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**MEDICAL TERMINOLOGY IN THE TRANSLATION OF
THE TV SERIES *9-1-1*: INVESTIGATING THE AUDIENCE
ROLE AND SEMANTIC ASPECTS**

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ABSTRACT

Due to globalization and the rise in popularity of medical TV series, both audiovisual translation and medical translation have been gaining notoriety in the field of translation. Despite this, medical translation in audiovisual products is still considered a very recent field, which is why further research is needed to fully understand the aspects related to it. Therefore, this research project will analyze the Spanish dubbing of medical terminology in the American TV series *9-1-1*, taking into account three variables: the translation techniques used, the semantic groups of the selected terms, and their domains of use, with the hope of contributing new data to a field of research that still shows significant gaps. Our results support those from previous studies as literal translation is the strategy that prevails, and this is so especially in the case of both expert and lay terms related to medication and medical conditions, respectively.

Keywords: audiovisual translation, medical translation, medical terminology, Spanish dubbing, medical TV series

RESUMEN

Debido a la globalización y al auge de la popularidad de las series de televisión sobre médicos, tanto la traducción audiovisual como la traducción médica han ido ganando importancia en el campo de la traducción. A pesar de esto, la traducción médica en productos audiovisuales aún se considera un ámbito de investigación muy reciente, por lo que todavía son necesarios estudios con distintos enfoques para comprender este campo de la traducción. Por ello, en este trabajo de fin de grado se realizará un análisis del doblaje al español de la terminología médica en la serie estadounidense *9-1-1*, teniendo en cuenta tres variables: las técnicas de traducción utilizadas en la traducción de determinados términos médicos, los grupos semánticos a los que pertenecen dichos términos, y el dominio de uso de estos términos con respecto a la audiencia, con la esperanza de aportar nuevos datos a una rama de investigación que todavía presenta carencias. Nuestros resultados corroboran los de estudios anteriores, ya que la traducción literal es la estrategia que prevalece, especialmente en el caso de los términos expertos y legos relacionados con la medicación y las afecciones médicas, respectivamente.

Palabras claves: traducción audiovisual, traducción médica, terminología médica, doblaje al español, series de televisión sobre médicos

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1. INTRODUCTION

Nowadays, globalization is an important aspect of our society, which has led to the need to spread diverse cultures throughout the entire world, especially through audiovisual products such as movies and TV series. Since the possibility of consuming content from anywhere is now a reality, we have also developed the need to understand it, which is why audiovisual translation (AVT) has grown more than ever.

As a very popular AVT product, American medical TV series have been very attractive to different cultures and audiences. In fact, although traditionally, medical terminology was used almost exclusively by the healthcare industry and its personnel, this changed with the emergence of medical-themed TV series, which, thanks to the aforementioned globalization, have been growing in popularity around the world. The present project focuses on the intersection between two topics: audiovisual translation and medical terminology. This subject has already been addressed by other scholars in various languages, but it remains relatively recent, and investigation in this field is still limited. In this case, the project focuses specifically on the medical terminology in the Spanish dubbing of the TV series *9-1-1* (Murphy, *et al.*, 2018-present). This TV series revolves around the emergencies that a group of first responders (firefighters, paramedics, police officers, and 9-1-1 dispatchers) deal with daily. As this is not a standard medical show, the research will focus only on the segments that involve medical terminology used by some of the main characters.

This research project is structured as follows. Section 2 provides a theoretical background of the essential major key points involved, including the definition of audiovisual translation and basic information about the process of dubbing (see section 2.1); the definition and main characteristics of medical translation, and how medical and audiovisual translation can be connected (see section 2.2); as well as the background and the problems related to the Spanish dubbing of American medical TV series, along with a review of previous research on the same topic (see section 2.3). Section 3 outlines the objectives proposed for the analysis of the present project, while section 4 discusses the methodology and procedures carried out in order to conduct this research. This includes the presentation and the reasons why this TV series was selected (see section 4.1); as well as an explanation of the three variables used for the analysis, the classification of the translation techniques used, the semantic groups and domains of use, and some examples taken from our corpus (see section 4.2). Section 5 presents the

results obtained from the analysis, organized according to the aforementioned variables: (1) the translation techniques (see section 5.1); (2) the semantic groups (see section 5.2); and (3) the domain of use (see section 5.3). A final subsection (see section 5.4) discusses the outcomes resulting from the interaction of these three variables. Section 6 provides the conclusions, highlighting the most relevant findings from the comparative analysis. Finally, section 7 contains a detailed list of the references used throughout the project.

2. TRANSLATION STRATEGIES IN AUDIOVISUAL TRANSLATION: THE CASE OF MEDICAL TV SERIES

Prior to begin with the analysis of this dissertation regarding with the terminology used in medical TV series both in English and the Spanish dubbing, it is important to make clear some major key points that would be essential for understanding audiovisual and medical translation, that is, how both can be related, and how the original English medical terminology can be altered in the Spanish dubbing of an audiovisual product. All the information needed for this purpose will be presented in the following subsections, where a general overview of audiovisual translation is presented, more concretely, that of medical TV series paying special attention to the terminology used in these TV products.

2.1. AUDIOVISUAL TRANSLATION IN A MULTIMEDIA WORLD

Audiovisual translation (AVT) is an umbrella term that includes different types of translation products in the audiovisual industry like, for instance, "media translation", "multimedia translation", "multimodal translation", and "screen translation" (Chiaro, 2009). These variety of terms reflects how AVT has become increasingly popular in the multimedia global context where we live today. Additionally, AVT has become one of the most recent fields in the Translation Studies area, and it has gained even more importance in the last two decades thanks to globalization and the need to spread the different cultures of the world, especially through the audiovisual products as movies, TV series or video games. This cultural and language aspect behind AVT is expressed by some translation scholars like Matkivska (2014: 38) when she defines it as "the transfer from one language into another of the verbal components contained in audiovisual works and products". This linguistic interchange in AVT depends on both visual and acoustic means (Chiaro, 2009) which must be reflected by the most common modes in AVT, i.e., subtitling and dubbing (Ramael, 2010).

In case of subtitling, the rendering of the oral original message into the target language is reflected on written texts which, at the same time, are restricted to specific conditions (e.g., the number of lines on the screen, the number of characters in each line and the rate of speech). These technical constraints may involve a certain lack of fidelity to the original message (Díaz Cintas and Ramel, 2007) with the risk that this entails of potential misunderstanding among the target audience.

From our research perspective, it is more interesting the dubbing mode in AVT as in Spain TV series are generally dubbed (Chaume-Varela, 2006). Dubbing consists of replacing the original track in which the source language (SL) is located with another track with the translated version of the target language (TL). In this case, there are also specific conditions which mainly refer to matching the target language translation and the articulatory and body movements of the screen actors. (Chaume-Varela, 2006). The intention of dubbing is to make it appear that the conversation between the characters is articulated in the target language in favor of improving the visual experience of the audience (Chiaro, 2009).

As part of the dubbing process, the film studios request a translation of the audiovisual product to a professional translator who is requested to provide a "rough translation" where indications on the source text and culture idiosyncrasies must be included. Then, this translation is rewritten by a dialogue writer to make it sound more natural (Chaume-Varela, 2006). These translators, also known as "dubbing-translators", are not required to be completely experts on the SL but they need to have script writing skills on said language to accomplish naturality and credibility for the audience (Chiaro, 2012). In the case of audiovisual products where the terminology used belongs to specialized areas like medicine, translators are not required to have any kind of medical specialization or previous knowledge, as Martínez Lopez stated in an interview, even though it could be quite beneficial when it comes to create an adequate and realistic translation (Trágora Formación, 2018). More extensive information about medical translators in the audiovisual context will be provided in section 2.3.

AVT has proven to be quite influential in the society that we live in nowadays considering that many people spend their time off consuming these kinds of products as TV series, movies or even video games. For this reason, the translators who settle on this kind of translation are recommended to specialize in other fields of knowledge like medicine or legal

issues, so that they can offer a credible product to the target audience. However, this double specialization is not devoid of challenges, as will be tackled in section 2.2.

2.2. MEDICAL TRANSLATION AND AUDIOVISUAL PRODUCTS: A FIELD OF EVER-EVOLVING DEMANDS

Fischbach (1962) states that medical translation is part of the technical field of translation and therefore, its experts must acquire three important faculties. First, they must have an extensive knowledge of the subject matter of the translation for them to be able to reason about it. The translators also must have the ability to read in the SL well enough to understand the intended meaning. Finally, they need to be able to incorporate the author's meaning in the TL translation in a completely clear and understanding way. All these faculties are very practical in order to create accurate and professional translation that will not jeopardize people's welfare, especially if it is an impactful field as is in this case of medicine.

Because of the impact of medical translation on people's lives and with the international expansion of the specialized knowledge and the new discoveries in medicine, it is essential that the medical translator possesses a general knowledge about medical issues and specific communicative skills to avoid inaccuracy in this field to the fullest extent (Steiert, and Steiert, 2011). Additionally, the medical translator should be aware of the purpose of this type of translation, which could be informative (e.g., regulating medical devices patents, developing research publications, etc.) or promotional (e.g., creating pharmaceutical products advertisements, etc.).

Therefore, when talking about the translation of medical language, it would be convenient to state that this is a type of specialized discourse where, besides the translator's specialized knowledge in the field, there are three important factors involved and that the translator should take care of: the user, the domain of use and the special application. Regarding the user and the domain of use, the language in expert-to-expert communication is mainly based on specialized terms that only are explained in case those terms are coined or redefined by the author. In this instance, a translation for experts should stay as close to the original as possible in order to retain both the original meaning and terminology. In contrast, the language expert-to-lay communication relies on simpler and direct terminology as the one used in TV series where the degree of accuracy does not have to be the same as that in medical journals inasmuch

as those audiovisual products has merely fictional nature (Karwacka, 2015; Kivinen, 2014). Taking these two first key factors individually, it seems that the medical translation is a demanding task in constant development which could be problematic for all serious implications derived from a bad or inappropriate translation. Therefore, the translators must possess the capacity to create translations as close to the source text as possible. The third factor, that is, the special application to specialized contexts, does not occur so strictly on TV series as in medical care services, so-, in medical TV series the translators have more freedom to solve communication problems and so it is more important in this case to focus on the users and the domains of use (i.e., lay or non-expert target audience) rather than on the application factor.

In fact, medical terminology in audiovisual products for general or lay target audiences, although as a rule quite a hurdle for a translator, seems to work appropriately in TV series and films as it usually provides a fitting atmosphere to the situation and also reproduces a realistic professional context (Lozano & Matamala, 2009). This may be due to the fact that the target audience of these audiovisual products is primarily people without any technical or specialized knowledge, although part of the audience could also include authorities in the field or people with medical training (Puddu, 2016). Considering this wide audience range, the original terminology used in medical TV series must be technical enough to be faithful to the medical specialty, but also quite basic with simple register for all the non-experts being able to follow throughout the plot. For example, if in the original version appears a term that does not have an equivalent in the TL, as it is fiction, the translator is allowed to arise with different solutions more freely: for instance, re-creating a similar idea or term, replacing it with a generic one, adding information that does not appear in the original version or utterly erasing it. All these techniques would not render such as accurate translation, but it will not have the same consequences as a non-fictional medical translation (Kivinen, 2014).

Henceforth the language of medical TV series or films are presented in the fictional settings of possible real situations merely for the entertainment of lay audience, but, at the same time, it can even reach the point of mimicking real-life situations that could be appropriate for the experts' knowledge, or medicine students. Therefore, both the user (i.e., the target audience of the dubbed version of the audiovisual product) and the domain of use (i.e., (semi-)expert *versus* non-expert) are the main factors to be considered when translating medical terms in TV series. As American medical TV series are the most popular worldwide, the following section

will briefly describe the main issues derived from the translation of medical English terms into Spanish, the TL under analysis in the present project.

2.3. AMERICAN MEDICAL TV SERIES DUBBED INTO SPANISH: THE IMPORTANCE OF TERMINOLOGY

As already mentioned in section 2.1, in order to create an effective translation for TV dramas with medical themes in Spanish it is not compulsory to have previous medical knowledge although it is recommended. Martínez López states in an interview that every translator, whether they have this prior expertise or not, must investigate and learn all the possible information about all the terminology used in the SL text before they begin their translation. This background formation can be helpful in case some issues arise while translating, i.e., the inability to find a specific term adapted to common medical slang. This would be the case of the translation, for instance, of "computerized tomography" as "tomografía computarizada" instead of "escáner" (which is a more common and everyday-life term); or that of "acetaminophen" as "acetaminofeno" (not so well-known for a Spanish audience), instead of "paracetamol", the official term in Europe and more common for a Spanish viewer) (Trágora Formación, 2018).

In the last decades, the popularity of TV series with medical themes has increased all around the world which has led several scholars as Lozano and Matamala (2009), Martínez López (2010), Laudisio (2015) and Kivinen (2014) to research about this kind of TV series and their correspondent translations into different languages (i.e., Spanish, Italian, Finnish, respectively) to learn how the terminology may change from the SL to the TL.

In the case of Spanish dubbing of TV medical series, the authors Lozano and Matamala (2009) conducted a study in which they analyzed the medical terminology in a single episode of *ER* (Michael Crichton, *et al.*, 1994-2009). They compiled all the original English terms and classified them according to the translation techniques used in the Spanish version in each case (i.e., literal translation, transposition, and elision, among others). In addition, the authors, with the advice of a medical expert, categorized the selected terms based on two criteria: the level of formality of their context (i.e., formal and informal), and the thematic field of the terms (i.e., therapeutic actions, biometric monitoring devices, and medical facilities and departments among others), and analyzed whether the translation technique used varied depending on the

context in which the term was found or the thematic field they belonged to. Similarly, Martínez López (2010) conducted another research in which all the medical terminology in the first four episodes from the first season of *House* (David Shore, *et al.*, 2004-2012) was gathered. The corpus consisted of a total of twenty-five terms and all the examples were presented along with the Spanish translation, as well as a brief explanation of how they were translated, and errors that were found in some instances, based on her expertise as a medical translator.

Both studies concluded that the Spanish dubbing in both TV series translated the medical terminology as close as possible to terms in English. However, some minor errors were identified both in Lozano and Matamala's (2009) and Martínez López (2010), but they were not considered particularly alarming, such as translating "attending physician" as "titular" instead of "médico adjunto", a term that in Spain, is used for university teachers and not for doctors in the medical field, or keeping the acronym "CBC" in Spanish, where it has no meaning instead of translating it as "hemograma". But since they are in a fictional context rather than in a real-life situation, an incorrect or inaccurate translation does not have serious consequences for any patient's life. Moreover, Lorenzo and Matamala's (2009) also concluded that, literal translation was the most used strategy in formal contexts, especially in thematic fields such as treatments and drugs, while the most used in informal contexts was by establishing equivalents.

In the present research project, we will also analyze how medical terminology may change from the TL to the Spanish dubbing, using a different TV series that that from references mentioned above but considering part of their variables of analysis (i.e., the translation techniques, the thematic fields/semantic groups, and the register or domain of use). The selected show will be *9-1-1* (Murphy, *et al.*, 2018-present), which is not a conventional TV series focused on doctors but rather a procedural drama where the main characters are first responders (i.e., 911 dispatchers, firefighters, police officers and paramedics). In the objectives and methodology sections, it will be illustrated in more detail how the research will be approached.

3. OBJECTIVES

Due to the limited length of the present research project, the TV series that will be used for the analysis in this dissertation, i.e., *9-1-1*, will not be a standard medical series *per se* but

a TV drama where the main characters are first responders, and so only some of the scenes in each episode the characters talk about medical topics or use medical terminology will be analyzed. The objectives will be focused on the following points:

- 1) To observe how the medical terminology used concretely by the paramedics during the patients' treatment prior to their hospital arrival is translated in the Spanish dubbing. This will imply the analysis of techniques used to translate the medical terms that appear in a selection of episodes of *9-1-1*. We will contrast our results with those of Lozano and Matamala (2009)'s and Martínez López (2010)'s research studies (see section 2.3) in order to find out if more literal strategies are also common in this type of series,
- 2) To observe how the translation process may affect the resulting Spanish term depending on the semantic group the original term belongs to, and
- 3) In the case of significant changes in the terminology of the Spanish dubbed version, to assess whether these produce a translation which is more or less comprehensive or complex to lay audience while maintaining a realistic medical language.

The analysis of these three variables will provide a full picture of how English medical terminology is translated into Spanish not only linguistic but also pragmatic factors are considered.

4. METHODOLOGY

In this section, a description about how we have proceeded with the compilation of American English medical terms, their Spanish translations and their classification according to our variables of analysis (i.e., translation techniques used, semantic groups they belong to, and their domain of use) will be presented.

4.1. COMPILATION OF MEDICAL TERMS FROM 9-1-1 TV DRAMA

9-1-1 (Murphy, *et al.*, 2018-present) is an American procedural drama that has gradually gained popularity since its airing, leading to its translation and dubbing in several languages. Because it is not considered a conventional medical TV series as the plot is focused on first responders as aforementioned, the analysis of this research project will be exclusively focused on the medical terminology used by the paramedics and their patients during their

treatment prior to their arrival at the hospital. Despite several studies about medical terminology in TV series have been carried out, as Matamala and Lozano's (2009) and Martínez López's (2010) research (see section 2.3), the reason behind the selection of this specific TV series is that the others tend to be focused on series set within hospitals (i.e., *ER*, *House*, *The Good Doctor*, *Scrubs*), where their main characters are medical experts such as doctors or surgeons, while in *9-1-1*, although the protagonists have an advance knowledge in medicine, they do not possess the same level of expertise as a doctor. Additionally, medical terminology is used only in certain scenes, as it is not the main focus of the show.

Since *9-1-1* does not have the same setting, only part of the show will contain medical terminology. Therefore, this may affect the number of examples found for the analysis but may provide a picture on the translation of medical terms in more common scenarios. For this reason and in order to provide a new perspective on an already conducted studies on the topic, in addition to the classification based on the translation techniques, as in the other studies referenced, we will create two additional categories based on the semantic group each medical term belongs to and the domain of use of each term.

9-1-1 is currently airing its eighth season, with a total of 115 episodes so far. However, due to time restrictions, the analysis will be limited to the first season, consisting of 10 episodes, 45 minutes long each. In total, it was possible to compile a corpus of 75 terms, distributed across 9 episodes instead of 10, since no terms fitting the purpose of this research could be found in the second episode. This TV series is available on demand on Disney + in several languages, which allowed us to watch the entire season in both the SL (English) and the TL (Spanish) in order to gather all the medical terms used by the characters, whose classification is described in the next section.

4.2. CLASSIFICATION OF MEDICAL TERMS FROM *9-1-1* TV SERIES

For the analysis of English-into-Spanish translated medical terms according to the translation strategies followed, an adaptation of Molina and Hurtado's (2002) classification of translation procedures will be used. This classification grants a modernized and updated perspective in a field that is in ceaseless development and was used by other scholars as Lozano and Matamala (2009) in their own research. An adaptation of Molina and Hurtado's translation strategies has been used, reducing them to the subsequent most common strategies. This

adaptation has been based on the strategies that, from our perspective, are more probable to be used in medical translation.

- **Calque:** To translate literally using a foreign word or phrase.
- **(Quasi-)Literal translation:** To translate a word or an expression mostly word for word.
- **Compression:** To reduce or delete some original content elements in the TL text.
- **Common particularization:** To use in the translation a term that is more precise or concrete than the one used in the TL.
- **Discursive creation:** To create an equivalent that can be understood by the context where the translator takes liberties to improve the term.

Not only these main strategies from Molina and Hurtado's (2002) proposal were considered for the classification of the strategies used in the translation of the selection of episodes (see section 4.1), but also other two variables of analysis were considered: the second variable relates to the semantic group each English medical term belongs to and, according to it, the terms were classified as those related to *medical condition* (terms related to the patients' status), *anatomic structures* (terms related to the human body), *medication* (terms related to drugs), and *hospitalization* (terms related to the process prior to the hospital arrival).

In the case of the third variable of analysis, that is, the domain of use, we adapted the classification based on the levels of expertise of the audience created by Hetmański (2018). This way, *lay*, also called *novice*, refers to the initial level of expertise and describes someone who has only elementary knowledge of a certain domain; *semi expert*, also called *apprentice*, which refers to an individual who already possesses specialized knowledge in a specific domain but is not yet fully self-reliant, and *expert*, which refers to the knowledge associated with a specialized domain that is developed through experience.

Considering the background information of each term (i.e., the season and episode where it was found, the original English term and the Spanish target term) and the variables of analysis (i.e., the translation technique, the semantic group the original term belongs to, and the domain of use of the target and source terms), all terms will be classified according to the information contained in Table 1.

Table 1. Classification of Medical Terms According to the Three Variables of Analysis

Term #	Season/ Episode	SL (English)	TL (Spanish)	Translation technique	Semantic Group	Domain of use (SL/TL)
1	1/01	Dilaudid	Dilaudid	Calque	Medication	Expert/Expert
2	1/06	Cricoid Cartilage	Cartílago Cricoides	Literal Translation	Anatomic Structures	Expert/ Expert
3	1/05	DOA	Muertos	Compression	Medical Condition	Semi-Expert/Lay
4	1/03	Brain Tissue	Cerebro	Common Particularization	Anatomic Structures	Semi-Expert/Lay
5	1/07	Soft Labor	Falso Parto	Discursive Creation	Medical Condition	Semi-Expert/ Semi-Expert

Table 1 shows a sample of how the results in section 5 will be presented. It contains some terms from the corpus to illustrate how the analysis was conducted. For instance, for the English term "Dilaudid", a calque is used in the translation, as the Spanish term remains the same. It is a term that should refer to medication and both the original and target term clearly belong to a lay (or non-expert) domain of use.

A literal translation, however, is used for the term "cricoid cartilage" ("cartílago cricoides"), as it means exactly the same. This term refers to a part of the body or anatomic structure, and both the original and the target term would be understood by an expert audience rather than a lay or non-expert one.

Moreover, the compression technique is used when translating from "DOA" into "Muertos", since the English acronym stands for "Dead On Arrival", and so part of the information is lost in the Spanish term. Both terms refer to a medical condition but while "DOA" would be used by an expert, "Muertos" seems to belong to a lay domain of use.

Even though it may not seem obvious, common particularization is the technique used to translate "brain tissue" into "cerebro", since it should have been translated as "tejido cerebral", but it was simplified into "cerebro" as this term could include the tissue it is made of. The translation of this anatomic structure would lead to a change of the domain of use as

the English term seems to belong to a semi expert domain, while the Spanish one is commonly used by lay people.

Finally, discursive creation is used to translate "soft labor" into "falso parto" since in Spanish there is not any similar equivalent and the adjective "falso" is created *ad hoc* to establish a temporary equivalence. In either case, it seems that both terms belong to a more expert field of knowledge.

As the author of the present project is a non-expert in the medical field, the online version of the popular dictionary known as *Libro Rojo* written by Fernando A. Navarro (2025), was used to consult doubts about uses and the most accurate translation of terms in professional medical context, in order to conduct the analysis presented in the following section.

5. ANALYSIS AND DISCUSSION ACROSS VARIABLES

In this section it will be analyzed the translation of a total of 75 medical terms compiled from the TV series episodes under analysis considering three different variables: the translation techniques used, the semantic group to which each term belongs, and their domain of use. For each of those variables, a subsection will be presented following the raw database and the corresponding analyses available at <http://bit.ly/4dvLomi>.

5.1. TRANSLATION TECHNIQUE

In this subsection it is displayed the classification of 75 medical terms considering the techniques used by Mar Asensio Hernández (2018)¹, the translator of the series. These techniques are already defined and explained in section 4.2. Table 2 shows the results regarding only the classification of terms according to the translation technique.

¹ Mar Asensio Hernández is a Spanish translator specialized in audiovisual and legal translation who worked on Technison S.A. as translator for the Spanish dubbing of the TV series *9-1-1*.

Table 2. Type of Translation Techniques Used in the Translation of Medical Terms

Translation Techniques	Percentage (Occurrences)
Literal Translation	56% (42)
Common Particularization	16% (12)
Compression	14,67% (11)
Calque	12% (9)
Discursive Creation	1,33% (1)

According to results displayed in table 2, the most common technique used is literal translation (56%, 42 terms), as occurs in example (1), which is used in more than a half of all the compiled terms. This most frequent technique is followed by common particularization (16%, 12), compression (14,67%, 11), and calque (12%, 9), being all these strategies illustrated in examples (2), (3), and (4), respectively. However, discursive creation (1,33%, 1) was the least used technique, with only one instance shown in (5).

(1) Emergency Tracheotomy > Traqueotomía de Urgencia [term #29, 1/06]

(2) ICU > UCI [term #8, 1/03]

(3) Spinal Disc Herniation > Hernia Discal [term #40, 1/07]

(4) Eclampsia > Eclampsia [term #18, 1/04]

(5) Soft Labor > Falso Parto [term #39, 1/07]

Asensio Hernández prefers to use literal translation to maintain the meaning of the translation as close as possible to the original term in the SL, as shown in example (1). Correspondingly, calque is the other translation technique used by the translator to preserve the original meaning as shown in example (5), as “eclampsia” is used both in the SL and the TL.

The other next two strategies are used to simplify the translation. So, on one hand, common particularization helps to simplify terms in the TL as it in (2), where “ICU” is translated as "UCI". This is considered a simplification because, in Spain, the ICU is divided in three sections: "UCI" (unidad de cuidados intensivos), "UVI" (unidad de vigilancia intensiva) and "REA" (servicio de reanimación). Since the USA healthcare system does not have this differentiation, the translator tends to translate this term always as "UCI".

On the other hand, simplification may imply the omission of the TL text, which is the case of compression in (3), "spinal disc herniation" translated as "hernia discal". In the TL, there is not a reference to the word "spinal" because it is implied that this type of injury occurs in the spinal cord, and therefore, it does not appear in the translation.

If there is not a literal equivalent of the term in Spanish, which is the case of “soft labor” in (5), creative discourse is used to replace in the TL the new concept created, in this case, “falso parto”.

Therefore, paralleling the analysis provided by Lozano and Matamala (2009) and Martínez López (2010) (see section 2.3), the translation of the medical TV series under analysis *9-1-1*, seems to maintain the meaning of medical terms as closely as possible to those in the original text in terms of meaning and form. For this reason, the most used translation technique is literal translation, with a total of 42 occurrences in our corpus. This result seems to reinforce the idea that even in fictional medical products like TV series, Asensio Hernández prefers to be as objective as possible in her translations to avoid misunderstandings, only allowing herself to simplify the meaning of terms with compressions, particularizations or even calques (which may imply the absence of translation itself). Other more creative techniques such as discursive creations are almost completely avoided.

5.2. SEMANTIC GROUP

All the medical terms used in the first season of *9-1-1* were also classified into 4 different groups considering their semantics.

Table 3. Medical Terms Classification According to Semantics

Semantic Groups	Percentage (Occurrences)
Medical Condition	42,67% (32)
Medication	25,33% (19)
Hospitalization	24% (18)
Anatomic Structures	8% (6)

As can be seen in table 3, the most common category, with a wide difference, is medical condition (42,67%, 32 terms), followed by medication (25,33%, 19), hospitalization (24%, 18), and anatomic structures (8%, 6), illustrated in examples (6), (7), (8), and (9), respectively.

(6) Rhesus Disease > Enfermedad de Rhesus [term #59, 1/08]

(7) TPA > TPA [term #68, 1/10]

(8) Blood Pressure > Tensión Arterial [term #23, 1/06]

(9) Adam's Apple > Nuez [term #31, 1/06]

Since it is not a show setting in a hospital but about first responders attending to people's emergencies, it is expected that the most used type of medical terms are those related to a medical condition, which involves terminology involving injuries, symptoms, and diseases which are the primary situations that paramedics deal with. Moreover, the second most used category was medication which follows a correlation between the TV series' plot as drugs is what the characters use for the immediate patients' treatment before the arrival to hospital. The third most used terms are those referring to hospitalization, which comprehends terminology related to hospitals as measurements, procedures, tools, personnel, and specialized rooms located in said buildings. All this terminology is used by the characters to indicate all the special attention and treatment that the patients will require once they arrive at the hospital.

Finally, we can also find that the less common group of terms refers to anatomic structures that includes not only anatomic structures but also other internal elements that constitute the human body. The lowest frequency of this semantic group may be explained once again by the focus of the plot, that is, the primary healthcare that requires a quick description of the medical situation of patients and a quick reaction towards it by the use of drugs. So more concise information about the anatomy involved in the diagnosis will be provided by other healthcare professionals in hospitals.

5.3. DOMAIN OF USE

As already stated, this research project has been conducted by a non-expert in the medical field, and therefore, the categorization of the terms compiled has been created solely based on the basic knowledge that an average spectator may have with the help of Navarro's *Libro Rojo* (2025). Those terms for which it was not possible to find their domain of use in this

dictionary, were categorized based on the context and the already mentioned basic knowledge as a non-expert.

For this third variable, we have decided to take into account the domain of use of both the English term and the Spanish translation of the term in order to discover if the translation process changes the domain of use of medical terms and so, if the Spanish translators adapt them to the target audience. Table 4 shows the results regarding the classification of terms according to the domain of use in the SL (English) and the TL (Spanish).

Table 4. Domain of use of the SL and TL Medical Terms

Domain of Use	Percentage (Occurrences)	
	SL	TL
Expert	42,67% (32)	42,67% (32)
Semi-Expert	18,67% (14)	16% (12)
Lay	38,67% (29)	41,33% (31)

The expert domain is the most frequent in the compilation of medical terms in both the SL and the TL (42,67%, 32 terms in either case), closely followed by the lay domain (38,67%, 29 in the SL; 41,33%, 31 in the TL), and being the semi expert domain the less frequent (18,67%, 14 in the SL; 16%, 12 in the TL). Therefore, it seems that the number of occurrences in both the SL and the TL are quite similar. This suggests that Asensio Hernández prefers to preserve the domain of use in the translation as much as possible, especially if the original term refers to expert terminology, as all the expert terms and in the SL maintain this exact domain of use in the TL. This result also seems to point once again to a conservative translation approach as the translator changes minimally the terms when considering the target audience, as examples (10) to (12) show.

(10) MDVP > MDVP [term #50, 1/7]

(11) Brain Tissue > Cerebro [term #9, 1/03]

(12) Migraine > Migraña [term # 66 1/10]

In the very few cases when the translator shifts the domain of use, this only happens from instances of semi expert terminology to lay terms (e.g., brain tissue > cerebro), which can be interpreted as a simplification of the domain of use, as happened with the translation strategies used (see section 5.1).

5.4. INTERACTION OF THE THREE VARIABLES

Since the differences are minimal in the case of the SL *versus* TL domain of use analysis (see section 5.3), in this section the analysis of the interaction across the three variables will be focused on the relationship between the type of translation strategy used with the semantic type of the SL medical terms and the domain they belong to. In this way, Table 5 helps to understand in which semantic field and domain of use literal translation, the most predominant strategy, tend to be used.

Table 5. Interactions Among the Three Variables in the SL medical terms

	Calque	Literal Translation	Compression	Common Particularization	Discursive Creation	Total (100%)
Expert SL	9 (28,12%)	21 (65,62%)	1 (3,13%)	1 (3,13%)	0	32
Anatomic Structure	0	2 (66,67%)	0	1 (33,33%)	0	3
Medical Condition	3 (33,33%)	6 (66,67%)	0	0	0	9
Hospitalization	0	2 (66,67%)	1 (33,33%)	0	0	3
Medication	9 (52,94%)	11 (64,60%)	0	0	0	17
Semi Expert SL	0	7 (50%)	4 (28,57%)	2 (14,28%)	1 (7,14%)	14
Anatomic Structure	0	0	0	1 (100%)	0	1
Medical Condition	0	5 (55,56%)	2 (22,22%)	1 (11,11%)	1 (11,11%)	9
Hospitalization	0	2 (50%)	2 (50%)	0	0	4
Medication	0	0	0	0	0	0
Lay SL	0	14 (48,28%)	6 (20,69)	9 (31,03%)	0	29
Anatomic Structure	0	1 (50%)	0	1 (50%)	0	2
Medical Condition	0	5 (35,71%)	3 (21,43%)	6 (42,86%)	0	14
Hospitalization	0	6 (54,55%)	3 (27,27%)	2 (18,18%)	0	11
Medication	0	2 (100%)	0	0	0	2
TOTAL	9	42	11	12	1	75

As seen from table 5, the most commonly used techniques when translating SL medical terms belonging to the expert domain are those that aim to preserve the meaning of the original term as closely as possible, such as calque (28,12%, 9 terms), and, especially, literal translation (65,62%, 21). In addition, these two techniques are mainly used when translating terms related to medication (52,94%, 9; and 64,60%, 11, respectively), which mostly are universal for different Western cultures like American and Spanish societies.

In the semi expert domain, literal translations (50%, 7) are mainly used when translating medical conditions (55,56%, 5 terms), the most predominant semantic group associated with this domain, which a lay audience may be more familiar with.

Finally, when translating lay SL medical terms, literal translation (48,28%, 14) is predominantly used also with medical conditions (35,71%, 5) and, mainly, with hospitalization terms (54,55%, 6). If another technique to translate medical conditions is used instead of the literal translation the common particularization is preferred (42,86%, 6). These results could be interpreted as follows: when using expert terms, these are usually names of drugs or medications, where Asensio Hernández prefers to preserve the original terminology or the literal translation for authenticity. Meanwhile, in case of semi expert and lay terms, these are usually medical conditions and terms related to medical tests or devices, which may be highly technical and complex for non-expert audiences. In order to avoid technicalities and to reach wider audiences, literal and simplification techniques are also preferred in these specific groups.

6. CONCLUSION

This research project was created to contribute additional data to a field that, although previously studied by other scholars (see section 2.3), still presents a gap that needs to be fulfilled. To this end, we gathered a total of 75 terms from the first season of *9-1-1* (Murphy, et al., 2018-present), containing 10 episodes to analyse three different variables: the translation techniques used, the classification of the terminology into semantic groups, and the domain of use to which each term belongs in both the SL and the TL. In addition, three objectives were established (see section 5), and after conducting this research, some answers can be provided.

In the case of our first objective, we found out that our results are similar to those provided by Lozano and Matamala (2009) and Martínez López (2010) as literal strategies are the most common strategies used in this type of series as well. This technique helps the translators to preserve the meaning of the original term as much as possible in the TL, in this case, Spanish. Additionally, other commonly used techniques include compression and common particularization, whose main objective is to simplify the terminology for lay audiences.

Regarding the second objective, i.e., to observe how the translation process may affect the resulting Spanish term depending on the semantic group the original term belongs to, our findings indicate that the semantic group of a term determines which translation technique is more likely to be used. For instance, terms related to medication were translated exclusively using calques or literal translations. Terms related to medical condition were mostly translated using a literal rendition of the original meaning as well and the same applied to hospitalization terms, which usually are terms that may be closer to the everyday of the lay viewers.

Finally, the third objective, dealing with the resulting terms as more or less comprehensive or complex to lay audience, our findings show that both expert and lay terms are used fairly evenly, with almost the same number of instances. This achieves a balance between a realistic context for the TV series and ensuring that all types of audiences can understand the entire situation. Additionally, expert terminology tends to be preserved in the process of translation, as is the case with lay terminology. However, in some cases, semi expert terminology shifts to the lay domain in order to simplify the term in the TL.

The conclusions reached in the present project should be considered only a small contribution to the ongoing investigation in this field, as the findings are limited by the size of the corpus. However, the addition of more episodes, and therefore more terms, could provide further insights.

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