Subtitling for the deaf and hard-of-hearing

In brief

SPA *Subtitulación para sordos*

origins

Subtitling for the deaf and hard-of hearing, originally known as *Closed Captioning*, was born in the 70s, in the United States. However, it was not until the 80s that subtitles for the deaf and hard-of-hearing appeared in some US TV channels. In Europe, it was introduced through the United Kingdom in 1979 and it gradually extended to other European countries. It took more than eleven years to arrive to Spain, in 1990.

other names

On streaming platforms it is named CC (Closed Captioning).

abstract

Subtitling for the deaf and hard-of-hearing (SDH) is a multimodal translation modality which is aimed at conveying information transmitted aurally (dialogues, music, and sound effects) through the verbal written mode. It can be open (in audiovisual productions), closed (in teletext) or live (in opera or any live TV program).

SDH is an intersemiotic translation modality, involving two semiotic modes in the translation process of non-linguistic sounds into words. It can also be classified as intralingual translation, given that it entails translating verbal oral language into written verbal language in the same natural language.

Knowing the deaf and hard-of-hearing culture and commanding some of the basic principles of sign language are two of the main competences for SDH. Although the deaf community is highly heterogeneous and demands different translated products, it is advisable to translate for those receivers with the greatest difficulties accessing the target language, who are usually deaf native signers.

The debate over the different forms of creating SDH, either transcribing the original dialogue or simplifying and adapting it through language or icons (e.g., using emojis or pictograms), is still open. Further reception studies on the preferences and access to subtitled multimodal products by the heterogenous receivers continues to be necessary.

A turning point in the standardization of SDH was, beyond any doubt, the creation and updating of the British guidelines by the BBC (2018) and the German standard (Untertitel-Standards 2015). In Spain, the early publication of the UNE standard 153010 (2003), which was improved and updated in 2012 thanks to critical revisions (Pereira Rodríguez & Lorenzo García 2005), has enjoyed widespread acceptance and has contributed to the standardization of SDH (Arnáiz-Urquiza 2015). The Spanish standard has established the

systematic and functional use of colours and other strategies for identifying characters and the location on screen of sound effects. This standard has led to the homogenization of key aspects of SDH, thus counteracting the cognitive reading effort made by deaf receivers. However, further studies are still needed to evaluate to what extent these guidelines are appropriate (Cuéllar 2018: 61).

record

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Entry

- **SPA** *Subtitulación para sordos*

contents

Introduction

The first step in the Subtitling for the Deaf and Hard-of-Hearing (SDH) translation process is analysing the multimodal source text (ST). It is important for subtitlers to know the nature of the different semiotic modes involved in the ST: the visual mode (images in motion) and the complex aural mode characteristic of soundtracks from audiovisual productions (Vernon 2016: 11), encompassing articulated sounds (verbal mode) and non-articulated sounds (suprasegmental sounds, music, and sound effects). In addition, devoting due attention to intermodal interaction is imperative. All too frequently, the end product, that is, the target text (TT) is redundant: sounds that receivers can infer from images are translated, unnecessarily increasing the cognitive load.

For example, in the Spanish subtitles of the film *Amour* (Haneke 2012) there is a scene in which a series of sounds which are non-evident for receivers and key to the plot are subtitled: (MEGAFONY), (Coughs and silence) or (Silence). However, in Figure 3 we can see that spectators are clapping. Thus, it is unnecessary to subtitle that they are clapping (*Aplausos*, in Spanish), as receivers can see what is happening on screen. Despite this, it is not rare that practitioners translate easily inferable or even “visible” sounds.

Figures 1,2, 3 & 4. Screenshots from a scene of the film Amour (Haneke 2012) in its Spanish dubbed version with SDH.

For this reason, although the visual mode, that is, images, are not translated, they are perceived and belong to the set of elements with communicative function that deaf receivers access to create meaning and inferences.

Subtitlers translate the aural content (dialogues, music, sound effects) and the original soundtrack of the visual TT. The way sound conveys information and functions as a communicative tool is one of the least researched topics in filmic studies (Ruiz 2010).

In this entry, the emphasis will not be on explaining intralingual translation strategies (lexical and syntactic simplification, deletion, and condensation). Although it is true that both SHD and subtitling for the hearing are two translation modalities influenced by time and space constraints, it has been observed that SDH practitioners tend to translate literally (Jiménez & Martínez 2018: 127), above all, in the English language, to the detriment of other adaptation techniques.

This entry is not devoted to professional aspects such as the use of subtitling software either, hence spotting will not be addressed. Although these are relevant for enabling access to knowledge, they are not central to the aural to verbal translation process from a cognitive and traductological perspective. In spite of that, they are more related to the social and professional side of SDH.

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¶ Sound as a source text

Sound can be studied basically from two perspectives: from the point of view of physics, sound results from the undulatory movement of a vibrant body or *sound source* in a *transmission medium*. Sound propagates through space and its characteristics depend on the nature of the sound source, the transmission medium and the objects on which it impacts.

In Figure 5, we see how human voice sound waves travel from their emission to the moment they reflect off a rock wall, thus creating an echo. Depending on the length of the sound, and on the location of the receiver, perception will vary. This difference should be conveyed in the translated product.

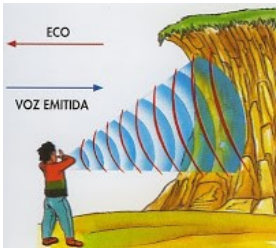

Figure 5. Reflection of the human voice sound. [Source: Ondas Física 3º "3"].

Sounds can be identified by their *sound source*. They are classified into *artificial* sounds, made by objects (including music), and *natural* sounds, produced by nature, animals and humans (language, bodily actions and paralanguage). Identifying the sound source is really important for classifying the sound and translating it with adequacy and coherence.

In practice, there is an excessive and loosely motivated variability as to how different sound types are translated. Sounds made by animals are sometimes translated using the name of the animal (*cat*), subtitling the sound the animal makes (*cat meow*), or combining both: *a cat is meowing* or *cat meowing*.

On the other hand, sound can be studied according to its perception and interpretation by humans, thus departing from the sensation that

emerges when sound is heard by a human ear. Sounds can, for example, be perceived as pleasant or cause fear or distress. Both perspectives are relevant for the study of SDH.

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¶ Translating sound

Knowing the qualities and characteristics of sound and the effects it can exert on the mental, physical, or emotional state of receivers could help in creating common traductological conventions for SDH.

Thus, practitioners would produce recurring semantic structures for translating the narrative function of sound in multimodal texts. This would prevent the high degree of variability which can be found when translating the same sound types, a variability which increases cognitive load for deaf receivers.

In the two following figures, we see how the same sound effect is subtitled differently. In both examples, someone opens a door somewhat silently. In the first instance, it is subtitled in Spanish as *door* and, in the second one, as *door opening*.

Figures 7 & 8. Screenshots of the first episode of the first season from the Spanish Netflix series Cable Girls (Campos 2017).

If sound in a scene conveys a change in communicative function, then this change should be mirrored in the translation. However, this does not seem to be the reason behind this variability when the translated

phenomenon and communicative functions are the same. Rather, each practitioner chooses between translating the sound source (door), the action which makes the sound (*door opening*) or the kind of sound that the sound source can make (*door creaking*), etc. Conceptual selection tends to be arbitrary and not due to an analysis of the scene or of the communicative function of the sound.

Nevertheless, according to filmic studies, each aural message from the soundtrack intensifies, stresses, contradicts or supports the verbal or aural message (Llinares 2012: 137). Sounds produced by the same source could be translated differently, but only when there is a change in communicative function.

Therefore, redundancy in the TT will be avoided if we relate the subjective characteristics of sound (in Table 1) with the sound type they could produce and its associated prototypical communicative function.

Characteristic	Sound type, quality	Function
Tone	High-pitched, medium-pitched, low-pitched	Calmness, stability, fear, terror, etc.
Intensity	Strong, weak, mellow	Strong, really strong, etc.
Timbre	Rough, metallic, velvety, etc.	Rough, metallic, velvety, etc.

Length	Long, short	Pleasing, clear, disturbing, etc.

Table 1. Subjective characteristic of sound and its possible naming according to auditory perception (Jiménez & Martínez 2017: 246).

This table offers the possibility of making different combinations among the four sound characteristics that can trigger different and specific perceptions in receivers.

For example, when the alarm clock tone is low-pitched it conveys calmness, which possibly is not suitable for waking us up. If its tone is high-pitched, this will stimulate our nervous system and we will probably wake up immediately. Intensity is also a relative concept, because it depends on the distance between the sound source and the receiver.

On the other hand, timbre is a quality which allows for distinguishing between two sounds of equal intensity, pitch and length produced by two different sound sources. Thanks to timbre, we can tell apart an alarm from a traditional clock from a mobile phone, being their aural perception thus different. Length affords the possibility of differentiating between longer and shorter sounds. The longer the sound of the alarm, the more unpleasant it will be.

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¶ Translation strategies for subtitling sound

The interim phase of the SDH translation process, that is, the translation strategies applied, has been studied to a greater extent than in any other translation modality. In the first place, given the time and space constraints, subtitlers adopt a macrostrategy: conceptual

selection. This first selection entails categorising sound naming either its source (*bird*, *train*, *brakes*, *wind*), or the sound it makes (*warble, screech*). Let us take that the subtitler watches the following scene and hears the accompanying sound:

***On the street, in the distance, the noise made by the braking system of a slowly approaching train is heard*.**

The sound content is generally categorised with a noun if it is an object or with a verb if it is a process. In this case, the object, that is, the sound source, can be categorised and would be expressed in the TT by *train* or *braking system*. If what is categorised is the sound produced by the sound source, the resulting translation could be *screech*. However, the translation of the above complex sound content is not usually subtitled only with a categorisation, but, on many occasions, the translator specifies the type of sound source by adding an attribution: *train braking system* or *railway screech*, thus applying two translation strategies: categorization and attribution. Finally, temporal or spatial location is usually relevant for receivers to create an appropriate mental image of the scene. Therefore, categorisation and attribution are followed by an explanation or explicitation. The result in the TT can range from

> **Categorisation: *train, braking system, screech***
>
> **Attribution including categorization: *screeching train braking system***
>
> **Explanation including both categorization and attribution: *distant screeching train braking system***

Several cognitive operations that imply arranging the verbal discourse in relation to each aural component can be appreciated here. In

addition, verbal discourse in subtitling emphasises the more relevant elements for a functional interpretation of the scene.

As mentioned, the extent to which this highly complex cognitive process could be organized so as to activate recurrent semantic, syntactic and pragmatic structures has not yet been studied. Therefore, the same sound element, with a given communicative function in a given scene, would be translated using a given categorization, attribution or explanation, thus becoming frequent structures associated with a communicative intention.

This would imply that a *sound structure X* (music) should always correspond to a *discursive structure Y* (pop music on the radio). The cognitive and traductological advantages of creating controlled grammatical structures in the TT associated with the communicative function of sound could be of great interest. In fact, in principle, it could lighten the cognitive load of deaf receivers, who would associate the structures to the form and function of the sound produced in the ST.

For example, the concept *music* would activate a series of linguistic structures that do not depend on an arbitrary decision, but on parameters based on the characteristics of the sound and its possible interpretations. In the first place, a sound source is categorized (MUSIC); then, a quality is attributed to it (POP) and finally, some added characteristic such as its location is explained (POP MUSIC ON THE RADIO), always following this order. In addition, when the aspects of perception and their effects were the focused elements, attribution would be somewhat more complex, denoting the possible annoyance that may be produced in the listening audience.

This proposal would pave the way for a simplified language of basic sounds made in some contexts, i.e., a controlled language for intersemiotically translating sounds into words.

The focus of this proposal is not on the adequacy of the translation of aural elements into words, but on coherence both in the sound selection process and the discursive production.

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Research potential

Although SDH has drawn on the advances in general interlingual subtitling on issues related to technical aspects, such as reading speed, spotting or locating subtitles (Arnáiz-Urquiza 2015), it has been able to forge its own path within the framework of accessible translation (Miquel 2017).

The complexity involved in describing the SDH translation process is the seed of many of the research studies on this intersemiotic modality (Neves 2010; Rica 2016).

Case studies (González López et. al. 2018) and corpus studies (Kalantzi 2008; Arias-Badia 2020) have been carried out. All of them provide invaluable material for reflection on specific issues posed by this modality, including the lack of a common application of translating strategies (Nascimento 2017), the lack of homogeneity in sound translation (Martínez et. al. 2019) or the shortage of strategies for different user groups, such as the subtitling of audiovisual products for children (Zárate 2014).

Innovative reception studies are being conducted with interesting experimental designs that measure access by user groups according to their age (children, adolescents, or adults) (Tamayo 2015; Lorenzo-García 2010) and among deaf people, whether oralists or signers.

The TRACCE research group has created a platform for the evaluation of accessible audiovisual resources

(https://tracce.ugr.es/pra2/) through the administration of online questionnaires.

Regarding technical parameters such as subtitle reading speed, reception studies using eye tracking technology have been undertaken (Romero-Fresco 2018; Doherty & Kruger 2018). In the same vein, the 2008 European DTV4ALL project (https://cordis.europa.eu/project/id/224994) analysed participants' eye movements and the distribution of attention between subtitles to uncover reading patterns in different European countries. The creation of questionnaires specifically designed for deaf and hard-of-hearing participants is another pending issue to evaluate and measure the access of deaf people to the enjoyment of leisure (e.g., films), but also cultural heritage in general.

SDH has established itself as a growing modality that requires further efforts in the application of an appropriate theoretical framework to channel cross-modal research. Studies on discourse pragmatics, as well as those of intermediality or those of physics of sound and its perceptual particularities could be of great help in analysing the problems of coherence, cohesion, and cognitive inference between semiotic modes.

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