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Writing and Translation of Patent Documents: Language of Descriptions and Claims[1]

Patent Metinlerinin Yazımı ve Çevirisi: Tarifname ve İstemlerin Dilsel Özellikleri

Research/Araştırma

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ABSTRACT

Technical advancements and new inventions highlighted the importance of technical translation, particularly patent translations as a specialised sub-field. In this respect, translation of patent application documents has emerged as a practice requiring specialisation, especially because the translated text is bound by the legal rules and restrictions in language use. The regulations governing the writing and wording of Claims and the textual characteristics in the patent documents require more attention. The main aim of this study is to provide a description of the general textual characteristics of patent documents as a subfield of technical translation, and particularly to provide examples to illustrate the characteristics of Claims with reference to related legal requirements. The focus of analysis is on English and Turkish language pair. The linguistic, contextual, structural and terminological properties of Turkish and English patent documents are introduced; then, Turkish and English versions of Claims are compared, to exemplify different sentence structures and translation requirements pertaining to specific textual conventions in TL. In the analyses of the translations, discussions centre not only on the translation itself, but also on what governs the translators' decision process in terms of technically appropriate and legally acceptable text characteristics. It is claimed that it is not merely the technical and terminological knowledge, but in fact the expertise in this specific genre and style of writing that brings quality in the translation of patents. The discussions regarding the translation process and examples of textual conventions might be beneficial for professional and prospective translators who are interested in the translation of patent documents.

Keywords: patent translation, technical translation, claims, specifications, description

[1] This article is a revised version of a part of the author's MA thesis. / Bu makale yazarın yüksek lisans tezinden alınan bazı kısımlar güncellenerek hazırlanmıştır.

ÖZET

Teknik ve teknolojik gelişmeler ve yeni buluşlar, hem teknik çeviri hem de özelinde patent çevirilerinin önemini arttırmıştır. Bu bakımdan, patent başvuru dokümanlarının çevirisi, çeviri kuramcıları ve profesyonel çevirmenler tarafından, özellikle de bu çeviri metin yasal sınırlamalara maruz kaldığı için sıklıkla tartışılan ve uzmanlık gerektiren bir alan olarak nitelendirilmektedir. İstemlerin yazımı ve biçemi ile ilgili yönetmelikler yanında patent disiplinindeki metin geleneği, patent çevirisini özel dikkat gerektiren bir alan kılmıştır. Bu çalışmanın temel amacı yürürlükteki mevzuatla da ilintili olarak, teknik metin olarak sınıflandırılan patent metinlerinin genel özellikleri ile ilgili bilgi vermek ve özellikle de İstemlerin çevirisiyle ilgili örnekler sunmaktır. İlk olarak İngilizce ve Türkçe patent metinlerinin dilsel, bağlamsal, yapısal ve terimsel özellikleri açıklanmış, sonrasında örnek İstemler üzerinden patent başvurularının İngilizce'den Türkçe'ye yapılan resmi onaylı çevirileri kaynak metinlerle karşılaştırılmıştır. Bu sayede farklı yapılardaki İstem türleri tanıtılmış, aynı zamanda çevirisi için erek dildeki (Türkçe) patent metni geleneğinde kullanılan kalıplar örneklendirilmiştir. Kaynak ve erek metinlerin karşılaştırılması sırasında sadece çevirinin niteliği değil, teknik dil olarak yeterli ve yasal olarak kabul edilebilir bir metin ortaya çıkarmak için çeviri eylemini ve çevirmenin karar alma sürecini yönlendiren etmenler de değerlendirilmiştir. Buna istinaden, patent çevirisinde kalitenin teknik ve terminolojik bilginin yanı sıra özellikle bu metin türü ve yazım geleneği üzerinde uzmanlaşarak elde edilebileceği öne sürülmüştür. Bu makalede sunulan patent metinlerine dair incelemeler ve çeviri örneklerinin, alanda çalışan çevirmen ve çevirmen adayları için temel bilgi sağlaması açısından faydalı olması umulmaktadır.

Anahtar Sözcükler: patent çevirisi, teknik çeviri, istem(ler), teknik şartname, tarifname

1. Introduction

Although regarded as a secondary profession or just a part-time activity by many, translation has a vital role in every segment of life. Day by day, the need for translations that legal, cultural and technological affairs of modern societies brought about increased. One major part of the translation market is now dominated by translation of technical texts as the whole world is after keeping up with the *state-of-the-art*, which accelerated developments in science and technology. This entailed an increase in the use of specialised terminology and a load of translation work as every new technology is shared globally, either for the benefit of humanity or for commercial interests. The advance in technology paves the way for new inventions, and with every invention comes an international patenting process that calls for a specialised type of translation: translation of patents. This, in turn, introduces the need for professionals specialising in patent translation.

Patenting process involves writing of highly technical and terminologically rich reports; i.e. "patent documents" which provide the technical details regarding the invention in question. There are rules and restrictions governing the language that should be used in such documents; and these rules are set out by law (Daldeniz, 2004, p.96; Taner, 2011, p. 2). When protection is sought at an international level, translations are also bound by the rules specific to the patent documents in the target language (TL). Therefore, patent translation can be regarded as an area of specialisation and expertise; and an industry growing day by day (Cross, 2007; Tsai, 2015). However, specific guides

detailing the language of patent documents in these languages or academic work devoted to the patent translation process are still relatively scarce.

The aim of this study is to provide a resource and patent translation guideline for translators and prospective translators through an analysis of Turkish and English language and translation conventions in European patent documents. For this aim, the researcher seeks to address the following issues: i) what the main textual components of a patent application are and what language characteristics each part of a patent document has; ii) why translation of these documents are considered to be in technical translation genre; and iii) what kind of terminological and structural restrictions govern the translation and writing process, especially of Claims, and how these affect translators' decision-making. The study claims that translation of patent documents should be considered as a separate specialized subfield of technical translation due to the distinct characteristics of the language used in each part of these documents and because of the specialized knowledge and strict textual/terminological conventions required in the writing and translation of these texts. In addition, the study asserts that writing of the Claims demands a more specific approach to translation since it is the part that defines the legal scope of protection; therefore, its translation has a direct impact in practice. It is suggested that it is not merely the technical and terminological knowledge, but in fact the expertise in this specific genre and style of writing that brings quality in the translation of patents.

In the light of these aims, patenting procedure, required documents and particular parts of these documents will be introduced first to set the background. A brief discussion on the theoretical stance will follow. Then, the focus will be narrowed down to "Claims" for the analysis section. Finally, language structure and restrictions regarding the sentence structure in Claims will be discussed though a descriptive analysis of Turkish and English examples.

2. Background

2.1 Patenting Procedure

A patent is a right granted to an inventor, to freely use and benefit from his/her invention (cf. Pasa and Benacchio, 2005; Carr, 2009; Hitchcock, 2009; Tankha, Bout, Fernandes and K.S., 2011). When an invention is made, in order to benefit financially from the advantages it brings and in order to protect the invention from being stolen, inventions and inventors are protected by law. This protection provides the inventor for a certain period with the right "to stop others from making, using or selling the invention without [their] permission" (Mimick, Smith and Thompson, 2005, p.119). This patent protection is also granted simply to encourage new inventions through the privileges it ensures for the patent holder.

In order for an invention to be granted a patent, it must be "patentable". There are different definitions by various authors of books on patents; although they vary in terminology, the word they converge on is "new", i.e. "novel". The European Patent Convention defines patentability in Article 52, Paragraph 1 where it states "European

patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application" (EPC 14th ed., 2010). Chapter 1 in Part II of EPC is on patentability issue and covers the articles pertaining to novelty, inventive step and industrial application (Articles 54, 56 and 57 respectively). Therefore, novelty can be regarded as the key issue in patenting, and this is also the guiding and restricting factor in sentence construction in the translation of Claims – which will be elaborated on in the following sections.

If an inventor considers his/her invention to be patentable under the above-mentioned terms, then s/he applies for a grant of patent. The first thing the inventor has to do is to decide the region s/he wants his/her intellectual property to be protected. Depending on the type of and the area s/he intends to use the invention, s/he may apply for validation in one or two countries, or s/he may seek a wider protection in multiple countries. In other words, patent applications can be done at national level; i.e. the invention will not be protected outside the designated country; or at international level, with protection in multiple countries or global protection. There are many international organizations related to the protection of inventions and patent rights globally, such as World Intellectual Property Organisation (WIPO) which grants international patents, and other regional offices such as European Patent Office (EPO), the United States Patent and Trademark Office (USPTO), and the Japanese Patent Office which are the leading three in the world, each issuing patents valid within their own territory (Ascheron and Kickuth, 2005, p.225).

Turkey is both in the territory of WIPO which grants patents under Patent Cooperation Treaty (PCT); and also in the territory of EPO established by European Patent Convention (EPC 1973: Article 4, Paragraph 1). For this reason, WIPO patents (WO) and EPO patents (EP) are the ones validated most in Turkey. Moreover, nearly all of the patent translations from English into Turkish in Turkey are carried out under the implementing regulations of Decree Law No. 551 Pertaining to the Protection of Patent Rights[2]. Both types of applications require similar documents as these are aligned processes. In Turkey, the number of EPs listed in Turkish Patent Institute search database far exceeds WOs; therefore, as a more common type, European Patents will be under investigation in this study.

2.2 Patent Documents

In the first step of this application process, the applicant should provide necessary documents to EPO (EPC 14th ed., 2010, Article 78), which include:

1) Request for Grant - Form
2) Description
    a. Title
    b. Technical Field
    c. Background Art
    d. Summary of the Invention

[2] Patent Haklarının Korunması Hakkında 551 Sayılı Kanun Hükmünde Kararname (KHK 551)

   e. Brief Description of Drawings
   f. List of Reference Numerals
   g. Detailed Disclosure of the Invention
3) Claims
   a. Independent Claims
   b. Dependent Claims
4) Drawings
5) Abstract

These documents are the main components of an application. The draft description, Claims and abstract are examined, and revised documents are published after the grant of patent. As these are the main documents in the patent application procedure both before national and before international authorities (Daldeniz, 2004, p.40), drafting of these documents are subject to a predetermined "template". Due to the fact that the writers of these texts have to follow a certain path determined by legal texts, these documents are regarded as one of the text types where text traditions are seen most (Göpferich, 1988, as cited in Daldeniz, 2004, p.65).

Once a patent is granted, the inventor will seek validation in designated countries; i.e. a patent granted at European level "has to be converted into a national patent in each state for which protection is desired" (Harhoff et al., 2007, p.4). This condition may, in accordance with the national regulations in force, require translations into the official language of the designated country. In Turkey, a Turkish translation of the patent documents is required [Article 12, in the Regulation on the Implementation of European Patent Convention Pertaining to the Grant of European Patents in Turkey (as revised on 22.05.2008)].

Before going further on the issue of translation, the characteristics of these patent application documents will be defined in the next section. As the forms (the first document) are not translated into Turkish, they will not be introduced in detail. However, the other documents necessary for national validation - which can be listed as the description, Claims, drawings and an abstract - have to be translated into Turkish and this translation is accepted as *the authentic text* in case of disputes. The importance of translation and the liabilities it brings about will be further elaborated on at the end of this section under "Role of Translation"; prior to these discussions, the texts translated in the validation procedure will be introduced below.

2.2.1 Description

The description of invention is the part where the applicant describes his/her invention in detail, by adding illustrations and diagrams, s/he makes clear how a process or object functions or what it looks like (Mohan, 2011). In simplest terms, Article 83 of the EPC requires the invention to be disclosed (i.e. described in detail) in a manner sufficiently clear and complete for it to be conducted by a person skilled in the art. Rule 42 in the Implementing Regulations to the Convention on the Grant of European Patents outlines the components of the description as below:

(1) The description shall:
(a) specify the technical field to which the invention relates;
(b) indicate the background art which, as far as is known to the applicant, can be regarded as useful to understand the invention, draw up the European search report and examine the European patent application, and, preferably, cite the documents reflecting such art;
(c) disclose the invention, as claimed, in such terms that the technical problem, even if not expressly stated as such, and its solution can be understood, and state any advantageous effects of the invention with reference to the background art;
(d) briefly describe the figures in the drawings, if any;
(e) describe in detail at least one way of carrying out the invention claimed, using examples where appropriate and referring to the drawings, if any;
(f) indicate explicitly, when it is not obvious from the description or nature of the invention, the way in which the invention is industrially applicable. (EPC 14th ed., 2010)

Title is the first component of a description, which gives information about the field of invention and the specific advantage it offers. Zerling (2010) defines the title as "a technical description of the invention" and notes that it is usually made up of technical words used in the opening part of Claims.

Technical field is the part where the area the invention related to is defined (Implementing Regulations to EPC, Rule 42, 1a). In writing the description, the applicant shall specify the technical field to which the invention relates in this part of the description. The technical field can easily be recognised and identified by someone experienced in patent document writing and/or reading.

Background Art section (also referred to as *Background of the Invention*) introduces the previous developments in science and technology that form the base the invention builds up on. This section generally includes references to patent applications and patents that were previously published in the same technical field and summarizes the ways this background art had to be improved. This section also provides justifications for the novelty of claimed characteristics of the invention, while constituting the grounds of evidence as to why the invention is advantageous over the *prior art*. Here, state of the art in the specific field the patent protection is sought is introduced, i.e. information about what is currently known in technology is provided first. After this introduction, the technical features of known art is described in detail so that the deficiencies of the prior art are seen, and the advantages the invention brings can be better noted. After this technical information part, the disadvantages of the prior art is discussed. The background art section may also include references to previous patents and patent applications, if there are any.

Summary of the Invention is not a compulsory part; this section is a general overview of the patent application and implication of the technical problem to be

solved. It is also referred to as *"Brief Description of the Invention"* since it briefly describes the method or product, lists the aims of the invention in terms of reducing the complexity of processes, improving quality, saving time and costs and so on, along with the advantages it aims to achieve. This summary, unlike the "abstract", is a general disclosure of the invention, which outlines the technical information without going further in detail. It provides the common characteristics applicable to all possible embodiments and does not include any reference to figures or to any specific preferable embodiment of the proposed invention.

Brief Description of Drawings is not usually given under a separate title within the description text, nor is required to be so. There are exceptions in which a sub-title, such as "Brief Description of Drawings" or "Legend to Figures", is provided. In this section, the drawings illustrating various embodiments (if there are any) are described in order to help readers better interpret the figures and thus the exemplary embodiments of the invention.

List of Reference Numerals is also an optional part of the description in which the reference numerals used in the figures are listed along with the technical (or scientific) names of the parts they correspond to. This section is of great help in the interpretation of the drawings, and is a valuable source of assistance. This is because a consistency among the reference numerals and the parts they refer to has to be achieved along with an overall terminological consistency throughout the text. It also serves as a checklist of terminology in the translation process, which shortens the time allocated to the editing of the translated text at the end of the process. After this point in the description documents, reference numerals are indicated next to the terms they refer to each time they appear. Reference numerals make the text harder to read, but help in accurate interpretation of the text.

Disclosure of the Invention, or *Detailed Description of the Embodiments* part is usually the most extended section of a patent description. In this part, one or more embodiments (or, in lay terms, practical, real life application) of the invention are described in detail, with reference to the drawings. As mentioned above, all the parts illustrated in figures are each assigned a reference numeral; these reference numerals are indicated whenever these parts are mentioned in the detailed description.

This section provides all technical details related to the embodiments of an "invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art" (EPC Article 83). This description acts as a guide in understanding of Claims; that is, the detailed description is the part which renders the correct interpretation of Claims possible. It is clearly stated in Article 100 Paragraph (b) of the EPC that any failure to meet this requirement of clear and complete disclosure is considered a valid reason for opposition against the grant of patent right (EPC, 14th Edition, 2010).

Being rich in technical details entails excessive use of terminology and it makes detailed descriptions a challenge for the translators. Descriptions mostly require technical knowledge or a detailed terminology search before and during the translation,

so the translator spends most of his/her time and effort on this part. On the other hand, it is this detailed description that helps the translator in better understanding the structure and the scope of the Claims.

The patent descriptions in Turkish follow a similar format since the procedures are aligned. The flow of ideas explained above is also applicable to Turkish patent descriptions.

2.2.1 Claims

The invention is described in description, but the scope of legal protection is determined by the Claims; this fact makes them a vital part both in legal and in translational terms (Daldeniz, 2004, p.45). The description part introduced above provides a basis and a justification for the Claims, and it is used for the interpretation of Claims (Article 69(1), EPC). As also stated in international documents, in Turkish patent legislation, the Claims are required to be within the boundaries set out in the description, i.e. Claims cannot exceed the features of the invention as disclosed in the description part of the application (Decree Law 551, Article 47). Another characteristic of patent Claims is that each "claim must consist of a single, albeit possibly very complex, sentence" (Sheremetyeva and Nirenburg, 1996).

As stated above, similar to other parts of a patent application, although it is possible to write Claims in a number of different ways, they have a particular format. Some Claim types accepted by authorities differ in terms of sentence structure and their specific language use. These different types of Claims will be introduced here with reference to examples taken from sample patent texts annexed to the application guide of EPO.

1.1.1.1 Types of Claims

The most widely known classification of claim types is according to their relations to other Claims. A claim can be *independent*, that is it has no reference to other Claims and describes the characterizing features of the invention on its own, or claim can be *dependent*, which gives reference to a previous independent claim and adds some further technical characteristics to the claimed structure. Article 9 of the Implementing Regulations for the Decree Law 551 announces that an independent claim shall state all the main features of the invention. Rule 43 in the Implementing Regulations to the Part III of the Convention defines a dependent claim as "any claim which includes all the features of any other claim".

Claims can also be classified into two groups according to their sentence pattern. Advised are Claims consisting of two parts; in other words, they have a prior art portion (reference portion in dependent Claims) and a characterizing portion (EPO Guide, 2010, p.30). However, although quite rare, it is possible to come across Claims that have only the characterizing part, i.e. Claims that give no reference to the prior art and are therefore one-part Claims.

Types of Claims will be exemplified in the analysis section along with their translations.

2.3 Language use in Claims

This peculiar language use in patent documents consisting of highly specialised terminology and complex sentence structures is most obvious in the Claims part. Though most of the terminology used in Claims is also used in other parts of patent documents, Sheremetyeva (2003) argues that a claim is also quite different in terms of its content and syntax. The difference in syntax noted here by Sheremetyeva (2003) must be due to the fact that these Claims consist of only one sentence (Lyon, 2005).

Daldeniz (2004) reminds that this is a well-known fact in patent literature. Each Claim having only one full-stop necessitates quite long sentences with almost unclear references within the sentence.

As seen clearly from the sample Claims presented above, the sentence structure used in Claims are more or less the same; no matter which sentence connector is used, the claim sentences are nominal sentences consisting of a number of phrases referring to each other. This is a fact also laid down by Sheremetyeva (2003), who adds "the obligatory form of a single extended nominal sentence, (…) frequently includes long and telescopically embedded predicate phrases." To someone unfamiliar with the technical field the invention is related to, these references may be mostly ambiguous especially in long independent Claims. To deal with the problems that are likely to arise, this is the point where the description is a source of reference which helps readers better understand the claimed features. This does not pose a burden for a person experienced in reading patent texts, the structure of these sentences are easily recognized and the relationships between the phrases become evident when one knows how to look at the text.

Another feature specific to the language Claims is the terminology used in the writing of them. Since there is an abundancy of terms used in patent Claims, the terms used in patent documents can be classified in two categories: some are "terms specific to the invention" which are novel terms used for the first time in the technical field in that particular invention, and some are "terms specific to the domain", which are used primarily in patent documents and not known by those unfamiliar with patent texts (Shinmori, Okumura, Marukawa and Iwayama, 2003).

Usually, the terminology of technical field is required in understanding the invention itself; however, besides the technical terminology, one has to know the functions of words or phrases specific to patent jargon in order to interpret Claims correctly. An example of the words specific to patent jargon may be the word "claim" itself; and its Turkish equivalent "istem", is not a word widely used by many other than those familiar with patent descriptions. Other terms specific to the patent Claims may be the sentence connectors which are "characterized in that", "characterized by" and "wherein". These phrases have a particular function in the patent domain because they signal the end of prior art and the start of characterizing portions of a claim. The same

thing applies to the Turkish equivalent of these phrases: "özelliği, …dir". This is a formal requirement for Turkish patent applications that the claims should include "özelliği, …dir" structure rather than sentences with "karakterize edilir" or any other possible translation (TPE Patent/Faydalı Model Başvuru Kılavuzu, 2019). The formal, structural and lexical requirements are strictly set in Turkish patent guidelines as well.

3. Theoretical Approach and the Translation of Patents

When a patent document is read, it is easy to name patent documents as highly technical texts. The first thing that strikes attention is the field or context of a text. If a text is about something that is related to technology or science, then it is named as a technical one. Therefore, the distinction between scientific and technical texts is not clear-cut. This leads to the classification of technical texts together with scientific ones and there is no clear distinction between the two. Scholars tend to refer to these texts as technical and scientific texts and their comments about technical writing are always accompanied by scientific writing. This may be due to the fact that these types of texts (i.e. technical and scientific texts) are similar to each other in terms of their content. The term technical writing is used as an umbrella term covering different areas of language use; in accordance with this, Hirschhorn (1980) defined the prime objective of a scientific and technical writer as producing 'a clear, logical, accurate and succinct piece of literature for a specific use' (p. 6).

This "specific use" as referred to by Hirschhorn (1980) is, when it comes to the patent documents, to produce a text that is describing an invention clearly. It is also obvious from the content of patent documents that the subject or the information presented in the document is related to a technical development. This fact automatically renders the patent application documents "technical texts".

Other characteristics that anyone can list when asked about the features of technical and scientific writing are the excessive terminology and the complex structures of language because of which the hard-to-comprehend message gets more unreachable. There is a specific language use, as stated by Erten (1997), free of style and any figures of speech when used properly. Byrne, opposing this view, expresses the use of style in technical texts:

> In many cases, the importance or even existence of style in technical texts goes completely unacknowledged, due largely to the belief that because technical language is functional, it must be "plain" and stripped of any form of style or linguistic identity. In reality, however, technical translation is a highly complex endeavour and style is one of its most important facets. (2006, p. 5)

Patent documents can be regarded as a good example of these; with frequent terminology and a style specific to patent writing. They include sentences of compound and complex structures and excessive use of terminology along with some expressions specific to patent documents. Any person familiar with patent application documents may easily notice that a sentence is taken from a patent document, even when they see

a sentence in an unrelated context; more experienced patent document readers may even name the part of document these sentences are taken.

According to Jumpelt (1961, as cited in Aixela, 2004), the duty and the task of a technical translator is a highly specialised, knowledge-based and demanding one. The opinions of Finch (1969) are also in the same direction:

> The specific difference of technical translator from the general translator is that he must have some knowledge of the subject which he is translating - indeed, knowledge of the subject is usually of more importance than knowledge of the language. (1969, p.1)

With this remark, Finch attributes the quality of the technical translation to the background knowledge of translator in the field concerned. If the translator lacks adequate knowledge in the technical field to which the translation is related, this may cause some problems during the translation process especially in the accurate transfer of content – or information – and terminology which is one of the components of technical writing and translation as noted by Erten (1997) who demands that "technical translation is distinguished from other types of translation by the special terminology used" (p. 19). This is obviously true to some extent; however, it would be neither linguistically nor theoretically appropriate if the excessive and sophisticated terminology is considered as the sole characteristic that makes a text technical.

In this respect, Jody Byrne (2006) discusses his view of technical translation as a multi-laterally affected performance and insists that the success or failure of technical translations depends on much more than just specialised terminology (p. 253). As mentioned before, with its certain style, diverging from the conventional classification of technical translation, patent translation emerged as a separate specialisation in translation in that it requires additional expertise that is specific to these types of texts.

3.1 Importance of Patent Translation

The most crucial point demonstrating the importance of patent translation is the fact that translation of an application is considered to be the authentic text in Turkey. This is clearly stated in the Article 15 of the Regulation for the Implementation of EPC Pertaining to the Grant of European Patents: if the scope of the translation is narrower than that of the original European Patent document, the translation is regarded as the authentic text in determining the scope of protection in Turkey. In other words, the translation may cause a partial loss of patent protection rights in a country.

In previous sections, it was stated that the Claims are the most important part of a patent application since they are the determinants of the scope of protection. This fact adds a legal dimension to the text in question, rendering the translation of Claims a task demanding special attention from the translator. The translator, while translating the Claims, has to be aware of the writing style of Claims set out by the regulations in force in the target community, and s/he has to shape his/her translation accordingly. The decisions taken by the translator in this process are shaped primarily by the function the target text will serve: the translated Claims, just like the original ones, will determine

the limits of the invention and will shape the borders of the patent right granted to an inventor. This clearly links patent translation to functional theories of translation, which on very broad terms claim that translation decisions are governed by the functions a document is intended to serve (example of such functional theories would be text typology of Reiss (1977), translational action of Holz-Mänttäri (1984), and Skopos Theory of Vermeer (1984) as listed by Munday (2001, p. 82). Also, there are other functional aspects that are to be preserved in the target language. For instance, the first and second parts of a Claim have different functions: the first part defines the prior art while the second part defines the characterizing portion. In addition to these, the function of sentence connectors within the sentence is noted by Daldeniz (2004) in her PhD dissertation: the function of sentence connectors is to mark the separation of the prior art and characterizing portions. And the characterizing portion is "novel", i.e. protected; if the position of elements within the sentence change, that would at the same time mean a change in scope of protection. Therefore, what is essential is to adhere to the scope and place of portions in the translation of claims.

In the next section, some example claims will be analysed in terms of their structure and translation decisions.

4. Analysis and Findings

4.1 Independent Claims

Table 1. *IC1 and its translation*

IC1	Translation of IC1
A selvage for electric or mechanical lock with a pivot (7) for a pawl engagement system, comprising a rear fixing plate (2) in which two links (4) with through holes (5) are pivoted coaxially and independently, said holes rotatably accommodating the ends (8) of said pivot (7), **characterized in that** the diameter of said ends (8) of the pivot (7) is smaller than the diameter of said holes (5), producing a mechanical play (9) that allows said pivot (7) to tilt its own axis with respect to the pivoting axis of said links (4).	İçerisinde uzunlamasına deliklerin (5) yer aldığı iki bağlantı parçasının (4) içerisine eş eksenli olarak ve bağımsız bir şekilde pivotların yerleştirilmiş olduğu, bahsi geçen deliklerin (5) bahsi geçen pivotların (7) uçlarını (8) kavradığı bir arka sabitleme plakasına (2) sahip olan türde bir kilit karşılığı olup, **özelliği**; bahsi geçen pivot (7) uçlarının (8) çaplarının, bahsi geçen deliklerin (5) çaplarından daha küçük olması ve bu sayede bahsi geçen pivotun (7) kendi eksenini, bahsi geçen bağlantı parçalarının (4) dönme eksenlerine göre eğmesine olanak sağlayan bir mekanik oynama alanının (9) ortaya çıkmasıdır.

The original text, i.e. IC1, consists of noun clauses connected to each other in the first part and a separate sentence in the second part connected to the first part with the phrase "characterized in that". As seen above in Table 1, the translator used a single sentence to translate the IC1, which is a correct choice, since the teaching in the patent

literature that demands a claim to be a single sentence prevails. It is seen that the sentence connector "characterized in that" is translated as "özelliği" as suggested in the patent application guide of Turkish Patent Institute. The sentence connector "characterized in that" here, along with the function of connecting separate parts to form a single sentence, has the function of separating the prior art and characterizing portions of the claim. It is an indication of the beginning of the characterizing portion in which the new features for which the protection is demanded. And the sentence connector "özelliği" in the translated claim serves the same aim.

When analyzed at a deeper level, it is seen that the translator did not translate certain parts of the first clause defining the known art in the prior art portion. The clause defining locks as "electric or mechanical … for a pawl engagement system" and the word "rotatably" in the prior art portion is not translated. It causes a broadening in the sense. When written in this way, the sentence, without defining parts, points to all locks of the known art: either "rotatable" or not, either electric or not, and either having a pawl engagement system or not. While the referred known lock is clearly specified in the original, it has a broader meaning in the translated document. The translator caused an unintentional change in the meaning of the Claim, which may have legal consequences, as was presented in the previous section regarding the writing of claims with reference to Article 15 of the Regulation for the Implementation of EPC Pertaining to the Grant of European Patents. What makes this mistake trivial is that the said mistranslation is not in the characterizing portion. The prior art portion refers to the technology already known in the art, and it is the characterizing portion where the protection is demanded. Therefore, the mistranslation here would not affect the scope of protection to a great extent.

Table 2. *IC2 and its translation*

IC2	Translation of IC2
An umbrella carrier (1) adapted to receive a folded umbrella and provided with attachment means (5) for removably securing it to an article of luggage, and which includes a holster-like perforated support element (2) having openings (4, 10) which are closed internally **characterised in that** the openings (4, 10) are closed by water repellent porous fabric.	Katlanmış bir şemsiyeyi içine almak için adapte edilmiş ve bir bagaja çıkarılabilir şekilde takılmak için bağlantyı elemanları (5) ile donatılmış olan ve içeriden kapanan açıklıklara (4, 10) sahip, tabanca kılıfı şeklinde bir delikli destek elemanı (2) ihtiva eden bir şemsiye taşıyıcısı (1) olup **özelliği**; açıklıkların (4, 10) su def edici gözenekli doku tarafından kapatılıyor olmasıdır.

The claim above shown in Table 2 is another good example of the most common claim type seen in patent literature. This claim again is a two part claim made up of a single sentence, consisting of a prior art portion and a characterizing portion. These

portions are separated from each other with the help of sentence connector "characterized in that", as in the previous example shown in Table 1.

The function of the first part, i.e. the prior art portion is again to inform about the current status of the art, and the second portion gives information about the new feature the invention adds to the already known product. The translator preserves these functions of the claim, and translates it again in two separate parts and uses a functionally equivalent sentence connector "özelliği". Therefore, taking the predetermined way of writing Claims in Turkish into consideration, the translator produces a functionally equivalent sentence.

Table 3. *IC3 and its translation*

IC3	**Translation of IC3**
A method of wrapping elongated articles in groups, the method comprising the steps of:	Uzun parçaların gruplar halinde ambalajlanmasına yönelik bir metot olup; bu metot şu adımları içerir:
feeding a first and a second pocket (6; 7) continuously along a first and, respectively, second path (P1, P2) having a common portion (T), the first and the second pocket (6, 7) comprising, respectively, a first and a second bottom wall (12; 21), and first and second lateral walls (13, 22, 23);	sırasıyla bir birinci ve bir ikinci alt duvardan (12; 21) ve birinci ve ikinci yan duvarlardan (13, 22, 23) oluşan birinci ve ikinci ceplerin (6, 7), ortak bir kısma (T) sahip birinci ve ikinci geçit (P1, P2) boyunca aynı sırayla sürekli olarak beslenmesi;
penetrating the second pocket (7) with the first pocket (6) along the common portion (T) by inserting the first lateral walls (13) of the first pocket (6) between the second lateral walls (22, 23) of the second pockets (7) to transfer a group (3) from the first to the second pocket (6, 7) together with a sheet (18) of wrapping material;	bir ambalaj malzemesi tabakası (18) ile birlikte bir grubu (3) birinciden ikinci cebe (6, 7) aktarmak için, birinci cebin (6) birinci yan duvarlarını (13) ikinci cebin (7) ikinci yan duvararı (22, 23) arasına sokarak, ortak kısım (T) boyunca birinci cebin (6) ikinci cebe (7) geçirilmesi;
gripping a first and a second flap (57, 58), opposite and parallel to each other, of the sheet (18) of wrapping material between the first and second lateral walls (13, 22, 23); and	birinci ve ikinci yan duvarlar (13, 22, 23) arasında ambalaj malzemesi tabakasının (18) birbirleriyle karşılıklı ve paralel birinci ve ikinci kanatlarının (57, 58) kıstırılması;
extracting the first lateral walls (13) from the second pocket (7);	birinci yan duvarların (13) ikinci cepten (7) çıkartılması;
the method comprising the further step of compressing the group (3)	metot ayrıca, birinci yan duvarlar (13) ikinci cepten (7) çıkartılırken, birinci ve ikinci alt

and a portion (56) of the sheet (18) of wrapping material between the first and second bottom wall (12, 21) when extracting the first lateral walls (13) from the second pocket (7).	duvarlar (12, 21) arasında, ambalaj malzemesi tabakasının (18) bir kısmı (56) ve grubun (3) sıkıştırılması adımını içerir.

The sample provided in Table 3, as clearly seen, does not have a sentence connector. This causes ambiguity as to where the prior art portion ends and where the characterizing portion starts. It also becomes clear here that the function of the phrase "characterized in that" is not only providing a connection but also highlighting the separate portions of a claim.

Here, the sentence flow is in a way that would be suitable for breaking up for translation; because the original sentence is too long and it already consists of smaller sentences tied to each other with the help of semicolons. As there is an obligation to use a single sentence in a claim, the translator has to follow the same format; both because any ambiguity has to be preserved as it will function as a legal text, and because there is a predetermined way of writing and constraints in claim writing.

In the original text, i.e. IC3, there is an ambiguity as to whether it has a prior art portion or it consists only of characterizing portion. This ambiguity is due to the lack of sentence connectors in the claim, which would mean in the first case, the last portion separated by a semicolon is protected or in the latter case, any feature listed in the claim is protected. It is important to note that such ambiguity can be solved by referring to the description text to understand what is included in the prior art and what is new. In fact, this is exactly what the description text is intended for: helping in the interpretation of Claims.

No matter if the description text helps translator distinguish the prior and characterizing portions or not, the translator should not try to solve this ambiguity, as the text, however technical it may seem is also have a legal function. Changing anything in the claim, or clarification of any ambiguity may eventually mean loss of rights either for the inventor who would lose his/her patent right, or for the other possible users of the patented product who may lose their right to use it because of the monopoly granted to the patent holder. Any disputes on the interpretation of Claims are to be solved by competent authorities, i.e. legal persons in this case; it is not a task of the translator who is responsible only for preserving the function and conveying the meaning of a text through translation.

The ambiguity in the original Claim as to where the characterizing portion starts is preserved in the translated claim as we see in Table 3, since the translator followed the same pattern and used the same punctuation. Contrary to the advice for clarification or being concise in technical translation, the translator did not interfere in the text anyhow. This may be because the function of the text is a significant determinant in the translation strategy followed.

4.2 Dependent Claims

Dependent Claims, are the Claims that have a reference to one or more of the preceding Claims, (cf. EPO Guide for Applicants, TPI Application Guide 2010; Loring, 2005, Pienkos, 2004). There is no limitation to the number of dependent Claims, there can be as many dependent Claims as needed, in order to list the new features of the invention for which patent protection is claimed in the most appropriate and comprehensible way.

The first sample dependent claim DC1 provided below is in a format that is most widely seen type of claim structure. The claim sentence, like others, has a reference portion and the characterizing portion. The translator translated the sentence in a way that the translated sentence will have the same pattern in the target language. As advised in patent application guides available in Turkish, the translated claim has "*özelliği"* as the sentence connector, which is sure to have the same function as the original did.

Table 4. *DC1 and its translation*

DC1	Translation of DC1
The selvage according to claim 1, characterized in that said pivot (7) is substantially cylindrical, its ends (8) having a smaller diameter and being suitable to be accommodated in said holes (5) of the links (4).	İstem 1'e göre kilit karşılığı olup özelliği; bahsi geçen pivotun (7) büyük oranda silindirik olması, uçlarının (8) daha küçük çaplara sahip olması ve bağlantı elemanlarının (4) bahsi geçen deliklerine (5) yerleşmeye uygun şekilde olmasıdır.

The translator here paid particular attention to provide exact equivalents of terms, and this feature was evident throughout the sample patent application document SD1. The translator tried to find an exact equivalent for such terms as *"selvage"* and *"link"*, and attempted to give the exact meaning in two words: rather than borrowing "selvage", s/he translated it as "kilit karşılığı" or rather than translating "link" as "bağlantı" which would cause additional meanings that may even refer to a "connection" or to a "circuit", s/he translated it as "bağlantı elemanı" to refer precisely to the specific part mentioned. This demonstrates that the translator is aware of the legal function of the translated text and the possible outcomes that may be faced in case s/he changes the meaning of words.

In the next example of a dependent claim DC2 below in Table 5, there is a sentence connector that is not as common as *characterized in that* in claim writing. However, *in which* has the same function as *characterized in that*; that is, signalling the end of reference part and the beginning of characterizing portion, which is the main structure in each Claim.

Table 5. *DC2 and its translation*

DC2	Translation of DC2
An umbrella carrier (1) as claimed in claim 1 in which the perforated support element (2) is provided as a substantially cylindrical tube.	İstem 1'e gore şemsiye taşıyıcısı (1) olup, özelliği, delikli destek elemanının (2) esasen silindirik bir tüp olarak tedarik edilmesidir.

The translator translated the sentence connector "*in which"* as "*özelliği",* which is generally accepted as the equivalent term for "*characterized in that".* This is a clear indication that the translator here is aware of the function the phrase *"in which"* possesses, and is also aware of the target text tradition in which the sentence connector preferred most is *özelliği.* In this light, the translator was successful in creating the same effect in terms of function without leaving any doubt as to the meaning of this claim.

Table 6. *DC3 and its translation*

DC3	**Translation of *DC3***
A method as claimed in Claim 1, and comprising the further step of folding the sheet (18) of wrapping material into a U by pushing the sheet (18) of wrapping material into the second pocket (7) by means of the ends (45) of the first lateral walls (13).	İstem 1'de açıklandığı şekliyle bir metot olup, ayrıca birinci yan duvarların (13) uçları (45) aracılığıyla ambalaj malzemesi tabakasının (18) ikinci cebin (7) içine doğru itilmesiyle, ambalaj malzemesi tabakasının (18) U şeklinde katlanmasından oluşan bir adım daha içerir.

Unlike DC1 and DC2, the third sample dependent claim, DC3, does not have a sentence connector. The translated version of DC3 does not include a sentence connector, either. It can be seen that the translator did not change the sentence structure while translating the claim. The original sentence consists of two parts with different functions, similar to the previous examples of dependent Claims: a reference and a characterizing portion. Here, the difference is that the characterizing portion does not begin with a marker such as "wherein", or in other words, sentence connector is not present in this case. However, it is obvious to the reader where the reference ends and where the characterizing portion starts. In order to preserve this structure, the translator uses *"olup"* at the end of the first part and thus warns the reader that a separate part with a different function is coming. Therefore, at sentence level, the reference and characterizing functions of two parts and in general, overall the legal function of the claim is preserved.

The fourth dependent claim DC4, similar to all previous claim examples, consists

Table 7. *DC4 and its Translation*

DC4	Translation of DC4
The process of Claim 1 wherein step b includes reacting the starting material with an amide or an acetal.	İstem 1'deki proses olup, burada b basamağı başlangıç maddesinin bir amid ya da bir asetalle reaksiyona sokulmasını içerir.

of two parts; what makes it different is the sentence connector "wherein", the second most common sentence connector encountered in patent literature. The translator here again, aware of the specific writing style of patent Claims, translated the claim according to the target text norms to produce a functionally equivalent text.

Another token important in this claim is the translation of the term "process" as "proses" rather than "süreç" which is the Turkish equivalent for the original term. Here, as the subject matter of the invention is in the field of chemistry, the translator uses the term as used in the technical field and do not need to apply any clarification or domestication. This is again due to the *function* of the text: the Claims are intended to give information to the "persons skilled in the art", not to a lay person.

5. Discussion and Conclusion

In the light of the theoretical framework and the analysis above, a discussion regarding the issues this paper set out to address will be provided in this section, along with implications for further research and practice. In line with the first claim that patent documents should be considered as a separate specialized subfield of technical translation, the distinct characteristics of the language used in each part of these documents were provided. As can be seen from the presentation of textual conventions and examples, these texts contain technical and scientific information and terminology, which were defined as properties of technical texts by various scholars (cf. Hirschorn, 1980; Erten, 1997). In addition to this, more recent approaches to technical text genre mentioned use of a certain way of writing, or *style* (Byrne, 2006), which is comprehensively defined for patent writing in various legal guides and by regulations (Taner, 2011). In parallel with these ideas in literature, the patent documents, especially the Claims, have a unique style and language structure. At this point, as seen above in the previous sections and as a response to the second issue raised in this paper, it can be suggested that patent translation might be considered a specific area of technical translation.

This specialization relates to the background information required on the part of the translator. Finch (1969) linked the quality of the technical translation to the background knowledge of translator in the field concerned. With their legal function alongside the technical textual properties, the patent translations require expertise in this specific text type. As a specific example, even though using the strategy of reformulation of sentences would not be a problem for the description, the Claims necessitate the use of long sentences which should adhere relatively strictly to the

ordering and wording conventions specified for the TL patent texts, otherwise might change the scope of protection. This is very important in that it is the target text, not the source text, that defines the scope of protection in a designated country in cases of legal disputes. Another vital restriction relating to this, for example, is that the translator cannot, as would usually do, clarify or resolve ambiguities; since this might mean an extension and/or reduction in the scope of patent protection. In this respect, translating patents would require expertise and specialization in this specific genre of technical translation, as Finch (1969) suggested. Therefore, translation decisions are guided not only by the text itself and specific textual and terminological conventions, but also by all the functions -be it technical or legal- they are meant to serve, as would most functionalist theories of translation (cf. Venuti, 2000; Munday, 2001) argue.

All in all, writing and translation of patent documents, especially of Claims, demand a more specific approach by the translator both in terms of knowledge in the technical field and in terms of the expertise in what this specific genre of translation demands. The previous literature mainly described the present situation and presented examples for patent translation (e.g. Daldeniz, 2004) but did not provide a comprehensive discussion on these various factors that shape translator's decision-making. In addition, this study advances the previous literature in that it asserts that it is not merely the technical and terminological knowledge, but in fact the expertise in this specific genre and style of writing that brings quality in translation: therefore, translation of patents should not be regarded as a secondary task but a profession and specialization in its own right.

The descriptions regarding parts of patent documents and analyses of example claims presented in this paper manifest themselves directly in translation practice. In this respect, this study might serve as a practical and compact introduction for the professional and prospective translators aiming to specialize in patent translation. With the strategies and restrictions discussed with reference to real examples from the Claims, this study might contribute to patent translation practice and in the training of translators. In this paper, the sentence structure in Claims was elaborated on; however, it was not possible to present analyses of other parts of the patent documents within the scope of this article. As an implication for further research, more studies can be conducted on the discourse of separate parts of patent documents, and syntactic and lexical analyses might be presented for the reference of translators specializing in patent translation.

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