special languages (also known as neonyms)." She states that neologisms differ from one another in several features:

(a)in their creation (b) in their primary function (c) in their relationship with co-occurring synonyms (d) in the resources favored for creating the word (e) in their continuance in the language (f) in the way they coexist in the system (g) in the way they relate to other systems.

    Cabré [3] enumerates the following characteristics for lexical neologisms in the general language, as opposed to neonyms or terminological neologisms:

1. They are usually more spontaneous, i.e. they arise for no apparent reason, they appear to be frivolous and are generally short-lived; neonyms, on the other hand, arise because of a need for a designation and are usually more stable.
2. They are not affected by synonymy but usually coexist with synonyms and acquire a certain stylistic value as a contrasting feature. Neonyms, in contrast, reject synonyms because it can distort communicative efficiency.
3. They tend toward formal conciseness, whereas many neonyms are phrases.
4. They often appeal to old and dialectal forms of the language and to borrowings, rather than to compounds based on neoclassical languages.
5. They do not usually spread beyond the language in which they have been created, as opposed to neonyms, which are designed to be international.

According to Cabré [3] "in contrast to lexical neologisms, neonyms cannot be separated from the features expected of terms: lack of ambiguity, single reference, belonging to a special field, stability, conformity to existing term formation patterns." She states that neologisms can be classified into referential or expressive based on their function. Thus, Cabré [3] asserts that "referential neologisms develop because they are required, i.e. there is a gap in a specific special field that must be filled; expressive neologisms develop simply to introduce new forms of expression into the discourse." (p. 206)

2.1. Contextual Factors for the Translation of Neologisms

In connection to neologisms, Newmark [7] has regarded the following factors:

    value and purpose of neologisms, importance of neologisms to SL culture, TL culture, and general, recency of neologisms, frequency of neologisms, likely duration of neologisms, translators' authority in translating them, recognized translation, existence of referents in the TL culture, transparency or opaqueness of neologisms, type of text, readership, setting, fashion, clique, commercial, euphony, is neologism in competition with others? Is neologism linguistically justified? Is neologism likely to become internationalism? Is neologism (acronym) being formed for prestige reasons? Milieu, status and currency of neologism in SL. (p. 150)

2.2. Translation Procedures for the Translation of Neologisms

Newmark [7] asserted that while translation methods related to whole texts, translation procedures are used for sentences and the smaller units of language. (p. 81) Since neologisms are lexical units, the translation procedures will be applied to them. Newmark [7] has numerated the following procedures:

    1. Transference (loan word, transcription, transliteration): it is the process of transferring a SL word to a TL text as a translation procedure. The word then becomes a 'loan word'. (p. 81)

    According to Newmark [7] in principle, the names of SL objects, inventions, devices, processes to be imported into the TL community should be creatively, preferably

'authoritatively', translated, if they are neologisms, although brand names have to be transferred. (p. 81)

2. Naturalization: this procedure succeeds transference and adapts the SL word first to the normal pronunciation, then to the normal morphology (word-forms) of the TL.(p. 82)

3. Functional Equivalent: this procedure, which is a cultural componential analysis, is the most accurate way of translating i.e. deculturalising a cultural word. (p. 83)

4. Descriptive Equivalent: it refers to the description of SL item into its TL.

5. Through-Translation: the literal translation of common collocations, names of organizations, the components of compounds and perhaps is known as calque or loan translation. [7](p. 84)

6. Recognized Translation: in translating a lexical item, if there are many equivalents available, the translator should refer to its first existing equivalent. If s/he disagrees on it, first, s/he should give footnotes on its existing equivalent, then write her/his intended equivalent.

7. Literal Translation: it is what Baker [2] has called it formal equivalence, and also refers to the SL and TL words having similar orthographic or phonological features. (p. 77)

8. Lexical synonymy: based on Newmark [7] it refers to "a near equivalent to an SL word in a context, where a precise equivalent may or may not exist." (p. 84)

9. Couplets, triplets, quadruplets also "combine two, three or four of the above-mentioned procedures respectively in dealing with a single problem." (p. 91)

3. Norms in Translation Studies

At the end of the 1970s Gideon Toury introduced the concept of norms into Translation Studies. Norms function as various types of sociocultural constraints on human behavior: they are shared values and ideas on how to act, think, and translate etc. appropriately in a certain context and for a certain group of people. [6] Cited in Pym et al. 2008, p. 91)

According to Toury (1995 Cited in [10] "norms are acquired by the individual during his/her socialization and always imply sanctions-actual or potential, negative as well as positive. Within the community, norms also serve as criteria according to which actual instances of behavior are evaluated." (p. 206) Toury also puts it that "in as much as a norm is really active and effective, one can therefore distinguish regularity of behavior in recurrent situations of the same type, which would render regularities a main source for any study of norms as well." (p. 207)

Toury identifies different types of norms operating in the translation process: (a) initial norms refer to "a general choice made by translators." "Thus, a translator may subject him-/herself either to the original text, with the norms it has realized, or to the norms active in the target culture." (p. 208) He argues that "adherence to the source norms determines a translator's adequacy as compared to the source text, and subscription to norms originating in the target culture determines its acceptability." (p. 208) (b) "preliminary norms have to do with two main sets of considerations which are often inter-

connected: those regarding the existence and actual nature of a definite translation policy, and those related to the directness of translation." (p. 209) By translation policy, Toury means "those factors that govern the choice of text types; or even of individual texts, to be imported through translation into a particular culture/language at a particular point in time. Directness of translation also involves translating from languages other than the ultimate source language." (p. 209) (c) "Operational norms, in turn, may be conceived of as directing the decisions made during the act of translation itself." (p. 209) They govern matricial norms and textual-linguistic norms.Toury states that "matricial norms may govern the existence of target-language material intended as a substitute for the corresponding source-language material, its location in the text, as well as the textual segmentation." (p. 209) "Textual-linguistic norms, in turn, govern the selection of material to formulate the target text in, or replace the original textual and linguistic material with.' (p. 210)

According to Baker [1] norms "are options which are regularly taken up by translators at a given time and in a given socio-cultural situation."(p. 239) As Baker states:

They can be identified only by reference to a corpus of source and target texts, the scrutiny of which would allow us to record strategies of translation which are repeatedly opted for, in preference to other available strategies, in a given cultural or textual system. (p. 240)

She expresses that the concept of norm takes a coherent corpus of translated texts as the object of analysis.

4. Research Questions

As mentioned earlier, the main purpose of the study is to provide a clear understanding of the translation procedures in the translation of neologisms in computer texts in 2000s. By having this aim in mind, the following research questions were raised:

1. What is the most frequent translation procedure in the translation of computer neologisms from English into Persian in 2000s?

2. What are the major translational norms in the translation of neologisms in computer texts from English into Persian in 2000s?

5. Theoretical Framework

Different scholars discussed neologisms, their types, and their translation procedures namely Newmark (1988), Silvia (2001), and Delabasita (2004). Newmark proposes different types of neologisms: existing lexical items with new senses (semantic neologisms), new coinages (formal neologisms), derived words (including blends), abbreviations, collocations, eponyms, phrasal words, transferred words (new and old referents), acronyms (new and old referents), pseudo-neologisms, internationalisms. (p. 150) Newmark also mentions different translation procedures for their translation such as transference (with inverted commas), TL neologisms, TL derived word, naturalization, recognized TL translation, functional term, descriptive term, literal translation, translation procedure combinations (couplets, etc.), through

translation (calque, and internationalism.([7] p. 150) Silvia cited [5] differentiates between morphological neologisms and semantic neologisms. Since Newmark's taxonomy has more varieties and procedures than Silvia and Delabastita's ones, this research is an attempt to take Newmark's typology into account.

6. Methodology

To achieve the objectives of the study, the researcher first selected parallel corpus of the intended computer texts which were mentioned earlier in the specific decade (2000s). Next, attempt was made to study them from the beginning to the end to identify neologisms. All instances of neologisms were underlined. To maintain validity of the corpora, chapters 4, 6, 12, 14, 17 of the intended materials were selected randomly and after a comparative study of them, the researcher tried to regard translation procedures which are used by Persian translators in the translation of computer neologisms from English into Persian. Then, they were classified based on Newmark's procedures for the translation of different types of neologisms. Then, the researcher investigated neologisms equivalents in the intended corpus. After this stage, their percentage was calculated. To identify translational norms and also translation procedures of neologisms in this decade, the researcher compared original texts and their translation i.e. English computer texts and their Persian equivalents in 2000s. The underlined neologisms were compared with their Persian counterparts to find those translation procedures which are used by Persian translators. All the specified procedures were classified. Accordingly, to identify the most common translation procedures based on their frequencies, their percentage were calculated. Finally, by analyzing translation procedures, the researcher provided information on the meaningful regularities in the translation of neologisms which were representative of normative regularity in their translation in this specific decade (2000s). Since, there is no electronic parallel corpus of the intended computer texts and their translations; the information was extracted manually. These three original English books and their translation in Persian constituted the corpus of the study:

Originals

1. Stallings, W. (2006). Computer Organization and Architecture: Designing for Performance, 7th (ed.). New Jersey: Prentice- Hall.
2. Sommerville, I. (2007). Software Engineering, 8th (ed.). London: Addison Wesley.Odom, W. (2010).
3. CCNP Route 642-902 Official Certificate Guide, New York: Cisco press

Translation

1. استالینگز، ویلیام. طراحی و معماری
کامپیوتر، ترجمه نرجس رهنما، ویرایش
هفتم، انتشارات باغانی. تهران: 86.

2. جعفرنژاد قمی، عین الله. مهندسی نرم افزار،
ویراست هشتم، انتشارات علوم رایانه. تهران: 87
3.ترجمه و گرد آوری: محسن زاده، حسین،
ویرستار: رضوی، امیر حسین.مرجع کامل
CCNP Route انتشارات فراهوش. تهران: 89.

To understand what we did in the research analysis process, we will present descriptive findings in the corpus by drawing tables and figures which show the frequency and percentage of neologisms' translation procedures as following:

Descriptive Findings in the Corpus

Table 1. *Frequency of Different Types of Neologisms in the Corpus*

ID	Field1	Field2
	Types of Neologisms	Frequency
1	Semantic Neologisms	9
2	Eponyms	11
3	Phrasal Words	15
4	Abbreivaitions	17
5	Formal Neologisms	30
6	Derivational	76
7	Acronyms	105
8	Collocations	226

In the table 1. Collocations carry the highest frequency in comparison with the other types of neologisms in the corpus; i.e. 336 in number.

Table 2. *Frequency of Neologism Translation Procedures from English into Persian in the Corpus*

ID	Field1	Field2
	Translation Procedures	Frequency
1	Transposition	1
2	Omission	2
3	Word-for-word	2
4	Quadruplets	2
5	Triplets	16
6	Equivalence	32
7	Lexical Synonymy	33
8	Calque	36
9	Literal Translation	63
10	Couplets	130
11	Transference	167

In the case of translation procedure, table2. shows that transference (transcription, transliteration) procedure contains the highest frequency and transposition, omission, word-for-word, and quadruplets have the lowest frequency.
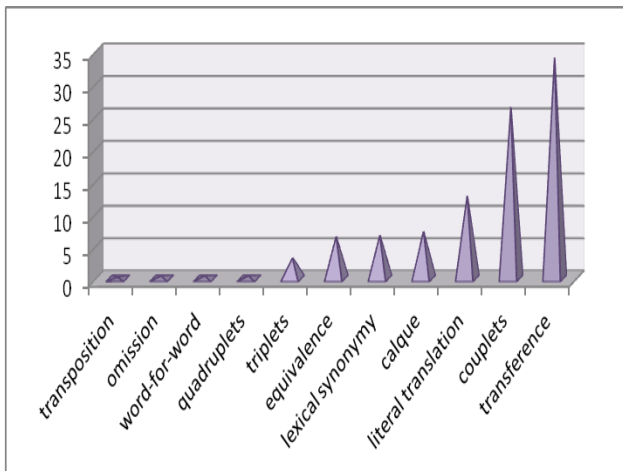

Fig 2. *Percentage of Translation Procedures in the Corpus*

Fig 2. depicts that transference procedure has the highest percentage in comparison with the other ones in the whole corpus. Thus, the second research question of the study is answered: what is the most frequent translation procedure in the translation of computer neologisms from English into Persian language in 2000s? Thus, transference is the most frequent translation procedure which is used by Persian translators in the process of translating computer neologisms from English into Persian. Transference and lexical synonymy also were the major translational norms in this specific time period (2000s).

7. Results and Discussion

The research attempted to identify the most common translation procedure used by the Persian translators in the act of translating computer neologisms from English into Persian which also will identify the major translational norms in this specific time period. Thus, based on the research there were 11 translation procedures used by the Persian translators in the act of translating computer neologisms from English into Persian in 2000s. Among them, transference had the considerable number of 167 in comparison with the other procedures used in the corpus. Thus, the first research question was that what is the most frequent translation procedure in the translation of neologisms in computer texts in 2000s? According to the research findings, transference was the most frequent translation procedure used by the Persian translators in this specific time period. It may be because of these reasons: (a) since these texts were written and translated for specific readers, i.e. those who are specialized in computer field, Persian translators also preferred to apply transference procedure in most cases. (b) Computer technology is developing all the time and so do its terms. From one hand, since computer technology brings with it new concepts, it is necessary that terminologists and translators also coin new terms in this domain which is ever increasing in comparison with those domains that are static. From the other hand, it is probably difficult and time-consuming process for Persian language terminologists to create equivalents for them as soon as possible because computer terminologies are developing continuously. (c) May be the capability of Persian language is limited for word formation processes. Therefore, translators turn to transference. It is also worth mentioning that in those cases which computer neologisms had equivalent in Persian language, the Persian translators preferred to use transference rather than applying their equivalent in most cases. But, in Newmark's [7] perspective, if computer neologisms do not have recognized translation, they should be transliterated or translated literally and also an explanatory note must be added to clear their meaning to the TL readers. As mentioned above, Persian translators used transference procedure with the highest frequency in the translation of computer neologisms from English into Persian in 2000s. Thus, the second question of the study is answered here, since, the first and second questions are interrelated. What are the major translational norms in the translation of

neologisms in computer texts in 2000s? As was stated earlier, Baker [1] puts it that norms "are options which are regularly taken up by translators at a given time and in a given socio-cultural situation."(p. 239) she also adds that "they can be identified only by reference to a corpus of source and target texts, the scrutiny of which would allow us to record strategies of translation which are repeatedly opted for, in preference to other available strategies, in a given culture or textual system." (p. 240) Thus, transference and lexical synonymy were the major translational norms in this specific time period.

In this study, because of time limitation, the sample was small. So, for the generalization of these findings and for higher reliability of the results more studies are needed. In general, based the research in translating computer neologisms Persian translators should try to use Persian equivalents of them as much as possible to enrich Persian language word formation processes and vocabulary, and in those cases which there are not any equivalent for them in Persian language, they can convey all aspects of their meaning by translating them literally plus adding some note or create equivalent for them based on Persian language word formation processes, or they can make new words in the Persian language by different means either to use the existing material in the Persian language in other new ways to increase its term formation processes or to import words from another language to enrich its vocabulary.

8. Conclusion

Considering different types of neologisms and their translation procedures, it can be concluded that neologisms have a wide variety in computer genre and also the translators apply different procedures in translating them from one language into another one.

As it was stated in earlier, transference was the most frequent translation procedure used by the Persian translators in this specific time period. It had the considerable number of 167 (34.1%) in comparison with the other procedures used in the corpus. Transference and lexical synonymy also were the major translational norms in this specific time period (2000s).

References

[1] Baker, M. (1993) Corpus linguistics and translation studies: Implications and applications In: M. Baker, G. Francis and E. Tognini-Bonelli (Eds.), Text and technology: In honour of John Sinclair. pp. 233–250. Amsterdam and Philadelphia: John Benjamins.

[2] --------(1998). Corpora in translation studies In M. Baker and G. Saldanha (Eds.). Routledge encyclopedia of translation studies. (2nd ed.). pp. 59-62. London and New York: Routledge.

[3] Cabré, M.T. (1999). Terminology: Theory, Methods and Applications. Amsterdam and Philadelphia: John Benjamins.

[4] Delabastita, D. (2004). Literary style in translation: Archaisms and neologisms. Übersetzung, 1, 883-888.

[5] [5]Eslami Rasekh, A., Shomoosi, N., & Panahi, M. (2009). Translation procedures in children and adults' literature: The case of neologisms. Translation Studies, 7 (25), 31-32.

[6] Meylaerts, R. (2008). Translators and (their) norms: Towards a socio-logical construction of the individual, In A. Pym M. Shlesinger, & D. Simeoni, (Eds.). Beyond descriptive translation studies:Investigation in homage to Gideon Tour.pp. 91-102. Amsterdam/Philadelphia: John Benjamins Publishing.

[7] Newmark, P. (1988). A text book of translation. London: Prentice Hall.

[8] Nida, Eugene A. & Taber, Charles R. (1969). The theory and practice of translation. Leiden: E.J.Brill reprinted 1982.

[9] Stein, G. (2002). Better words: Evaluating EFL dictionaries.UK: Short Run Press, Ltd, Exeter.

[10] Venuti, L. (Ed.). (2004). The translation studies reader, (2nd ed.). NewYork/Canada: Routledge.

- Author: **Masoumeh Yazdani Mohgadam**, M.A. in translation studies, **department of English language, Science and Research Branch, Islamic Azad University, Tehran-Iran**, 2011. E-mail: masoume.yazdani@gmail.com

- Coauthor: Dr. Ahmad Sedighi associate professor of English Language Teaching.