Pedagogical Contemplations and Thoughts on English Language Learning, Teaching, and Acquisition in the Libyan Environment

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Semantic/syntactic Disharmony and Implications on Quality of Translating Medical Texts

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Abstract

Linguistic aspects, as we all know, play a significant role in translating a text from one language into another language. Therefore, this paper aims at identifying aspects of disharmony between semantic and syntactic features that result in meaningless medical translated sentences. A special focus is given to Chomsky's Transformational Generative Theory (TGT) that extrapolates the correlation between deep structure (which determines the semantic features of a sentence) and the surface structure (which determines the syntactic structure of a sentence). The investigation of this study also relies on the concept of 'Selectional Restrictions' which suggests that certain sets of verbs stand with agreement with certain sets of subjects/objects that subsequently lead to the production of semantically acceptable sentences. Accordingly, it is imperative to touch upon aspects related to the Componential Analysis Theory where the meaning of a word is expressed with the assistance of (+) and (-) markers. This study applies prominent semantic theories with the craft of translation, offering real concrete examples extracted from translation tasks by students of Translation Department, Faculty of Languages, University of Tripoli.

Keywords*:   Source text (ST); target text (TT); deep structure; surface structure, selectional restrictions.*

1. Introduction

Translation is not an easy task as some may think or believe. Translation requires skills, study, and practice. A lot of conflicts and wars have taken place because of mistakes in translation. As there is no absolute translation, there are some good translations and some others are bad and distorting. Translating medical texts, however, requires specialist not only in the field of translation, but also in the field of medicine. Hence, this study is provided to shed lights on the field of translating medical texts.

2. Literature Review

This part of the study is dedicated to the literature review that are relevant to the topic of the study.

2.1. The Correlation between Deep and the Surface Structures

Deep and surface structures are considered as the most prominent concepts produced by Noam Chomsky, where the deep structure represents the grammatical/syntactic form of a sentence; whereas, the surface structure determines the semantic aspect of it. Chomsky (2002) argues regarding how language processed in the brain to be used later in communicative situations. In this regard, Omar (2019) claims that "we most often fail to express our thoughts into utterance to express what we feel to reality. Language might be seen as a reflection of what is called 'the human essences', which mainly indicates that language is rooted within our brain system" (p. 509).

In his Transformational Generative Theory (TGT), Chomsky made an attempt to make a correlation between the syntactic

structure and the semantic aspects of sentences. He points out in his first work *Syntactic Structures* that in every sentence, there are two levels of syntactic structure. The first level is called deep structure (D-structure) which plays an important role in providing the interpretations of sentences; whereas, the second level is the surface structure (S-structure) which is subject to phonological and morphemic rules and involves applying adequate transformations for the deep structure of the given sentence.

(Figure 1) Deep Structure and Surface Structure
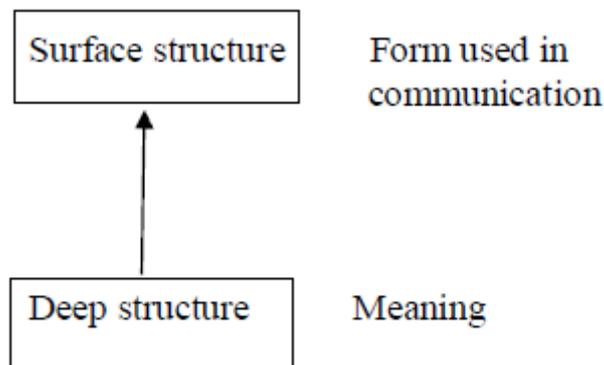
In this regard, Lefevere (1993) stresses that deep structure determines the meaning of the sentence, and the surface structure acts as the phonological and morphemic expression of the sentence's deep structure.

According to Chomsky (1957), the grammar of a sentence is "a device of some sort for producing the sentences of the language under analysis" (p. 13), as such linguistic analysis can help differentiate between the grammatical and the ungrammatical sentences and analyze the various structures of sentences. It is suggested that a grammar of a sentence is autonomous of meaning;

that is, it is expected that a sentence could be grammatically correct but at the same time is considered to be meaningless.

In this regard, Chomsky presented his famous phrase 'colorless green ideas sleep furiously' which represents disharmony between the sentence's deep structure (meaning) and its surface structure (grammar). This phrase is precisely devised to reveal that syntax and semantics could be vastly divergent. Our linguistic competence and knowledge of compositionality tell us that the two semantically contradicting pre-modifiers 'colorless' and 'green' are not properly combined with the abstract subject 'ideas'; whereas, the action of sleeping can only be fulfilled by an animate actor. This results in a semantically deviant sentence that could not be used in a normal linguistic context.

2.2. Incorporation of Chomsky's Model into Translation Science

Upon the emergence of Chomsky's Transformational Generative Theory, a number of scholars showed interest in applying this theory to the theoretical research of translation. Nida (1964) and Nida and Taber (1969) suggest that this model furnishes the translator with techniques to decode the source text (ST) and procedures to encode the target text (TT). Accordingly, the surface structure of the source text is analyzed into deep structure's basic elements. In the process of translation such elements are 'transferred' and then semantically and stylistically restructured into the TT's surface structure (Nida and Taber, 1969). In the below figure, the three stages of translation: analysis, transfer, and restructuring are presented:

(Figure 2) Nida's Translation Model
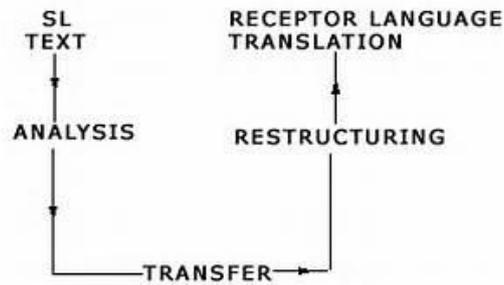
From the above figure, it can be understood that while Chomsky puts focus on generating a surface structure through transformation, Nida goes for, in the purpose of creating an equivalent translation, analyzing the surface structure of the ST by a reversed process of back-transformation.

2.3. Translation and Meaning

Translation is a communication process that involves the analysis, comprehension, and render of meaning. Newmark (1988) as well defines translation by concentrating on the importance of meaning. Since the main objective of translation is the transfer of meaning from the source language into the target and that semantics play an important role in translation; therefore, it is necessary to study theories that tackle the aspect of meaning 'semantics', the branch of linguistics that studies meaning.

However, the process of meaning transfer to another language is often problematic. Catford (1965) highlights that meaning is the 'property of a language', and that the source language text has a source language meaning and the target language text has a target language meaning. Subsequently, any failure in rendering the intended message (meaning) of the source text would end up in a wrong translation.

Based on the above, translations that suffer lack of thematic fit between syntactic structure and semantic components are deemed to be disharmonious. This is clearly evident in the below observation of examples extracted and documented from the mid-term examination performed by students of the eighth semester in the Faculty of Languages, Translation Department (spring, 2018):

<u>Source Text (1):</u>

The prevention and control of common diseases and adolescent health-related problems were the main concern of many parties.

Translation Sample a.1:

لضبط هذه الامراض السارية والمشاكل المتعلقة بصحة المراهقين حيث العديد من الاجزاء الرئيسية المتعلقة.

Translation Sample b.1:

وللتحكم ومنع هذا المرض الشائع وايضا المشاكل الصحية المتعلقة بالمراهقين والتي كانت مصدر للقلق الرئيسي لهذه الاطراف.

Translation Sample c.1:

الوقاية والسيطرة على هذه الامراض المعقدة وصحة المراهقين مرتبطة بالمشاكل التي كانت متعلقة بعدة أجزاء أو عوامل.

Translation Sample d.1:

الوقاية من والتحكم في الامراض الشائعة والمشاكل المتعلقة بصحة المراهقين كانت من أهم المخاوف لعدة أطراف.

Translation Sample e.1:

الوقاية والسيطرة على الأمراض الشائعة والمشاكل الصحية للمراهقين كانا الاهتمام الرئيسي للعديد من الأطراف.

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Source Text (2):

Whereas, the contamination of water-supply was the main cause of mortality that requires intensifying of proven cost- effective actions.

Translation Sample a.2:

حيث أن تلوث موفرات الماء كانت السبب الاخلاقي وراء هذه التعزيزات للأعمال الفعالة المكلفة.

Translation Sample b.2:

بينما امدادات المياه الملوثة هي السبب الرئيسي للمبادئ الاخلاقية التي تتطلبها بشدة بأن تبرهن بالأفعال.

Translation Sample c.2:

حيث أن التلوث القادم من المياه الموردة هو السبب الرئيسي للخسائر ومعدل الوفيات التي تتطلب الشدة المثبتة لأداء اقل خسائر وفعالة.

Translation Sample d.2:

ومن جهة أخرى، فقد شكل تلوث موارد المياه العامل الرئيسي للوفيات والذي يتطلب تكثيف الاجراءات التي اثبتت فعاليتها الاقتصادية.

Translation Sample e.2:

في حين يعد تلوث الامداد المائي السبب الرئيسي للوفيات والذي في حاجة لتكثيف الاجراءات الفعالة من حيث التكاليف.

The above translation samples (a.1, b.1, & c.1) and (a.2, b.2, & c.2) are composed of a string of grammatically arranged words which are judged to be grammatical because of their adherence to Phrase Structure Rules (PSR) of target language (Arabic), yet they are deemed to be semantically deviant "meaningless". The unacceptability in the above stated translations are regarded as a

violation to the known syntactic selectional restrictions and thus represent disharmony between deep/surface structures.

On the contrary, the translation examples (d.1& e.1) and (d.2 & e.2) provided above are found to be more or less semantically well-formed and establish harmony between the surface and deep structure, resulting in an acceptable translation product.

2.4. The Concept of 'Selectional Restrictions'

This concept has been introduced to solve the problem of lack of harmony between meaning and structure. Selectional restriction is the co-occurrence constraint or possibility which exists between lexical items. According to Katz (1966), this concept refers to the constraint on the combination of meanings of lexical items that are being indicated by certain semantic features which they carry. Brown and Miller (1985) highlight that anomalous constructions come into surface as a result of co-occurrence of incompatible features. In other words, only certain sets of subjects are capable to stand in agreement with certain sets of verbs.

As mentioned earlier, it is vital to preserve harmony between meaning and structure to produce a meaningful piece of translation. In order to achieve this objective, the translator can adopt one of the methods of analyzing the meaning used in semantics, for instance, the methods of Componential Analysis Method, where a word is analyzed in terms of its wider category which is a component of a further wider unit creating a chain of semantic relationships.

It is pointed out that Componential Analysis is "an assumption that the meaning of a word can be analyzed in terms of a set of semantic features, many of which will form part of the description of

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other words in the same language" (Jeffries, 1998, p. 87). The application of this method of analysis involves using the positive (+) marker to express the presence of a feature and negative (-) marker to express the absence of another (Saeed, 2009). For example the term 'physician' includes [+man], [+women], [+adult], [-ignorant], and many others so as these terms are believed to be the components that encapsulates the wider category 'physician'.

According to Newmark (1988) the main process of Componential Analysis Method in translation is to compare the source language (SL) word with the target language (TL) word which carries a similar meaning yet is not considered to be the 'one-to-one equivalent'. Newmark (1998) suggests that "the only purpose of CA in translation is to achieve the highest possible accuracy, inevitably at the expense of economy" (p. 117).

Nida (1964) also presents four basic types of semantic features which are shared by the language being compared: object elements; events elements; relational elements; and quality elements.

Source Text 1a:

(The 33-year old patient was admitted on 21st January, 2010 and underwent an abdominal hysterectomy the next day)

Target Text 1a:

ادخل المريض البالغ من العمر 33 عاما الى المستشفى بتاريخ 21- 01-2010 واجري له عملية استئصال الرحم

In English, the source language of the above text, the subject 'patient' is a common gender noun that denotes either a male or a female; whereas, the object 'abdominal hysterectomy, a medical

term which refers to surgical removal of the women's uterus specifically and having semantic implications of [+ female] and [- male] that requires a female actor. Yet in the Arabic translation, it is noticed that the medical procedure (hysterectomy) has co-occurred with grammatical arguments that carry opposing semantic features of [- female] and [+male]. Accordingly, it is clear that while the ST is totally acceptable, the TT is an odd expression and very deviant due to the lack of thematic fit of the translation.

Target Text 2a:

ادخلت المريضة البالغة من العمر 33 عاما الى المستشفى بتاريخ 21 -01-2010 واجريت لها عملية استئصال الرحم

In (Target Text 2a), the translator attempted to communicate the exact message by performing all necessary alterations and adequate selections needed, resulting in an acceptable translation output. The thematic fit between a verb and the rest of arguments of the sentence play a central role in the composition of the translated sentence.

Moreover, violations to semantic/selectional restrictions of nouns result in deviant structures. According to Larson (1998) in translation there are two types of translation: *form-based translation* and *meaning-based translation*. The Form-based translation is where that translator attempts to follow the exact form of the Source Language known as (literal translation); whereas, the meaning-based translation is where the translator puts his effort to communicate the meaning of the SL text in order to reflect the natural forms of the receptor language as shown in below:

(The 23-year old female patient presented with her past history)

حضرت المريضة البالغ عمرها 46 سنة <u>بماضيها السابق</u>/ <u>بتاريخها السابق</u>

حضرت المريضة البالغ عمرها 46 سنة <u>بسجلها الطبي السابق</u>

In Arabic, the phrase (بماضيها السابق) which is ambiguous between two different kinds of meanings or extensions (connotative and denotative meanings), as it more likely to carry a negative connotation implying a woman with an unfavorable past behavior. However, the translation of the phrase *'her past history'* can be disambiguated if paraphrased into بسجلها الطبي السابق in order to clearly and correctly refer to the previous medical records that the female patient holds and avoid other misinterpretations. Below is another example for the two types of translation :

(It is not known whether Celfixine is excerted in <u>human milk</u>)

Form-Based Translation:

(لم يعرف بعد إذا ما كان سيلفكسيم يفرز في <u>الحليب البشري</u>)

(لم يعرف بعد إذا ما كان سيلفكسيم يفرز في <u>حليب الأم</u>)

2.5. Collocational Restrictions

Based on the fact that selectional restrictions limit options of the co-occurrence of words with other words, this must be applicable, as well, in the case of the creation of collocations. Jeffries (1998) points out that a "collocation" itself is another type of restriction which "usually restrict a word, or a group of words, to occurring with another semantically defined group of words". Thus, it is important for a translator to be aware of such collocational restrictions when producing a target text, as mis-selecting the correct combinations might affect the quality of translation. Firth (1957)

suggests that "you shall know a word by the company it keeps." Palmer (1988) further highlights that "there is probably a limited number of particles that can rightly be included in the combinations".

For example, it is apparently evident that the two English nouns (*medicine*) and (*Drug*) are two medical terms that carry overlapping because of their high semantic similarity. In order to assure the synonymous relationships of the chosen nouns, they were looked up in two synonyms and thesauruses dictionaries; the Merriam-Webster Thesaurus (online) and Oxford Thesaurus: A Dictionary of Synonyms. In both consulted sources the noun drug was mentioned as a synonym of medicine.

One the other hand, the entries of both dictionaries provide explanatory definitions of the usage of these nouns. In the below sentences demonstrate how this synonym set could be used interchangeably:

The <u>drug</u> will be useful to hundreds of thousands of infected people.

The <u>medicine</u> will be useful to hundreds of thousands of infected people.

It is worthy to mention that while in English both nouns are often specified in reference to a substance or preparation used in treating disease, on the contrary the Arabic translation, such interchangeability is totally unacceptable, as it is often connected with illicit misuse of medicine and narcotics:

سيكون <u>المخدر</u> مفيدا بالنسبة لمئات الالاف من الناس المصابين. (unacceptable)

سيكون <u>الدواء</u> مفيدا بالنسبة لمئات الالاف من الاناس المصابين.(acceptable)

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Whereas, the replacement of the word (المخدر) by selecting an adequate alternative (عقار) resulted in an acceptable translation, as shown below:

سيكون العقار مفيدا بالنسبة لمئات الالاف من الاناس المصابين.(acceptable)

In addition to selection restrictions put on equivalent items, translators are to be selective, as well, in choosing the appropriate verb that naturally collocates with given nouns.

In Arabic, at first sight it is obvious that the transitive verbs يتناول- يتعاطى – يأخذ appear to have synonymous relationship and are semantically interconnected with an overlapping meanings. In fact, the verb (يتعاطى) in most cases carries a negative connotative meaning that refers to the illicit misuse of medicine or in worse cases to the addiction of narcotics.

The diagram below shows the overlapping relations of these verbs:

(Figure 3) Overlapping Relations of verbs in Sequence
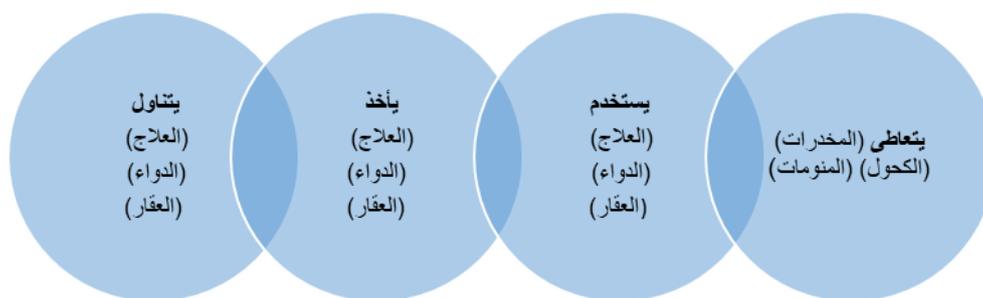
From the above, it is evident that in translation there are selectional restrictions causing that "certain features of meaning are predictable from semantic environment, and that any contradiction of such features will result in an unacceptable utterance" (Leech, 1969). Given the fact that there the Arabic literature suffers a sever

lack of literature 'lexicographical materials' that provide collocational suggestions, translators might commit pitfalls in the selecting the adequate equivalent collection. Emery (1988) highlights that equivalent words in various languages contain various collocational ranges that represent a problem in itself.

2.6. Gradient Acceptability of Selectional Restrictions in Translation

In the spirit of the selectional restriction approach, it is vital to highlight how far it is important for translators to put in consideration the aspect of formality grades and the proper selection of compatible equivalent forms from the linguistic treasury of the target language.

Descending Acceptability Ratings range between formal translation counterparts to less formal equivalence that are less likely to be considered as compatible. In medical translation, unskillful translators tend to translate medical terms literally and disregard the scientific counterparts that should be considered. In this regard, Asher (2011) states that judgments of semantic deviance should always be sharp, whereas a cognitively plausible model should account for gradient acceptability.

The table below show the Arabic medical term, the middle column represents the extremes of acceptability (Scientific Equivalent) and then the odd expression (Literal Translation). For example, the type-based selectional restriction finds otorhinolaryngology as a highly acceptable equivalent, but Nose, Ear & Throat Doctor very deviant.

Table (1) Grades of Acceptability

Source Language Term	Scientific Equivalent (Highly Acceptable)	Literal Translation (Less Acceptable)
انتانات الاذن الوسطى	Otitis media	Middle ear Infections
غسيل المعدة	Gastric lavage	Stomach wash
بدء العلاج	Institution of therapy	To Start of medication
فترة الرضاعة	Lactation	Breast-Feeding
الثلاث اشهر الاولى للحمل	First trimester	First three months
قبل وبعد العملية	Pre/post-operation	Before/after operation
الارتكاسات التحسسية	Anaphylactic reactions	Allergic reactions
اخصائي انف واذن وحنجرة	Otorhinolaryngology	Nose, Ear & Throat Doctor
اخصائي امراض القلب	Cardiologist	Heart Disease Doctor

As noted from the above table, examples reveal inappropriately literal translations. Worthy to mention, descending acceptability

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grading does not result necessarily in wrong translations, as they may produce the exact correct meaning. Literal translation of medical terminology may manage to render the meaning of each word in the source phrase separately, but fail to be compatible to the scientific genre.

The descending acceptability grading in the selection of translation equivalence suggests that translators are to be selective and choose the adequate scientific equivalent term.

3. Conclusion

Translations that suffer lack of thematic fit between syntactic structure and semantic components of a translated text are deemed to be disharmonious and represent violations to the known syntactic selectional restrictions. The adoption of the 'Selectional Restrictions' concept leads to the production of semantically acceptable translations. It is also important for translators to put in consideration the aspect of formality grades and the proper selection of compatible equivalent forms from the linguistic treasury of the target language.

Reference List

Asher, N. (2011). *Lexical meaning in context: A web of words*. Cambridge, UK: Cambridge University Press.

Brown, E. & Miller, J. (1985). *Syntax: A linguistic introduction to sentence structure*. London: Hutchinson.

Catford, J. C. (1965). *A linguistic theory of translation*. Oxford: Oxford University Press.

Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton.

Emery, P. G (1988). Collocation: A problem in Arabic-English translation. *Quinquereme, New Studies in Modern Languages*.

Firth, J. R. (1957). *Papers in linguistics*. London: Oxford University Press.

Jeffries, L. (1998). *Meaning in English: An introduction to language study*. Houndmills: Palgrave.

Katz, J. (1966). *The philosophy of language*. NY: Harper Row Publishers.

Larson, M. L. (1998). *Meaning-based translation: A guide to cross-language equivalence*. Lanham, MD: University Press of America and Summer Institute of Linguistics.

Leech, G. (1969). *Towards a semantic description of English*. London: Longman.

Lefevere, A. (1993). *Translating literature: Practice and theory in a comparative literature context*. New York: The Modern Language Association of America.

Newmark, P. (1988). *A textbook of translation*. London: Prentice Hall International.

Nida, E. (1964). *Towards a science of translating*. Leiden: E. J. Brill.

Nida, E & Taber, C. (1969). *The theory & practice of translation.* Leiden: E. J. Brill.

Omar, Y. Z. (2019). Impact of thought as a cognitive system in brain on shaping language as a symbolic system in reality. *Abhat Journal*, 14, 501-522.

Palmer, F. R. (1988) *The English verb* (2nd ed.). London: Longman.