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The Use of Circumlocution in Translating Medical Terms on TED Platform into Arabic: The Causal Model Approach

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Abstract

There are three strategies for translating specialized terms: borrowing, circumlocution, and neologism. Out of 253 terms taken from 19 videos on TED Platform, 144 terms were translated using circumlocution. Hence, the present paper aims to explore the following research problem: why do TED translators opt for circumlocution as main strategy? The paper's originality stems from the fact that it tests the applicability of the causal model (Chasterman 2000) in the study of terminology translation. The study hypothesizes that the causal model can bring more insights into the analysis of the translator's choices. It follows a methodology that consists of two phases: 1). the analysis of *the translator's cognition, translation event,* and *socio-cultural factors;* 2) the analysis of *terms' translation.* The study reveals that circumlocution is over-used because of: the absence of instructions on TED guidelines, the explanatory nature of the Arabic language, and the assumptions of translators about the audience.
Keywords: Medical terminology, translation, translation zone, causal model, TED.

1. Introduction

In his work, B*ridge concepts in translation sociology*, Chasterman (2007) puts forward that translation studies witnessed four turns. Comes first the linguistic *turn* (1950's), which was the first scientific attempt to the study of translation. It adopts linguistic concepts and approaches in exploring and explaining translational phenomena, applying a comparative research method. The main scholars of this school of thought are Vinay and Darbelnet (1958)'s work on comparative stylistics and techniques of translation, Jakobson (1959)'s types of translation, Catford (1965)'s typology of translation shift, etc. Second is *the cultural turn* (1980's) which appeared as opposition to the linguistic view of translation and focused on the study of translation as a cross-cultural phenomenon. Firstly advocated by Bassnett and Lefevere (1990), Researchers in cultural studies aim at exploring cultural issues such as ideological manipulation, cultural representation, hybridism, identity, gender, etc. In the third place is *the cognitive turn* (1990's) which tends to transmit the interest from product-oriented research to process-oriented one. It aims at understanding the translator's choices and decisions by studying what happens during the process itself. A number of tools are adopted in this context; think aloud protocol, eye tracking, and keyboard logging software. 4) *The sociological turn* tends to study translations as a product of an

extensive network of agents and decision-makers. Neither the product nor the translator are sufficient for the study of translation but situating translation within the social framework: patronage, publishing company, canons, translation policy, etc., and showing how all these factors interfere and influence the final product (the translated text). The prominent examples of sociological insights into translation are Lefevere's (1992) patronage, Bourdieu's (1991) work on field theory and habitus, Latour (2005)'s actor-network theory, etc.

It goes without saying that these different turns affected the way translations were analyzed in the sense that they offered researchers different perspectives to handle translated texts (linguistically, culturally, sociologically, cognitively, etc.).The diversity of translation analysis models reflects this discipline's richness but also raises the problem of the perplexity of the nature of translation studies: What should we study when we study translation? It is true that translation is a multidimensional operation and requires micro-studies models to deal with a specific aspect but speaking of holistic studies. The field still needs more conceptual suggestions.

Translation analysis can be done in the pre-translation phase focusing on the analysis of the ST and the study of its factors and parameters, or in the post-translation phase, where the analyst tends to explain what kind of changes took place. Translation analysis approaches moved from micro-level (linguistic analysis) to macro-levels (discourse analysis and sociological approaches). Traditionally, translation analysis handled the textual product; it was either prescriptive, giving instructions to translation trainees; or descriptive, aiming at describing and explaining the differences that occurred in the TT.Munday (2018) distinguishes four translation analysis types: **comparative, textual and discoursal, appraisal, and sociological.** The comparative analysis method is the first and fundamental translation analysis that puts the study of linguistic and semantic changes to the fore. The primary example is the Vinay and Darbelnet's translation procedures, Catford's translation shifts, etc. The textual and discourse analysis approach stipulates that equivalence cannot be reached by merely comparing the element from the source and target text but by tailoring the translated text based on the audience's needs and expectations. Several models flourished: Nida's concepts of formal and dynamic equivalence(1969), functional school represented by text type theory (1971), Skopos theory (1984), translatorial action (1984), and Nord's (1997) model of analysis. Needless to say, Halliday's (1994) systemic functional linguistics widely influenced translation analysis studies; his model of language use that asserts that a writer's choices and words must be explained by a set of factors that range from the socio-cultural environment, discourse, genre, register, discourse semantics to lexico-grammar. House (1997) relied on Halliday's idea to develop a model for assessing translations, while Baker (1992) used Halliday's terms to develop her pragmatic approach. Hatim and Mason (1990) analyzed translation through three dimensions of context: communicative, pragmatic, and semiotic. As for appraisal theory-based analysis, it was developed by Martin and White (2005), and focuses on the study of the « tenor». Its primary purpose is to identify the translator's intervention and choices. Appraisal theory explores three main factors: (1) the type of the attitude (affect, judgment or appraisal), (2) the graduation of the attitude, and (3) the engagement of the writer\speaker to the attitude conveyed and the feedback of the reader\listener (Munday 2018). The

sociological analysis model draws on concepts from sociology and literary studies in the study of translation; it tackles translation as a social phenomenon. In translation studies, sociological insights came with the development of the descriptive translation studies paradigm. Toury (1995) asserts that the essence of a « science » of translation is empirical. Accordingly, it must rely on real-life facts rather than prescriptive hypotheses. Polysystem theory (Even-Zohar 1978) is another example of the sociological paradigm in translation analysis. It perceives translation as a part of interconnected systems (literary canons, patrons, cultures, etc). Hence, a study of translation must take into account how translation interacts with all these systems. Lefeverer's (1992) work on patronage remains one of the main insights into the sociological paradigm in translation analysis. He distinguishes between three types of patronage: ideological, economic, and status. Chesterman's (1997) norms, Bourdieu's (1998) work on habitus and field theory, Latour and Callon's actor-network theory, and recently, Olohan's translation practice theory (2021) represent different perspectives of the sociological trend of translation analysis.

Needless to say, these different approaches were adopted to deal with varying issues of translation; audiovisual, literary, machine, specialized, etc. Yet, the applicability of each one is relative; while discourse analysis models are widely used in political and media translation, the cultural model is adopted in literary translation analysis. The nature of the approach as well as the background of the translation scholar who developed it are of paramount importance in choosing which type of translation the model fits the best.

The present paper applies Chasterman's (2000) model of translation analysis, which he termed "the causal model" to explain the use of "circumlocution" in translating medical terms by TED translators. Previous studies that tackled TED translation were mainly corpus-based studies that aimed at exploring discourse issues (Farahani & Kazemian, 2021), or collaborative and volunteerism work in translation (Comas-Quinn & Guttierez, 2019; Kung, 2021; Lee, 2021). In the present paper, the analysis of terminology translation does not tackle merely the linguistic level by comparing the source and target terms but goes deeper through the analysis of translators' profiles, TED instructions and guidelines for translators, the mechanisms of working as a volunteer translator in TED, and time and deadlines given to translators, etc.

1.1. TED Platform

Launched in 2012, TED (Technology, Entertainment, and Design) platform was a continuation of TED conferences that appeared in 1984 to spread knowledge and concepts (website). Founded by Richard Saul Wurman, an American architect, with the assistance of Harry Marks, a British-American broadcast designer,the project aims to spread knowledge and ideas in different disciplines from various thinkers and researchers. TED offers various options: TED-talks, TED-ED, TED-x-talks, Audacious projects, TED Translators, etc. Videos and talks cover several topics: psychology, business, science, technology, global issues, entertainment, and design. As for translation, the TED platform is a real translation zone because it gives much attention to languages and subtitles. On the website, it reads: "TED Translators are a global community of volunteers who subtitle TED Talks and enable the inspiring ideas in them to crisscross

languages and borders." TED covers 115 languages provided by 43661 translators who undertook 204032 translations up to august 2022 (website). The organization proposes a set of events that may promote translation work: Review-a-thon (award for most subtitles reviews), Translator pass (application to attend TED conference), TED women subtitling contest, TED's countdown summit…

Once a translator's application is accepted, the volunteer translator can select the video he wants to subtitle. There is a set of activities for translators: transcription of the text, translation of the text, or reviewing another translator's outcome. It is worth mentioning that only translators who carried at least five talks can be reviewers. No translation will be published without review. The process of translation, as suggested by the company, is as follows:
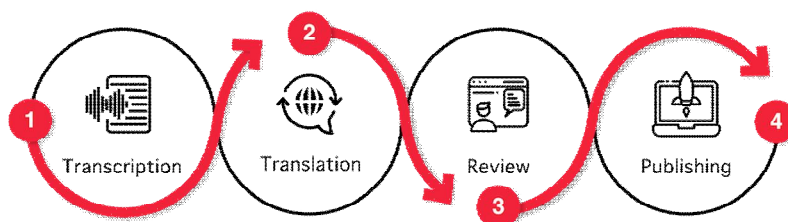

Figure 1: Translation process according to TED Company taken from the website

Transcription is regarded as the first step in translation. Translators tend to transcribe the original text (generally in English) before transmitting the text into their target language, following subtitling guidelines (number of characters per line, organization of subtitles, language preferences, etc.). Reviews are undertaken by experimented translators who have already translated at least five videos, and then the product is ready for publication.

1.2. TED Platform as translation zone

According to Sherry Simon (2013), Mary Louise Pratt (1992) was the first who coined the term « contact zone » to refer to spaces where communities of different cultural and linguistic backgrounds interact in a given way. It can be colonial relationships, borderlines, conflict zones, multicultural cities, megalopoleis, migration sites, refugee camps, etc. Louise Pratt (1992) reckons that she borrows the term « contact » from linguistics which she defines as: «improvised languages that develop among speakers of different native languages who need to communicate with each other consistently, usually in context of trade. » (Louise Pratt 2003: P.06). She opts for the term « contact » in order to deal with the phenomenon not in its apartheid and segregation dimension but in terms of asymmetric power relations. According to Neather (2021), three main concepts must be distinguished: *contact zone*, *translation zone*, and *engagement zone*. The contact zone represents the ancestor of both concepts. It refers to places where two individuals who do not share the same language and culture interact, whether in a context of war (colonizer – colonized) or peace (traveler – travelee). The translation zone is one of the representations of the contact zone since the interaction between individuals is expressed through languages in the first part. Engagement zone, basically related to museums as translation zones, refers to the way interlingual texts are produced and delivered in museums. Cronin and Simon (2014) define translation zone as all types of

places characterized by intense linguistic interaction, or translation issue is exclusively highlighted. As an illustration, Cronin (2013) uses the term "translation zone" to refer to different historical eras: Ptolemaic Egypt, Bible translation, and migration.

As for TED platform, translation is one of the main issues valued by the company: number of translators, number of languages, scripts on websites, guidelines, gifts, rewards,etc., which makes it a worth exploring translation zone.

1.3. Medical terminology

Terminology is essential in the translational process. Deep knowledge of terminology assures an accurate and faithful translation. In specialized translation, though it is not the only one, terminology is the main feature. Any translator must have terminological skills in order to translate a specialized text from one language into another. The word "terminology" may refer to three different meanings: 1) the set of theories and methods that aim at organizing terms; 2) the set of arguments that explain the relationship between terms and concepts they refer to; 3) the vocabulary of a given discipline e.g. medical terminology, legal terminology, etc. (Sager 1990: 03). Cabré (2010, 357) defines terms on the basis of three different perspectives; linguistic, cognitive and communicative. Linguistically, terms are perceived as lexical units used by experts in a given field to refer to specialized knowledge. Cognitively, terms are conceptual units logically and ontologically linked to technical concepts through knowledge nodes. Communicatively, terms are tools that allow experts and laypersons to communicate and interact with each other using a code relevant to their field of specialty. There are three main components of the terminological work; concept, definition, and term. A concept is a unit of thought through which experts organize their knowledge and perception of their field. The definition is a complete description of the concept, which allows terminologists to give an appropriate designation (term) to the concept. The term is the linguistic name of the concept (Bowker 2020, 579). As far as translation is concerned, terms are the most difficult to find. The problem is not at the level of concept or definition but on finding the appropriate term that respects the conception, the naturalness, and the lexical requirements of the target language.

Translating terms stipulates three main strategies (Rogers 2015, 121): borrowing, circumlocution, or neologism. Deemed as the most primitive solution, borrowing is the fact of transcribing the foreign term as it is in the target language. It is conceived as a transgression to the target language in the sense that it transmits certain "weirdness" and connotates sterility of coining new terms. Circumlocution is the process of translating a foreign term with a whole statement in the target language; it is like a definition of the term in a different language. This solution represents a first step in finding an appropriate equivalent in the TL. Finally, neologism means creating a new term in the TL with the same lexical and functional meaning. It is the ideal solution since it aims at reaching equivalence, the most desired translation's purpose

Medical terminology is characterized by its Greek and Latin origins (e.g. sclerosis, phobia), acronyms, compound terms (e.g. lockjaw - tetanus), affixation (e.g. megalocardia), eponyms (e.g.

Fallopian tube, caesarean section), historical versus scientific terms (e.g. Consumption – tuberculosis), American vs.British terms and spelling (e.g. *seizures vs. fits, orthopedic vs. orthopaedic*), and doublets (e.g. *stomach – gastric, teeth – dental, heart – cardiac*), among others.
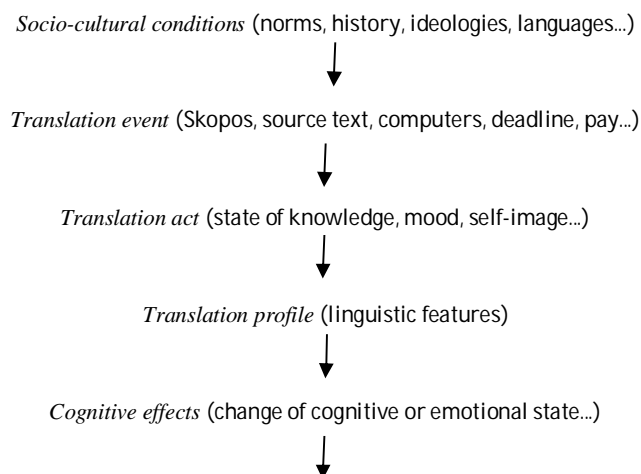
2. The causal model

Chasterman (2000, 123) starts from a premise that there are three research models in translation: *comparative*, *process*, and *causal*. The comparative model, a product-oriented one, focuses on aligning passages from the source text with their « assumed » equivalents in the target one. It is the earliest model and adopts contrastive approaches (Vinay and Darbelnet, Catford, Mounin, etc). Chasterman explains the model as follows: $X = Y$ (2000, 125). The process model, an operation-oriented one, tends to explore the different phases of translation and explain issues, hurdles, and problems encountered by the translator while translating. The process model aims to understand what happens in the translator's mind to explain a research problem. It relies on different methods: think-aloud protocol, eye tracking, keystroke logging, etc. the model is dynamic and can be explained as follows: A (time1) B (time2). (Chasterman 2000, 126). However, these two models seem to be insufficient to tackle translation problems and issues since: " *neither models help us to explain why the translation looks the way it does, or what effects it causes. The questions asked by the first two models are "what?" and "when?", or "what next?" rather than "why?"* (Chasterman 2002, 53).

The causal model seeks the reasons that led to the translation: narratives, translator's profile, publishing policy, and other translations of the - same or similar texts, behavioral factors, cultural considerations, etc. It can be summed up as follows:

Source text – Factors – Translation – Effects (Chasterman 2000: 128)

Saldanha and O'brien (2013: 06) advance that the causal model aims to pursue the reasons that made translations look the way they are through three main dimensions: the translator's cognition (behavior, attitude, identity, skills, knowledge, perception), the translation event (deadlines, clients, brief) and the socio-cultural factors (culture, censorship, ideology, canons, audience).

Here is the model as illustrated by Chasterman (2000):

Socio-cultural conditions (norms, history, ideologies, languages...)

↓

Translation event (Skopos, source text, computers, deadline, pay...)

↓

Translation act (state of knowledge, mood, self-image...)

↓

Translation profile (linguistic features)

↓

Cognitive effects (change of cognitive or emotional state...)

↓

Behavioural effects (individual actions; criticism...)

Socio-cultural effects   (on target language, consumer behaviour, discourse
of translation, status of translators...)

To advance his argument, Chasterman (2000) puts to the fore that the causal model is the only one which is valid for all types of hypotheses (interpretive, descriptive, explanatory and predictive) while the comparative and the process models can be adopted to test merely interpretive and descriptive ones. Predicting the translator's choices and a decision can only be possible by looking for the reasons for the translation event, thus, adopting the causal model.

The causal model seems to be more efficient for many reasons:

• The only one that can encompass the four kinds of hypotheses (interpretive, descriptive, explanatory, and predictive) ;

• The causal model implies the other two models because the source and target texts are compared, and process issues are tackled;

• Its applicability to translator training and quality assessment ;

• It explains the translator's choices and how translations are produced ;

• It situates translations within the circumstance in which they have been produced ;

• It takes into account cultural and sociological context instead of merely linguistic analysis.

Though its methodological importance, the causal model had not been adopted in terminological studies. Scarce are the papers and studies that employed this model. The present paper tends to fill in the gap by adopting the causal model in analyzing medical terminology in TED translation zone. The necessity of such a study lies in the fact that the causal model allows us to understand the translators' choices and decisions better as well as to suggest solutions for similar issues.

3. Methodology

3.1. Data collection

This study relies on data collected from TED platform videos. For the sake of the study, videos that tackle medical issues were viewed, and terms were picked up with their Arabic translations. Two-hundred fifty-three medical terms from 19 videos were selected. Each video has its own translator and reviewer (See Appendix 1).

3.1.1. Data Analysis

Data analysis includes two stages. The first stage is the causal analysis. It tackles three main points: *translator's cognition, translation event,* and *the socio-cultural factors*. This stage is accomplished by analyzing four types of data: TED translator's profiles (skills, knowledge, and attitude), TED translation Skopos, and TED guidelines for translators, norms, and conditions of acceptance. The second stage deals

with parallel analysis of medical terms in English and Arabic. In this stage, the researcher tends to highlight the impact of the above factors on the outcome, the etymological analysis of terms as well as alternative equivalents.

4. Findings and Discussion

4.1. Translators' cognition

Forty-three thousand nine hundred ninety-one translators are working on 115 languages on TED platform (Website). They are chosen based on a quiz that largely depends on their knowledge of the company's conditions and norms. Volunteer translators are asked to have three main skills: fluency in the source and target languages, transcription, and subtitling techniques.

The primary skills that the platform requires are:

- "Volunteer translators should be fluently bilingual in both source and target languages.
- Volunteer transcribers should be fluent in the transcription language.
- Volunteer translators and transcribers should be knowledgeable of subtitling best practices." (*https://www.ted.com/participate/translate/get-started*)

However, there is no mention of how to deal with terminology though TED works on specialized topics that are mainly characterized by terminology. Translators are free to choose the appropriate strategy to translate terms. This point may explain the overuse of circumlocution instead of equivalence. In addition, Translators do not present any official document proving that they had academic training in translation; the quiz and the video they first subtitle are enough to be accepted.

Besides, there is no mention of the possibility of a reviewer to change a term in the target language if he does not agree with the translation. According to TED tutorial, reviewers check wrong literal translations, grammatical errors, and timing issues. It can be implicitly tackled, but an important issue such as terminology, must be explicitly highlighted.

Another worth mentioning factor is that translators in TED are not specialized in the type of topics they translate. There are several fields that TED tackles: medical, psychological, economic, environmental, etc. This requires specialized translators to handle terminology, phraseology, stylistic and knowledge-based aspects. Yet, TED platform does not take this point into account. This can be explained by the fact that translators are merely volunteers whose main task is to transmit the text into the target language.

As for the quiz, volunteer translators are invited to answer a set of questions mainly related to translation guidelines suggested by TED. The overwhelming majority of these questions are technical such as what roles are available to new volunteers? How many subtitled talks should you have published to become a reviewer? How should sounds be subtitled? How should the on-screen text be transcribed? How should lines be broken up within a subtitle? All these questions are basically technical and TED-related but need to be reinforced with translation-based questions as how to deal with fixed expressions. What are the strategies that you should adopt when coming across terms? How to look for a specialized expression or term? Etc.

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There is no point in TED guidelines that urge translators to use circumlocution when translating terms. It is a personal choice that may be the result of a number of factors such as the timing and deadlines issues, the simplification nature of TED videos, the non-specialization of translators, etc. This fact raises another point: is circumlocution a trend in Arabic translation? In fact, in translation practices, circumlocution is used only if the foreign term does not have an equivalent in Arabic. The over-use of circumlocution may alter the nature of the target language as well as the quality of the translation.

4.2. Translation Event

In translation event, Chasterman (2000) suggests tackling the Skopos (the purpose of the translation) as well as the context of the translation. TED aims to disseminate knowledge and ideas from different disciplines. The simplification and popularization of science is the first purpose of the platform. Hence, a set of professors, experts, and authors from various fields intervene. The delimitation of the Skopos is crucial because it allows translators to use the techniques he sees useful for realizing such Skopos.

4.3. Socio-Cultural Factors

According to TED guidelines, cultural specific words must be kept in the target language with a short explanation. On TED website, we read that translators are invited to translate: informal over formal (when necessary), modern over traditional words, personal over generic (related to translator's style and tone), global over regional (avoiding dialect and slangs that cannot be understood by all the viewers), equivalence over word-for-word (when dealing with idioms), preserving the original titles of books, magazines, and movies (in case there is no official equivalent in the target language), the use of transliteration in the translation of foreign proper nouns, punctuation rules of the target language, conversion of units of measurement regarding the target culture. These are the main rules set by TED Company for translators and reviewers. Needless to say, these instructions constitute the basic law of translation of the company.

4.4. Parallel Analysis of Medical Terms

As mentioned earlier, translating terms from one language into another implies using one of the three techniques: borrowing, circumlocution, and neologism. Borrowing is perceived as the first step toward conceptualizing a "new" concept in the target language. Circumlocution is the use of a whole expression as equivalent to the foreign term, and it is regarded as a "term in formation", and neologism is the perfect solution; the fact of coining a new term that serves the same meaning. The over-use of borrowing leads to a pidgin of the target language, while the over-use of circumlocution leads to redundancy and over-translation. Thus, the two techniques must be used and regarded as temporary alternatives to the foreign term, not as ultimate solutions. This is the case when there is no equivalent in the target language; however, if it is the case, there is no explanation of the use of these techniques.

In this study, it has been observed that TED translators use circumlocution as an essential translation technique even when there is an Arabic equivalent to the English medical term. The paper analyses 19

videos that deal with medical topics. One hundred forty-four terms, out of 253, have been translated using circumlocution. The number is enormous regarding the field of study and the existence of Arabic medical terminology. In the following table, statistics about the use of strategies in translating medical terms on TED platform:

Table 1: Strategies Used in the Translation of Medical Terms on TED Platform

Borrowing	Circumlocution	Neologism
37%	57%	6%

The statistics reflect the choice by Arab translators of circumlocution and borrowing in most cases. The majority of terms were translated into whole phrases and expressions in Arabic. Circumlocution is not a translation but an explanation in a different language. That is why it is to be avoided as much as possible. However, the question is: why do translators opt for circumlocution while there are other choices? When analyzing the corpus, we noticed that most terms have equivalents in Arabic. Is it the problem of deadline, translators' preferences, or TED's policy? As mentioned earlier, TED's guidelines do not mention terminology and the methods they recommend to deal with it. Translators' preference (toward a given technique) is an important aspect that we have to consider since they are free, in this case, to choose what they see as useful and appropriate.

Borrowing certain terms is the result of the absence of equivalents in Arabic. In the specialized context, borrowing is adopted in order to fill in a lexical gap. However, some terms became universal and used in all languages the same way, such as *Collagen*الكولاجين, *hormone*الهرمون, *oxylipins*الأوكسيليبين. Translators do not try to find equivalents in the sense that they are globally known in their basic original language. Terms of proteins, hormones, and some specific types of diseases are borrowed into Arabic. This raises the question of reconsidering the acceptability of foreign terms by Arab speakers. In other words, the Arabic taste accepted the usage of these borrowed terms since weirdness and exoticism, if found, are rejected in the first time a term had been used. The following table shows some examples of the use of borrowing:

Table 2: Examples of the Use of Borrowing

English Term	Arabic Term
Thyroxin	الثيروكسين
Leukemia	اللوكيميا
Chemokines	كيموكاين
Estrogen	الإيستورجين
Luteum	اللوتينيئي

Moreover, Neologism was slightly adopted in TED translations. Needless to say, neologism is the most creative and appropriate technique of translating term as it contributes to the enrichment and diversification of the target language. When considering neologism (see table below), we find out that metaphorisation (المجاز) is the most relaible strategy of coining neoligms in Arabic. Metaphorisation is the extraction of word from its original true meaning, and using it in a specialized context such as the

term التوذم (swelling) which means types of verrucae that affect camels. The term has been adopted to refer to similar deformation of human skin.

The Second strategy for neologism is etymology; the return to Arabic language heritage to coin new terms as the term القلس (Gastoesphageal) which refers to the fact of removing food from stomach. The activity is the same; hence, the term is used to refer to this kind of gastric infection.

Table 3: Examples of the Use of Neologism

English Term	Arabic Term
Gastroesophageal	داء القلس
Swelling	التوذم
Cranium	القحف
Septicemia	انتان الدم
Lump	النتوء
Allogeneic	خيفي
Placenta	المشيمة

Yet, circumlocution is used whenever the term does not exist in the target language, but the operation of creating an equivalent is intended. The term *vasodilation* was translated اتساع الأوعية the English term is composed of *vaso*, referring to the vessels and *dilate*, which means the fact of widening. The Arabic term is merely the translation of the definition rather than an equivalent term.

4.4.1. Obligatory vs. Optional Circumlocution

Referring to the causal model, the use of circumlocution in some cases is the result of two main factors: *socio-cultural conditions* and *translation event*. The socio-cultural conditions originate in the respect of Arabic norms and ways of expressions: whenever there is no equivalent, an explanation is attributed to the foreign term. As illustration, Arabic does not contain affixes; hence, many English terms with affixes are translated through circumlocution. As for translation event, it is worth mentioning that TED videos are intended to the general audience. This fact can justify the adoption of explanation and circumlocution by TED translators. The Skopos of TED videos is the popularization of sciences and ideas: the easiest technique, in this case, would be circumlocution.

From this perspective, the study finds out that there are two types of circumlocution: obligatory and optional. Obligatory circumlocution refers to cases where the translator uses the explanation of the term in Arabic because of purely linguistic servitudes and differences between English and Arabic, such the use of affixes in English that can only be rendered through the use of whole words in Arabic:

Table 4: Obligatory circumlocution

Malnutrition	سوء التغذية
Antibiotics	المضادات الحيوية
Retrovirus	فيروس ارتجاعي
Antiretrovirals	مضادات الفيروسات القهرية
Meningitis	التهاب السحايا

Obligatory circumlocution is imposed by the nature of Arabic that does not accept affixes but expressions to refer to different processes. In this context, it is worth mentioning that we cannot find one Arabic word for *antiretrovirals*, semantically composed of three meanings. Hence, three words in Arabic. The use of this technique in such cases is, to an extent, justified.

There is a sense of simplification in the use of circumlocution. Unlike borrowing, for example, which presents the foreign term transliterated in the target language with all its strangeness, circumlocution is target-audience oriented. It is, in translation terms, a domesticating technique. Concerning TED platform, the overuse of circumlocution can be explained by the fact that the target audience is not specialized in medical sciences, and one of the aims of TED is to spread knowledge to all persons. This raises the *audience vs. loyalty* dilemma.

Optional circumlocution is problematic. The premise in translation is that whenever there is an equivalent, there is no need to switch to another solution. The use of circumlocution, in this context, alters the quality of the translation as well as the conceptual basis of the target language. Here are some examples of optional circumlocution:

Table 5: The use of optional circumlocution

English	TED Translation	Alternative
Hemostasis	وقف النزيف	الإرقاء
Macrophages	الخلايا البلعمية	البلعمية
Stroke	السكتة الدماغية	الجلطة
Tuberculosis	التدرن الرئوي	السل
Pathogen	مسببات الأمراض	الممراض

One of the main reasons for terminological disturbance is the translation of terms with circumlocution when these terms already have equivalents in the target language. Thus, one should look for the reasons behind the use of such technique while Arabic offers better alternatives. As far as TED is concerned, there is no instruction related to the translation of terms and the techniques that translators must adopt. However, in the absence of such guidelines, it is the task of translators to know which solution is the most appropriate.

4.4.2. Circumlocution in the translation of compounding-based terms

Table 6: Compounding-based terms

Likelihood	فرص الإصابة
Blastocyst	كيسة الأرومة
Immunosupressive	مثبطة للمناعة
Vasoconstriction	تضييق الأوعية
Bloodstream	تيار الدم
Neurotransmitters	نواقل عصبية

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English uses compounding in medical terms coinage. There are numerous terms that are compound; made up of two words. Following the causal model, a set of questions must be asked in this context; why do TED translators adopt circumlocution when dealing with compound medical terms? Why do TED reviewers approve this translation? Does it convey the meaning? Is it the best in conveying the meaning? What are the alternatives? Arabic, a derivative language, does not use compounding as a principle word formation method. Medical Arabic also obeys to the same rule. Hence, the overwhelming majority of compound terms were translated through circumlocution. The suggested terms are the most frequent in Arabic. This may explain the acceptance of reviewers of such translations. Lexically, the suggested terms convey the meanings of their counterparts and are widely understood by the audience.

Needless to say, translators, in this case, are obliged to adopt circumlocution since it is due to the nature of Arabic. Compounding is rarely used in Arabic, which is seen as a derivation-based language.Other more frequent techniques of terms coinage in Arabic are: blending النحت, etymology التأثيل, borrowing الاقتراض, or metaphor المجاز.

In causal model terms, *Translation profile* requires the use of circumlocution.The two languages do not have the same term formation methods. English relies on compounding as one of the main term formation method while Arabic opts for derivation and etymology. The term *immunosuppressive* cannot be rendered into Arabic in one word: circumlocution, in this case, is inevitable.

Besides, *translator's cognition* is also of paramount importance in the use of circumlocution for compounding terms: TED translators are neither medical translators nor terminologists. They rely on documentary research and their translation skills to deal with these different issues. In addition, TED translation guidelines do not impose to be specialized in one field of translation (medical, technical, psychological, etc) but just general translators.This is due to another important factor which *volunteerism* which raises a set of questions related to translator's profile (who is translating? What are the skills required?), translation ethics (trust, involvement, faithfulness, clarity), and translation profession (the new insight of translation profession such as freelancing, co-authering, etc.)

4.4.3. Arabic is an explanatory language.

It is worth mentioning that Arabic uses simplification and repetition to refer to the same thing. From an ethical point of view, we must highlight the fact that, in some cases, circumlocution is not a choice for translators but a feature of the target language. Here are some examples:

Table 7: The use ofaddition in Arabic

Paletels	صفائح دموية
Rash	طفح جلدي
Meninges	أغشية السحايا
Capillaries	شعيرات دموية
Ovulation	فترة الإباضة

The term "rash" for example, can be rendered as طفح without the addition جلدي (dermic), « ovulation » as الإباضة without the addition فترة (period), and so on. Yet, this can be explained by two main reasons: 1) Arabic uses more words to emphasize the thing being expressed; 2) the rhetoric and stylistic nature of Arabic influences the way of expression, even in scientific and technical texts. These examples show to what extent *socio-cultural conditions* affect translator's choice and the techniques he uses. Arabic norms oblige the translator to adopt circumlocution so that his translation sounds more natural and fluent.

From a cognitive point of view, addition in Arabic is related to the translator's perception of his own language. TED translators adopted circumlocution as an application of Arabic conception rather than a choice or obligation as in the previous examples.One must notice that صفائح دموية (literally *blood patelets*) is more meaning conveying than صفائح (patelets) alone. The reception of the English individual termis different than the Arabic term. The translators need to add a word to make it more simple and acceptable.

5. Conclusion

The present paper set out to test the applicability of the causal model in exploring the use of circumlocution in the translation of medical terms on TED platform. Out of 253 medical terms, 144 were translated using circumlocution, which is seen in translation studies and terminology as a first "temporary" step toward the creation of a new term in the target language. The study showed that circumlocution was not used only for this reason, in most cases; the foreign medical terms have equivalents in Arabic. Yet, TED translators opted for circumlocution. Returning to the research question of this paper, it is now possible to assert that circumlocution can be used for several reasons: absence of equivalence, simplification of terms to the target audience, obeying the nature of the Arabic language, etc. However, after applying the causal model approach, we found out that the overuse of circumlocution is not due to the mere linguistic differences between Arabic and English. TED policy does not give much importance to the translation of terms since there is no instruction on the platform's guidelines that mentions how to deal with terms, and translators tend to use circumlocution because they are not specialized in the field of medical translation.

The paper recommends that further studies tackle the issue of the effect of volunteerism on TED translation quality, the ethical implications of using the causal model, and the translation of scientific discourse features on TED platform.

The Use of Circumlocution in Translating Medical Terms on TED Platform into Arabic: The Causal
Model Approach

استعمال الترجمة الشارحة في نقل المصطلحات الطبيَّة على منصة تيد TED
إلى اللغة العربيَّة: مقاربة النموذج السببي

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الملخص

توجد ثلاث تقنيات لترجمة المصطلحات العلمية: الاقتراض والإسهاب والوضع. فمن بين 253 مصطلح طبي مأخوذ من 19 فيديو على منصة تيد، 144 مصطلح تمت ترجمته باستعمال تقنية الإسهاب مع أن اللغة العربية تتوفر على المكافئ الوظيفي. من هذا المنطلق، تهدف الورقة البحثية الحالية إلى دراسة أسباب تبني تقنية الإسهاب في نقل المصطلحات الطبية من اللغة الإنجليزية إلى العربية على منصة TED، وذلك من خلال الاعتماد على نموذج السببية الذي أرسى دعائمه المنظر أندرو تشاسترمان (2007). تأتي إشكالية المقال الحالي على النحو الآتي: لماذا يوظف مترجمو منصة TED الإسهاب في ترجمة المصطلحات الطبية؟ تكمن أهمية الدراسة في أنها توظف النموذج السببي في تحليل ترجمة المصطلح العلمي. كما تفترض أن النموذج السببي قد يفتح آفاقاً في عملية تحليل الترجمات ونقدها، ومن شأنه تزويدنا بالتفسير العلمي لاختيارات المترجمين لتقنية ما على حساب أخرى وذلك بالنظر لطبيعة الأسئلة التي يطرحها هذا النموذج. في سبيل ذلك، جاءت الدراسة في شقين: شق نظري تطرق إلى المفاهيم والخلفية النظرية على غرار: المصطلحية، مناطق الترجمة، النموذج السببي، نماذج تحليل الترجمات؛ وشق تطبيقي عالج المدونة من خلال تطبيق النموذج السببي على مرحلتين: 1. دراسة عرفانية المترجم، وحدث الترجمة، والعوامل السوسيوثقافية. 2. تحليل المصطلحات وترجماتها. من بين أهم النتائج التي خلص إليها البحث: أن النموذج السببي يقدم تحليلاً معمقاً للترجمة، ولا يكتفي بالمقاربة اللغوية المحضة، وأن الإستعمال المبالغ فيه لتقنية الإسهاب يُعزى إلى غياب أي ذكر لكيفية ترجمة المصطلحات في الصفحة الخاصة بالترجمة على موقع TED، وكذا إلى توقعات المترجمين بأن الترجمات موجهة إلى عموم الناس ومن ثمة تبني الشرح والتبسيط.

الكلمات المفتاحية: المصطلح الطبي، ترجمة، النموذج السببي، منصة تيد

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Appendix 01: TED videos

Video	Translator	Reviewer
How does heart transplant surgery work?	Mohamed Salem	Shimaa Nabil
How a wound heals itself	Sabah Kabashor	Adnan Ayasso
What is melatonin -- and should you take it to fall	Aya Ashraf	omar idma
How do cigarettes affect the body?	Mohamed Emad	muhammadyoussef
What causes seizures, and how can we treat them?	omaridma	Shimaa Nabil
What makes TB the world's most infectious killer ?	Mahmoud Saleh	Riyad Altayeb
How close are we to eradicating HIV?	Sara trainor	afra'a al za'ubi
Why is meningitis so dangerous?	HamzehKoumakli	Nada Qanbar
What causes heartburn?	HamzehKoumakli	Nada Qanbar
Why is pneumonia so dangerous?	Ghaida Khlaif	Nawfal Al Jabali
How does the immune system work?	Nada Shokry	Anwar Dafa-Alla
How this disease changes the shape of your cells	afra'a al za'ubi	Nada Qanbar
How does the thyroid manage your metabolism?	Sulaf Manna	Hani Eldalees
How bonesmakeblood	.. ....,	Abd AlrahmanAlazhurry
How doeschemotherapywork?	Eman Sabry	Hussain Laghabi
What is HPV and how can you protect yourself from it?	HamzehKoumakli	Sara trainor
How do contraceptives work?	Mohammad Houri	Muhammad Samir
How in vitro fertilization (IVF) works	Mohamad Al Mousa	Ali Alshalali
What causes dandruff, and how do you get rid of it?	omaridma	Shimaa Nabil