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**UNIVERSITAT AUTÒNOMA DE BARCELONA**

Departament de Traducció i d'Interpretació i d'Estudis de l'Àsia Oriental

Doctorat en Traducció i Estudis Interculturals

**SOUND EFFECT LABELLING IN SUBTITLING FOR THE DEAF AND HARD-OF-  
HEARING:**

**An experimental study on audience reception**

TESIS DOCTORAL

presentada por:

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*Amb el suport de l'Agència de Gestió d'Ajuts Universitaris i de Recerca de la Generalitat  
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Gracias – Gràcies - Ευχαριστώ







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## **List of abbreviations**

### English:

|           |                                               |
|-----------|-----------------------------------------------|
| AD        | Audiodescription                              |
| AF        | Attentional Focus                             |
| AVT       | Audiovisual Translation                       |
| AVTS      | Audiovisual Translation Studies               |
| DTV4ALL   | Digital Television for All                    |
| EE        | Emotional Engagement                          |
| FS        | Film Studies                                  |
| H         | Hypothesis                                    |
| HBBTV4ALL | Hybrid Broadband Broadcast Television for All |
| HoH       | Hard of Hearing                               |
| MA        | Media Accessibility                           |
| NP        | Narrative Presence                            |
| NU        | Narrative Understanding                       |
| O         | Objective                                     |
| RQ        | Research Question                             |
| SDH       | Subtitling for the Deaf and Hard of Hearing   |
| TS        | Translation Studies                           |
| UX        | User Experience                               |
| VX        | Viewer Experience                             |

Castellano:

|        |                                                         |
|--------|---------------------------------------------------------|
| AD     | Audiodescripción                                        |
| AFC    | Análisis Factorial Confirmatorio                        |
| AENOR  | Asociación Española de Normalización y Certificación    |
| ANOVA  | Análisis de Varianzas                                   |
| CEEAH  | Comisión de Ética en la Experimentación Animal y Humana |
| FESOCA | Federación de Sordos de Cataluña                        |
| LSC    | Lengua de Signos Catalana                               |
| LSE    | Lengua de Signos Española                               |
| SPS    | Subtitulado para Sordos                                 |
| TAV    | Traducción Audiovisual                                  |





## CHAPTER 1



## 1. Introduction

Over the last few years there has been a growing interest in media accessibility. This is demonstrated by the legislation of various countries, the scholarly works in the field and the implication of both its practitioners (e.g. subtitlers and audiodescribers) and its addressees (people with sensory impairments) in the overall discourse. Especially in the European Union context, directives and standards<sup>1</sup> have been adjusted in order to cover more accessibility needs. Research projects funded by the European Commission, such as DTV4ALL and HBB4ALL<sup>2</sup> have been exploring the possibilities of new technologies towards the same direction. In the context of Spain, the voices advocating an improvement of the accessibility services have raised to petitions. The Federation of the Deaf in Catalonia (FESOCA 2014) lobbied to both public and private broadcasting channels calling them to provide both a complete subtitling service and sign language interpreting for their programmes<sup>3</sup>. This growing interest in media accessibility has not only increased attention to the topic but has also given useful insights in the art and craft of the Subtitling for the d/Deaf and hard-of-hearing practice (SDH) and audio description (AD) for the blind and visually impaired people. The present thesis focuses on one of the many aspects of the former with an addressee-oriented scope for the context of Spain, and especially the bilingual deaf and hard-of-hearing population of Catalonia.

Over the last decade there have been various definitions of SDH (e.g. Neves 2005, Díaz-Cintas & Remael 2007). Drawing on Pereira's (2005: 162) definition, SDH includes a semantic account of what is said and what is heard in an audiovisual product. Both parts highlight the prominence of the acoustic component in SDH but also the line drawn between the verbal and the non-

---

<sup>1</sup> See, for example, the EN 301 549 standard "Accessibility requirements suitable for public procurement of ICT products and services in Europe", published in 2014.

<sup>2</sup> For more information, see <http://www.psp-dtv4all.org/> and <http://www.hbb4all.eu/>.

<sup>3</sup> "Public and private television channels should offer a complete subtitling service, both broadcast but also on their web pages [...] and also alternative services of Catalan Sign Language interpreting since current technologies know no limits or barriers." (my translation)

verbal elements of the audiovisual text. The discussion of the particularities of the verbal component has been mostly related to the reading skills of the targeted group of addressees. However, the intersemiotic transfer (Gottlieb 2005) involved in rendering non-verbal and acoustic elements verbally and visually has not been studied that systematically until very recently (see Romero 2015). On the other hand, we can count on descriptive and also a few experimental studies on the topic (see section 1.2.). The focus of the latter has been related to cognitive-perceptual and behavioral issues. At the same time, the domain of user or viewer experience<sup>4</sup> remains even nowadays largely under-researched. Most experimental studies in the field have been combined with surveys on audience preferences. As Pérez-González (2014: 151) puts it, “[i]n our field, eliciting views and gauging perceptions of audiences, practitioners and scholars are common ways of securing data often in combination with other research methods, whether as part of quantitative or qualitative projects”. All the above-mentioned aspects, i.e. the non-verbal component in an audiovisual text, viewer experience and preferences gave rise to the main topic of the present PhD thesis: an experimental study on one of the many aspects of audience experience and reception regarding the rendering of non-verbal elements. In particular, it focuses on the rendering of sound effects in SDH. Consequently, this study falls mainly into the Audiovisual Translation Studies (AVTS) and Media Accessibility (MA) disciplines. Finally, it necessarily lends itself to the fields of Experimental Psychology, Media Communication and Film Studies.

## 1.1. PhD Structure

---

<sup>4</sup> User experience is a broad concept rooted mostly to the field of electronic engineering and it is relevant to media accessibility in the sense that the target is similar: to meet the needs of the potential audience. The main difference between viewer experience and user experience is that the latter involves a great degree of interactivity with the product (see Tullis & Albert 2013), which is not the case of linear media consumption, even though this may change in the future with the advent of new technologies, e.g. the hybrid broadband broadcast television.

The present thesis comprises a compendium of three research papers published or accepted for publication in international peer-reviewed journals. These papers are presented here in Chapters 2, 3 and 4, respectively. The order of presentation of these articles follows the progressive order of the study for coherence purposes. Thus the first article presents the theoretical framework and model of analysis proposed for sound-effect labelling. This model was applied in the methodology of the following two articles, which are mainly built on the different types of data collected during the experimental stage. Namely, these papers may be referenced as follows:

- (Chapter 2) 2015. Making sound accessible: The labelling of sound-effects in subtitling for the d/Deaf and hard-of-hearing. *Hermēneus. Journal of Translation and Interpreting* 15, pp. 233-252.
- (Chapter 3) Forthcoming. Efecto de la modalidad de representación de los efectos sonoros en las preferencias de espectadores con diversidad auditiva. *Come. Studies on Communication and Linguistic and Cultural Mediation*.
- (Chapter 4) Forthcoming. El disfrute de la experiencia audiovisual por personas sordas y con diversidad auditiva: La representación visual de los efectos sonoros. *Disertaciones. Anuario electrónico de estudios en Comunicación Social*, 11(1).

The remaining chapters include a general introduction, a presentation of the contents, the theoretical background, objectives, hypotheses, research questions and methodological design selected (Chapter 1). After the presentation of the main core of this study (Chapters 2, 3 and 4), a summary of the above-mentioned papers is offered in Chapter 5. Finally, conclusions from all the above are presented in Chapter 7 together with other considerations requiring further research. Readers can also consult the bibliography cited in this thesis in Chapter 8.

This work is also complemented by the following appendixes:

- Appendix A presents the papers in the format in which they were published and/or accepted for publication.
- In Appendix B readers can refer to the original screenplay on which the short film presented to the participants was based.
- Appendix C (in electronic format) includes the film in the different versions in which they were presented to the different groups of participants.
- Appendix D gathers the materials presented to the participants during the experimental stage. This includes the information and ethical commitment document, as accepted by the Animal and Human Experimentation Ethics Committee (CEEAH) of the *Universitat Autònoma de Barcelona*. It also includes the pre-questionnaire and the post-questionnaires filled in by the participants.

## 1.2. Theoretical framework

Bartoll's (2011) subtitle classification was extended in 2012 by Arnáiz-Uzquiza in order to include the parameters that differentiate SDH from "traditional" interlingual subtitling. Thus SDH parameters include the following:

- Linguistic parameter
- Extra-linguistic sound parameter
- Pragmatic parameter
- Aesthetic parameter
- Technical parameter
- Aesthetic-technical parameter

There have been quite a few descriptive studies (Pereira 2005, Neves 2005, Civera & Orero 2010, Weber 2010) on aspects that are exclusive to SDH. These studies built the basis on which experimental research is conducted over the last few years. The linguistic aspect has drawn the attention of various researchers (e.g. Szarkowska et al. 2011, Perego 2012, Miquel-Iriarte 2014) in conducting eye-tracking studies that provide data on the issue of adequate

reading speed and visual attention in SDH. On the other hand, the extra-linguistic sound parameter includes the main features that distinguish SDH from interlingual subtitling, i.e. character identification, paralinguistic information, music information and sound effect information. These features have been included in experimental designs in a few cases (Fels et al. 2005, Arnáiz-Uzquiza 2012, McClarty 2012) and more systematically in the recently edited volume by Romero-Fresco (2015) which compiles some first results on the aspects included in the extra-linguistic sound parameter over different European countries.

A basic way to understand the extra-linguistic sound parameter is decomposing and identifying its counterparts. More specifically, music, suprasegmental and paralinguistic features as well as noises are often treated as a single category. However, each of the above-mentioned non-linguistic components bears different functions and effects. Once sound effects are differentiated from other types of sound, it is possible to examine the typology of different kinds of sound effects and their particular contribution to the meaning-making process of audiovisual texts. In the present work, the observation of these parameters is reflected in a new model of analysis for sound effects which draws primarily on Film Studies, e.g. Chion's (1994, 1998) seminal work on sound in films, and its diverse functions (see Chapter 2). Nevertheless, a thorough analysis of sound effects does not alone ensure an adequate rendering of sound effects on screen given the lack of reliable empirical data. Moreover, there is a potential lack of consensus and even of contradictory findings among deaf and hard-of-hearing groups as suggested by previous studies (Prada-Gonzalez 2004, Pereira 2010, Arnáiz-Uzquiza 2012). This can be explained in terms of the wide heterogeneity of the audience addressed and it stands as an obstacle in any attempt to normalize SDH practices in a prescriptive manner.

Regarding the current practice and standards, the UNE 153010 norm issued by AENOR in 2012 has been used for identifying the labelling strategies used in Spain. The identified sound-effect labelling strategies, i.e. description,

transcription/onomatopoeia and icons were included in the experimental design (see section 1.5.). In grouping together these strategies, a basic distinction was made evident between verbal and non-verbal or graphical representation. This distinction is proven more than appropriate if we take into account the different viewer profiles depending on the language systems they use. In relevant literature in SDH a distinction is often made between pre-locutive and post-locutive deaf (e.g. Prada-Gonzalez 2004, Matamala & Orero 2010, Pereira 2010). This categorization points towards the system used for communication, since independently of the medical hearing condition, a person falling in any of these categories is a potential user of either an oral language, a sign language, or even both. Hence we are dealing with users that are more or less fluent with verbal communication or sign languages. Sign languages are, in turn, graphical in nature in the sense that iconicity constitutes a main "structural feature" of these kind of visual representation systems (Pizzuto et al. 2007: 3). Therefore, language use and verbal or non-verbal communication have been the basis of the methodological design of this study (see section 1.5.)

For the empirical part of the study it was necessary to select the type of reception study required for assessing sound-effect labels, apart from personal preferences. Previous literature in SDH has been complementing more subjective data on preferences with eye-tracking data. This has increasingly been converted to the major methodological tool applied in empirical research in the field (see Perego 2012, Romero Fresco 2015) because of its usability in offering objective data regarding such behavioral issues as reading and viewing. Apart from response (Gambier 2009), there have been some attempts in measuring user experience (UX) or viewer experience (VX) in other AVT modalities (e.g. Ramos 2013). For example, in the disciplines of AD and video game localization, there have been some experimental studies on experience-related concepts such as immersion and presence (Jennet et al. 2008, Fryer & Freeman 2012). Through mapping the functions of sound effects in eliciting emotions in a narrative and consulting relevant literature in Communication Studies (e.g. Rodero 2014, Busselle & Bilandzic 2009), an one-to-one

relationship was made evident between the components of engagement (see Chapter 4) and the functions of sound effects in an audiovisual text. The relationship between sound effects and engagement turns the former into an adequate candidate in measuring reception in SDH. Thus reception is assessed here at the level of narrative engagement, which constitutes a main component of enjoyment (Green & Brock 2000, 2002) together with personal preferences on different labelling strategies depending on viewers' hearing and language profile.

### **1.3. Objectives**

Presented in a deductive order, the objectives of this study are:

- O<sub>1</sub>: Mapping the non-verbal acoustic component and its functions.
- O<sub>2</sub>: Mapping and classifying sound-effect labelling strategies.
- O<sub>3</sub>: Identifying audience diversity in SDH in terms of hearing and language profile.
- O<sub>4</sub>: Identifying the preferences and attitudes of the audience depending on their profile when the above-mentioned strategies are presented.

Thus being able to:

- O<sub>5</sub>: Propose sound-effect labelling strategies that allow the reinforcement of engagement and enjoyment of the audiovisual narrative in question for the viewers and adjust to their personal preferences.

The latter objective (O<sub>5</sub>) constitutes the ultimate aim of this study, namely, to make a contribution towards the improvement of the sound-effect labelling practice as part of the audiovisual experience. Under the scope of this PhD, this is understood as an enhancement of viewers' enjoyment and adaptability to their personal preferences. Towards the achievement of this objective, it is necessary to map the functions of sound effects in an audiovisual

text and the strategies for rendering them in text form ( $O_1$  and  $O_2$ ). Since the present study takes an empirical stand, it also aspires to offer specific data stemming from the audience addressed ( $O_3$  and  $O_4$ ).

The hypotheses, research questions and methodological design have been formulated towards the achievement of the above-mentioned objectives.

#### **1.4. Hypotheses and research questions**

The methodology followed in this study has been selected in order to provide an answer to the following hypotheses and exploratory research questions:

$H_1$ : The nature of the representation strategy will affect engagement depending on the viewer's language profile.

$H_{1a}$ : Engagement will be higher for oral-language users when presented with verbal stimuli.

$H_{1b}$ : Engagement will be higher for sign-language users when presented with non-verbal stimuli.

$H_2$ : Engagement is a predictor of enjoyment.

$H_3$ : Oral-language speakers prefer verbal strategies

$H_4$ : Sign-language speakers prefer non-verbal strategies

RQ<sub>1</sub>: Do viewers prefer one labelling strategy or more for sound effects with different functions?

RQ<sub>1a</sub>: If RQ<sub>1</sub> is confirmed, is there any association between the sound-effect function and the strategy chosen for each case?

The basic underlying premise of  $H_1$  and its sub-hypotheses is that depending on the degrees of acquaintance with verbal communication (as in oral-languages) or non-verbal communication (as in sign languages), a visual

verbal or non-verbal rendering may respectively affect overall engagement with the film narrative. Since engagement is one of the basic components of enjoyment (Busselle & Bilandzic 2009: 236), the correlation between the two should be analogous ( $H_2$ ).  $H_3$  and  $H_4$  are based on the same premises regarding language use, however, from the perspective of stated preferences.

After mapping the specific functions of sound-effects (see Chapter 2), RQ<sub>1</sub> and RQ<sub>1a</sub> have been added as research questions. The central idea was to explore whether there is a need to adapt strategies according to the specific film context. For example, do viewers prefer a different visual rendering of a sound effect that informs us about the context or diegetic world as opposed to a sound effect that adds up to a specific emotion? Such context-dependent differences would support the emerging practice of creative subtitling. Creative subtitling "responds to the specific qualities of the individual film text" and allows "an aesthetic that matches that of the source text" (McClarty 2012: 140). Applying this practice in the use of icons would mean differences in the appearance, size, colour, transparency and even duration and position of the icons. This would support McClarty's idea (2012: 145) that "[g]raphically, creative subtitles may mirror the emotion of the moment by integrating into the mise-en-scène in terms of colours, styles or special effects used". Apart from highlighting the aesthetics, such variability in sound effect labelling could be useful in engaging viewers and even enhancing their comprehension of the film. Though this is not one of the primary aims of this study, the participants' attitude and variances on preferences could pave the way for further research in creative SDH<sup>5</sup>.

## 1.5. Methodology

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<sup>5</sup> Even in technical terms, the icons used in this study have been included in the AV material through film editing software (Final Cut Pro X) and not through subtitling software (see McClarty 2012: 149). Although an "iconography which could be used in any subtitling software" (Civera & Orero 2010: 156) may be expected in the not-that-distant future, subtitlers may also be able to choose any icon from the internet that they deem relevant to a specific sound effect. The same could be the case for emoticons in order to convey mood of speech delivery.

A mixed method approach has been used in translating the deductive hypotheses "into operational terms" (Bryman 2008: 9). Thus the present study comprises a piece of quantitative research with a  $2 \times 2$  experimental research design for measuring engagement and a  $2 \times 4$  experimental design for assessing preferences, combined with content analysis. The latter has been applied for discerning the functions of sound effects in an audiovisual narrative and the strategies used currently in sound-effect labelling ( $O_1$  and  $O_2$ ). The analysis included written documents, i.e. the official guidelines by AENOR in Spain and relevant literature in AVTS. As Bryman puts it (2008: 275), "content analysis is an approach [...] that seeks to quantify content in terms of pre-determined categories in a systematic and replicable manner". Thus the strategies identified in content analysis are description, transcription and icons and fall into the verbal and non-verbal categories respectively.

The labelling strategies identified were integrated in the stimuli of the experimental design and constitute its independent variables. However, for the exploratory part of the study there was a need to assess the inter-relationship of the strategies with the different sound effect functions (RQ<sub>1a</sub>). In other words, it was necessary to include a single sound effect in the four different functions that emerged through content analysis. In addition to these requirements for the search of audiovisual stimulus, the four instances of the sound effect should be presented within the same coherent plot in order not to disrupt the enjoyment of the film experience. In practical terms, it has been important to adhere to time constraints in terms of duration of the experiment. All these factors resulted to the decision of creating the audiovisual material from scratch<sup>6</sup>. The sound of a phone ringing was selected because of the simplicity and recognizability of its source, thus avoiding the need for further disambiguation of the sound. Consequently, the short film was shot and edited with the help of volunteers from the *Universitat Autònoma de Barcelona* at the

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<sup>6</sup> A first attempt in merging AVT and filmmaking was made by Romero-Fresco (2014) in coining the notion of accessible filmmaking (see [www.accessiblefilmmaking.org](http://www.accessiblefilmmaking.org)). Even though the basic line of this notion, i.e. the integration of AVT and accessibility in the filmmaking was present in the process described here, the aim was albeit experimental.

premises of the same university. The dialogues were subtitled and the sound effect stimuli (labels and icons) were distributed accordingly in order to fit the experimental design.

The stimuli were presented in controlled conditions (Williams and Chesterman 2002: 62) at different sessions and points in time with different groups of participants. The selection of the sample has not been random as the criteria included different degrees of hearing loss and users of both oral and sign languages. The distribution of the sample over the different variables, however, has been randomized thus constituting a quasi-experimental design (see Gribbons et al. 1997) and allowing comparisons between the different groups of oral-language speakers and sign-language speakers. The methodological tool for the quantitative part of the research has been the use of self-completion questionnaires involving different types of questions for the extraction of both quantitative and qualitative data. In concrete, a long scale questionnaire was employed including Busselle and Bilandzic's (2009) 12 items on engagement. One of those items has been adapted in order to reflect the specific plot of the short film presented to the participants and the wording of some items was modified in order to be more understandable in Spanish. In addition, three new items on enjoyment, satisfaction and pre-disposition to repeat the experience were added resulting to the final 15-item scale (see Appendix D).

The distribution of the labelling stimulus over the different groups of participants has been designed as follows:

At a macro level, a comparison can be drawn between participants' response at watching the film with verbal and non-verbal labels (group 1 and 2). At a micro-level the results could show differences on preferences between description or onomatopoeia (group 1A and 1B). With regard to the second subgroup (2A and 2B), the comparison is more exploratory since the purpose is to gather some first data on whether a variety of icons for the same sound effect is welcome by the audience. It also seeks to determine if these differences are related to the various sound effect functions. Therefore, the

labelling strategies used as stimuli fall into the verbal and non-verbal categories respectively on which reception is measured and contrasted.

Before entering into details regarding the experimental design, it is important to mention that the stimuli only concern these levels. For this reason, technical considerations such as positioning and font for the verbal strategies were left out in order to delimit the variables, or in other words to "eliminate other features that are not relevant to the research" (Williams & Chesterman 2002: 63). Thus verbal strategies are presented at the bottom of the screen with no exception. Indeed, care was taken so that no important visual information interferes with this area. With regard to the non-verbal strategies, there was a need for positioning icons at the top left corner instead of the top-right corner as dictated by the Spanish norm (AENOR 2012), due to interference with the visuals. However, this change coincided with positioning the icon closer to its source in most cases. Placement of the label according to its source has given positive feedback in a study conducted by Arnáiz-Uzquiza (2015) given its specific importance in understanding and recognizing a sound (see Chapter 3). All in all, non-verbal strategies are not as established in the industry and internal consistency of the positioning has been achieved.

Regarding audience preferences, the questionnaires were drafted according to the variable in question, therefore there are four different versions of it (see Appendix D). On the contrary, the pre-questionnaire and engagement scale were the same for all groups of participants. Finally, the participants were collected through contacts with associations, personal communication and through the webpage created for the purposes of recruitment<sup>7</sup>.

Regarding the experimental procedure, the routine of the experiments consisted in gathering groups of participants in a room with an overhead projector in order to simulate the cinematic experience. The materials were presented in the following order:

- Information and agreement sheet (in paper)

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<sup>7</sup> <http://cinevisual4all.com>.

- Pre-questionnaire (in paper)
- Short-film projection
- Post-questionnaire (in paper)

This process allowed us to proceed to the analysis of the demographics, quantitative data and statistical analysis and the evaluation of the qualitative data accordingly. Data are contrasted between sign-language users and oral-language users since all types of participants were presented with all kinds of stimuli. In this sense, the data collected reflect the current SDH practice in addressing an extremely diverse audience in terms of hearing and language profile.



## CHAPTER 2

### **Article 1. Making sound accessible: The labelling of sound-effects in subtitling for the deaf and hard-of-hearing**



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## CHAPTER 3

**Article 2. Efecto de la modalidad de representación de los efectos sonoros en las preferencias de espectadores con diversidad auditiva**



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## CHAPTER 4

**Article 3. El disfrute de la experiencia audiovisual por personas sordas y con diversidad auditiva: La representación visual de los efectos sonoros**



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## CHAPTER 5



## 5. Summary

The present thesis is an attempt towards achieving a better understanding of sound effects in SDH and their appropriate rendering on screen with an addressee-oriented scope. Sound effects have been included in various categorizations in AVT, however, their characteristics and functions in an audiovisual narrative have not been analysed in depth. For this reason, this study proposes a model of analysis for sound effects through a merge with Film Studies that could be useful to SDH practitioners. Still, determining the adequacy of the strategies applied cannot be complete without information from and about SDH users, which is where audience reception studies acquire specific importance.

In the present case, audience is approached from the scope of language use, in the sense that deaf and hard-of-hearing audiences can be users of an oral language, a sign language, or both. The degree of familiarity with these representation systems has a series of implications when viewers are presented with verbal or non verbal strategies on screen. The verbal/non-verbal and the sign/oral language dichotomies have been the basis of the experimental design of this study.

Meanwhile, the empirical studies carried out in the field of SDH have combined surveys measuring satisfaction and stated preferences mostly with eye-tracking for assessing viewer's perception (see Arnáiz-Uzquiza 2012, Miquel-Iriarte 2014), while viewer experience has not been previously included in a similar mixed-method design. Therefore, the methodology of the experimental part of the study assesses both preferences regarding verbal and non verbal strategies but also viewers' narrative engagement and enjoyment when the above-mentioned strategies are applied. The experiment was carried out in Spain and, specifically, with deaf and hard of hearing viewers coming from the region of Catalonia.

Regarding stated preferences, the main findings suggest that both types of users ( $N = 40$ ) accept verbal strategies, which coincides with the practice commonly applied in Spanish television. However, concerning different parameters that could be included in sound-effect labels, participants seem to be open to diversity, especially when it comes to factors like the source and the volume of the sound.

With regard to the second level of reception, namely, the grades of narrative engagement and enjoyment of the audiovisual material, no significant differences were found between oral-language users ( $N = 21$ ) and sign-language users ( $N = 25$ ), when presented with verbal and non-verbal representation strategies. Meanwhile, the relationship between the component of engagement and enjoyment has been confirmed, demonstrating the prospects offered by the methodology selected for measuring viewer experience for deaf and hard of hearing audiences.

These results suggest that the narrative experience at the level of engagement with and enjoyment of the narrative is similar, regardless of the language profile of viewers and strategy presented. However, there is a positive tendency with respect to preferences towards verbal strategies and the inclusion of different labels for the same sound effect, which could pave the way towards further research in creative SDH. Finally, despite the limitations of the study, it constitutes a first attempt in merging viewer experience and SDH, while providing a wide overview of sound effects and their functions in an audiovisual narrative.

## CHAPTER 6



## 6. Resumen

El objetivo de la presente tesis es conseguir un mejor entendimiento de los efectos sonoros en el SPS y de las estrategias que se usan para su representación en la pantalla con una aproximación hacia el espectador. Los efectos sonoros han sido incluidos en diversas clasificaciones en TAV, pero sus funciones y características dentro de una narrativa audiovisual no han sido analizadas en profundidad. Por este motivo, este estudio propone un modelo de análisis basado en los Estudios Fílmicos que podrían emplear los profesionales del SPS. Aún así, para determinar el grado de adecuación de las estrategias usadas en el SPS es necesario obtener información sobre y desde los usuarios del SPS, por lo cual este estudio también adopta una aproximación empírica.

En este caso, el enfoque a los usuarios se basa en el uso del lenguaje en el sentido que las personas sordas y con diversidad funcional auditiva pueden usar una lengua de signos, una lengua oral o ambas. El grado de familiarización con estos sistemas de representación conlleva una serie de implicaciones para la presentación de estrategias verbales o no verbales en la pantalla. Por eso, las dicotomías verbal/no verbal y signante/oralista han sido la base del diseño experimental del presente estudio.

Al mismo tiempo, en los estudios empíricos en el ámbito del SPS las medidas de satisfacción y preferencias mediante cuestionarios son a menudo complementados por otras medidas relacionadas con la percepción, como los estudios de medición de los movimientos oculares (véase Arnáiz-Uzquiza 2012, Miquel-Iriarte 2014). Hasta la fecha, en estas aproximaciones de diseño metodológico mixto, no se han incluido medidas de la experiencia narrativa. Por lo tanto, en este estudio se investigan tanto las preferencias de los espectadores sobre las estrategias verbales o no verbales, como también el fenómeno de compromiso narrativo (enganche) y el disfrute de la narrativa cuando se aplican las mismas estrategias. El experimento se llevó a cabo en Cataluña con espectadores tanto de perfil oralista como de perfil signante, provenientes de la misma región.

En cuanto a las preferencias expresadas, los principales resultados de este estudio indican que ambos tipos de espectadores ( $N = 40$ ) aceptan las estrategias verbales que coinciden con las que se emplean generalmente en la televisión española.

Sin embargo, cuando se estudian los diferentes parámetros que podrían incluirse en las etiquetas de los efectos sonoros en el SPS, los participantes están más abiertos a estrategias menos establecidas, especialmente cuando se trata de incluir información sobre el origen y el volumen del sonido.

En el segundo nivel de recepción, es decir el grado de compromiso narrativo y disfrute de los contenidos audiovisuales, no se hallaron diferencias significativas entre los perfiles oralistas ( $N = 21$ ) y signates ( $N = 25$ ) cuando se presentaron con estrategias verbales o no verbales. Por otro lado, se observa una estrecha relación entre el efecto de compromiso narrativo y el disfrute. Este resultado apunta a las posibilidades que ofrece esta metodología para evaluar la experiencia audiovisual por parte de personas sordas y con diversidad auditiva.

Los anteriores resultados indican que a nivel de compromiso narrativo y disfrute de la experiencia audiovisual es parecida para ambos perfiles lingüísticos independientemente de la estrategia presentada. Aún así, existe una tendencia positiva hacia las estrategias verbales y la inclusión de diferentes etiquetas para el mismo tipo de sonido. Dichos resultados podrían abrir el camino hacia la investigación en el SPS creativo. Por último, y a pesar de las limitaciones de este estudio, se presenta una primera aproximación a la experiencia narrativa combinada con el SPS, mientras también se ofrece una amplia perspectiva de los efectos sonoros y sus funciones en una narrativa audiovisual.

## CHAPTER 7



## 7. Conclusions

Sound in films has been analysed in Film Studies and Communication Studies but only marginally in relation to Audiovisual Translation Studies. Given the importance of the sound component in SDH, the initial motivation of this study was to bring together these three disciplines in order to provide a comprehensive analysis tool for sound-effect labelling. Meanwhile, by examining the existing labelling practices that are currently applied for rendering sound effects, it was made evident that the nature of the strategies used has a series of implications depending on the viewers' language profile. For this reason, apart from the initial exploratory approach, an empirical methodology was adopted. Thus, the focus towards the viewer did not only allow to add the level of "adequacy" in our approach, but also to select a methodology for measuring user experience, which has not been studied previously in SDH.

In the following subsections, the different stages of this thesis are summarized and discussed in relation to the objectives of the study (see Section 1.3.). Concretely, the aspects lent from Film Studies, Communication Studies and the currently available data in SDH are recapitulated in section 9.1. The methodological contribution of this study and its limitations are presented in section 9.2. Under the theoretical context provided through the literature review, the results of the present study are discussed in section 9.3. Finally, relevant aspects that require further research are included in section 9.4.

### 7.1. Theoretical framework

The first objective was to map the non-verbal component in an audiovisual text and delimiting sound effects and its functions from a descriptive approach. This was achieved through content analysis of the classifications used in Film Studies and reviewing the definitions and descriptive studies available in AVT. Thus, an important distinction was made between sound effects and paralinguistic elements. As a result of this mapping, the

importance of the source producing the sound was attested, as well as the various functions of a sound effect within a film context. Both of these elements, i.e. source and function (see Table 1 and Table 2), form the first and second level of sound analysis that could be used by SDH practitioners.

Content analysis for detecting the existent categories was also used for the labelling strategies used in SDH, which comprises the second objective of the study. Description, transcription or onomatopoeia, and icons have been identified as the main strategies for sound-effect labelling through consulting the literature available in SDH in the field of AVT and also the standards proposed in Spain by AENOR (2012) to regulate the production of SDH. The three strategies have been grouped, further, according to their verbal vs. non verbal nature.

The third level of the analysis model proposed was strictly experimental and it was related to data about/from the audience being addressed, establishing levels of adequacy. Heterogeneity is the most distinctive feature of deaf and hard-of-hearing audiences, which can be classified according to medical and linguistic aspects. The latter have been related to visual representation issues as explained in section 3.2. and informed the experimental design of this study. The final two objectives of this analysis level are also related to the experimental phase since they concern data stemming from the audience addressed, based on viewers' hearing and language profile.

## 7.2. Methodological aspects

The first methodological decision taken was to create the audiovisual material in which the labelling stimulus would later be integrated. The rationale behind this decision has been both research-oriented, i.e. being able to address the issue of different functions for the same sound effect, and also practical in inducing narrative engagement in a short period of time. Both of these aspects

have been achieved with the short film created for assessing audience reception in the present study (see Appendix C).

From the many levels of audience reception, the following two were selected in order to be measured through the experimental design: (1) viewers' preferences and (2) viewers' experience in terms of engagement with and enjoyment of the audiovisual narrative. This approach allowed to include experience measurements in SDH for the first time and merge media entertainment with accessibility.

Regarding preferences as stated by the participants, viewing habits were examined through a pre-questionnaire, since habit is a factor that highly influences viewers' perspectives. This fact is also reflected in the data collected in this study (see Chapter 3). Coherence with stated preferences has been examined through the post-questionnaire assessing satisfaction with the labelling strategy used (verbal vs. non-verbal). On the exploratory part of the study, the importance of the function of sound effects has also been examined through the post-questionnaire together with viewers' opinion on the use of different labels for the same sound. Quasi experimental research has been conducted with a  $2 \times 4$  within-subject design. The independent variables were language profile and stimulus presented, respectively. This design allowed providing an answer to  $H_3$ ,  $H_4$ ,  $RQ_1$  and  $RQ_{1a}$ .

Satisfaction with the stimulus presented has also been assessed in conjunction with the experience measurements adopted in the second part of the experimental design (see Chapter 4). The main methodological tool selected has been the scale proposed by Busselle and Bilandzic (2009) for measuring narrative engagement, plus three new items added for measuring enjoyment. In this case, a  $2 \times 2$  within-subject design was followed, with language profile and types of stimulus presented as main variables. Through this process we were able to confirm or refute  $H_1$ ,  $H_{1a}$ ,  $H_{1b}$  and  $H_2$  accordingly, as we shall see in the following section.

### 7.3. Outcomes and implications

The main findings of the study suggest that there are no significant differences regarding preferences or engagement and enjoyment of the audiovisual narrative between oral-language users and sign-language users. Even though sound effects are deemed as quite important by both groups – though less so by sign-language users – the application of verbal or non-verbal labels for sound effects has no effect on the levels of reception assessed in this study.

Verbal strategies are indeed preferred by oral-language users as hypothesized. However, sign language users also prefer verbal strategies, which refutes the initial hypothesis ( $H_4$ ). An elementary explanation of this result is habit and thus conformity with the strategies applied currently on Spanish television. Another possible interpretation of these findings lies on the viewers' language background. The overall percentage of participants that reported using predominantly sign languages is rather limited in this case (32.5%), given also the fact that most of the participants had an oral-based education. What is more, both description and transcription are accepted by both types of participants, which is probably the result of the familiarity with the specific sound effect transcription used in the study (i.e. ring ring).

Regarding the use of multiple strategies for a single sound effect, up to 90% of the sample is positive to different labels for different contexts and functions. Although the inter-relationships between labels and functions are far from conclusive, the tendencies observed indicate that the source of the sound effect and its volume are both important parameters. Finally, the aesthetics of the strategy used and the way the emotive function is reflected on the label are also of particular importance for the participants. However, there is even less consensus regarding the emotive function, thus proposing a strategy that would be satisfactory for all viewers seems to be a challenging task. A possible solution to this issue could be the personalization of the strategies applied, giving viewers the possibility to select the strategy that would inform them

about the emotional value of a specific sound effect if they so desire. Personalization is increasingly included in the technological design of accessibility services as evidenced by the prospects of the new HBB television.

A lack of significant differentiation is also observable for engagement and enjoyment experienced by the participants. The main components of engagement, i.e. narrative understanding, emotional engagement, attentional focus and narrative presence, were attributed similar scores by both groups of users, regardless of the stimulus they were assigned. The same is true of the factors added to the scale, i.e. enjoyment, satisfaction and inclination to repeat a similar experience. These results confirm  $H_2$  by indicating a strong relationship between narrative engagement and enjoyment of the overall experience. To summarize, data analysis confirms the validity of the model applied for measuring enjoyment, however, there are no statistically significant differences found in relation to the main variables of this study.

Viewers with both an oral-language profile and a sign-language profile have enjoyed the short film with both verbal and non-verbal strategies. Even though most viewers prefer verbal strategies, non-verbal strategies do not affect enjoyment either, as observed in the sample that participated in both studies. On the one hand, these results show that both types of strategies are acceptable, despite the inclination over the verbal ones. On the other hand, it could also indicate that sound-effect labelling has a marginal effect on reception, even though the participants of the study evaluated sound effects as an important element that assists their understanding of the narrative. Finally, the aesthetics of the labels and the creativity in reflecting specific functions and characteristics of a sound effect have been positively received by the participants. Creative SDH is a practice on which little is known and further research is required.

#### **7.4. Future research avenues**

The contribution of the present thesis on a descriptive level has been analysing sound effects and sound effect labels and proposing a model that could guide the practitioner's way from what needs to be labelled towards how a specific sound should be labelled. Since adequacy includes information stemming from the audience addressed, this study has been complemented by experimental data on reception. Thus, the main methodological contribution of the thesis has been focusing solely on sound effects and approaching SDH in terms of viewers' experience.

On the other hand, the primary limitation of this study is the fact that the findings only reflect some basic tendencies. In addition, no generalizable conclusions can be drawn, given that we have focused on an isolated and rather limited – though quite heterogeneous – population. In order to propose strategies for the adequate labelling of sound effects, it is necessary to investigate other aspects of reception and, essentially, the cognitive effort these strategies imply and any psychophysiological reactions related to these strategies. Finally, adequacy is not only defined at the level of audience reception. The perspectives of professionals, broadcasters and other parties involved in the standardization of SDH practices are also crucial for determining the adequacy of the practices proposed.

We have seen the various strategies applied nowadays for the labelling of sound effects, however, these strategies have been established primarily through convention, since the data available on the topic are rather cursory and, therefore, further research is mandatory. The following list, which is by no means exhaustive, includes parameters that could inform similar studies.

In terms of stimulus, further research could include:

- the same or other aspects of narrative experience with a variety of sound effects.

- more creative labels, not only in terms of content or representation but also in terms of appearance, e.g. diverse formats, positions, colours, etc.
- the possibilities of personalized strategies.
- the possibilities of merging SDH and sign-language interpreting.
- the effect of representation of other aspects of SDH on reception, e.g. character identification, paralinguistic elements and music.

In terms of sample, this study could be extended in order to:

- include users from other language and cultural backgrounds.
- include "secondary" users of SDH, i.e. learners of a language and hearers who watch programmes with SDH for a variety of reasons, e.g. watching a programme without sound or with a deaf or hard of hearing person.

In terms of method, the following aspects could be considered:

- the effect of different labelling strategies on cognitive processing through the use of eye-tracking.
- the effect of different labelling strategies on physiological reactions through measurements of heart rate and skin response.

From all the above, it is evidenced that the way forward to the development of accessibility practices is only possible through bringing together service users and providers in a joint effort. The present thesis has moved towards this direction with the collaboration of SDH users, while aiming to provide useful tools and information for practitioners.



## CHAPTER 8



## 8. Updated bibliography

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## **APPENDIXES**



## **APPENDIX A**

### **Publications**



## **APPENDIX B**

Screenplay



PASADO INT.: Esc. 2 - 5 - 7 - 9 - 11

PASADO EXT.: Esc. 3

PRESENTE INT.: Esc. 1 - 4 - 6 - 8 - 10

PRESENTE EXT.: Esc. 12

---

[Esc. 1.]

PLANO GENERAL de cielo TRAVELLING DOWN a despacho de CLAUDIA. INT. DÍA.

PRIMER PLANO de CLAUDIA que mira desde la ventana. Está triste, distraída y con ojeras.

PLANO CONJUNTO de CLAUDIA. Varios escritorios con personas trabajando delante del ordenador. CLAUDIA está sentada delante del ordenador. Mira la pantalla.

Se oye el sonido de los teclados y de teléfonos sonando en el fondo.

PRIMER PLANO PANTALLA ORDENADOR

CLAUDIA está mirando información de vuelos.

---

[Esc. 2]

INT. DIA/TARDE. Casa de RAMÓN Y CLAUDIA. PRIMER PLANO a la mesa donde RAMÓN deja una carta.

RAMÓN (VOZ EN OFF)

Es un puesto superior en las oficinas de Washington. No creía que me lo iban a dar.

---

[Esc. 3]

EXTERIOR. DIA. CLAUDIA Y RAMÓN están acostados en el césped.

PLANOS DETALLE de las manos cogidas de RAMÓN Y CLAUDIA. Miran hacia el cielo. Se abrazan. Se oyen risas.

RAMÓN

¿Nos vamos?

CLAUDIA

¿A dónde?

RAMÓN

No sé, a donde no hemos estado nunca. A donde va este avión.

CLAUDIA

Ya, así de sencillo es.

RAMÓN

Claro! Levántate!

CLAUDIA

(Se ríe) Yo estoy muy a gusto aquí.

RAMÓN

¿No te vienes conmigo?

RAMÓN intenta levantarse, CLAUDIA le tira de la mano y RAMÓN se cae. Se ríen.

TRAVELLING cielo sigue avión volando.

---

[Esc. 4]

INT. DIA. DESPACHO DE CLAUDIA.

PLANO CONJUNTO DE CLAUDIA.

CLAUDIA mira a la dirección de donde viene su colega Marta.

MARTA

Hola guapa, que tal estás?

PLANO MEDIO CORTO

CLAUDIA

Bien... aquí. Bueno, solo un poco preocupada por RAMÓN. No me ha llamado todavía, no se... Me tenía que llamar. Aterriza

hace ya dos horas y busco la información de vuelos y ni siquiera aparece el vuelo.

MARTA

(confundida) Ahh no te preocupes, espera un rato y te llamará. Intenta pensar en otras cosas mientras tanto. Si quieras bajamos y nos tomamos un café rapidito, eh?

CLAUDIA

Ahora no, quizás en un rato.

MARTA

Vale, estaré por aquí.

CLAUDIA

Bien, gracias.

MARTA

Hasta ahora.

MARTA se va.

---

[ESC. 5]

INT. CASA CLAUDIA Y RAMÓN. TARDE.

PLANO ENTERO CLAUDIA y RAMÓN están sentados en la mesa. Discuten.

CLAUDIA

Si ya está decidido no sé qué decirte.

RAMÓN

Pero no entiendo, probamos una temporada. Si no te gusta en seis meses volvemos.

CLAUDIA

No voy a dejarlo todo porque tu de repente te quieres ir.

RAMÓN

De repente? Y dejar que, tu trabajo que ni siquiera te gusta?

CLAUDIA

No quiero irme! No quiero aviones y gente y sitios que no conozco.

RAMÓN

Lo que no quieres es hacer un esfuerzo a vivir algo diferente a lo de siempre.

CLAUDIA

Me dan miedo los aviones!

RAMÓN

Vaya tontería!

intenta abrazarle, ella se levanta.

Claudia... Pero que quieres que haga?

CLAUDIA

(enfadada) Que te vayas y que no vuelvas! No quiero estar aquí esperándote siempre.

---

[Esc. 6]

INT. DESPACHO. PLANO MEDIO CORTO DE CLAUDIA DE PERFIL

CLAUDIA mira al ordenador y teclea. Se para y mira hacia un lado.

Teléfono suena.

PLANO AMERICANO

CLAUDIA se levanta y casi se atropella, está buscando su bolso, cuando lo coge, el teléfono para de sonar.

CLAUDIA hace gruñido de exasperación y deja el bolso al lado de donde se sienta.

---

[Esc. 7]

INT. TARDE. PLANO GENERAL CASA DE CLAUDIA

CLAUDIA está en la cocina y oye la radio.

VOZ EN OFF

Las causas del accidente...

PRIMER PLANO DE CLAUDIA

---

[Esc. 8]

INT. DESPACHO.

Foco a MARTA y colega que están en el fondo, detrás de CLAUDIA. Están hablando en voz baja.

COLEGA

Y que te ha dicho exactamente?

MARTA

Que está preocupada porque no sabe si RAMÓN ha llegado!

COLEGA

Que? Si se fue hace como un mes, no?

MARTA

Ya te digo. Creo que se le va la cabeza. No quiere asumir que se ha ido y que se acabo con el.

Bueno, por una parte la entiendo, que han estado juntos desde siempre pero por otro, es que no sé que decirle, está cada vez más rara.

COLEGA

Ya, pobrecita, demasiado duro.

MARTA

Total, no sé, como siga así no sé como acabará.

---

[Esc. 9]

INT. Casa de CLAUDIA y RAMÓN. TARDE.

CLAUDIA está triste, parece haber estado llorando. Cuando se acerca RAMÓN se pone firme.

CLAUDIA

Vete ya por favor. Cuanto antes mejor.

RAMÓN

Pero no quieres ni que te llame a ver como estas?

CLAUDIA

Estaré bien, tu también. No quiero saber nada de ti.

(Silencio)

Bueno, solo llámame cuando llegues para que me quede tranquila. Nada más.

RAMÓN

Pero que sentido tiene esto, si luego me dices que no te puedo llamar ni nada?

---

[Esc. 10]

INT. DESPACHO

CLAUDIA sigue sentada con el bolso al lado, parece aburrida y distraída.

Teléfono suena incrementando volumen y vibración.

CLAUDIA busca en su bolso agobiada. Responde.

CLAUDIA

Si?

PRIMER PLANO.

CLAUDIA

Si, si pero oiga, ahora no es buen momento. ¿Le puedo llamar yo más tarde? Vale, vale gracias. Adiós.

PLANO MEDIO

Deja el móvil irritada y hace gruñido.

Se mueve un poco. Se ve más nerviosa.

PRIMERISIMO PLANO

Está a punto de llorar.

---

[Esc. 11]

INT. CASA CLAUDIA Y RAMÓN. CLAUDIA ha estado llorando. RAMÓN esta haciendo las maletas.

CLAUDIA

Tengo miedo que el avión... Todavia te puedes cambiar de opinión, por favor.

RAMÓN

(triste)

Otra vez con eso...

---

[Esc. 12]

EXT. DIA. CLAUDIA sale del despacho y se siente debajo de un árbol, abre una libreta.

PRIMERISIMO PLANO

"La ausencia es también una muerte, la única e importante diferencia es la esperanza"

Mira hacia el cielo, planos de cielo.

VOZ EN OFF

CLAUDIA (EN OFF)

Tu ausencia me confunde. Creo que es mejor pensar que no volverás nunca. Te dejo en aquel cielo que tanto nos gustaba mirar. A partir de ahora lo miraré sola y pensará siempre en ti.

Plano conjunto de CLAUDIA. Se ha quedado dormida.

Teléfono suena. CLAUDIA se despierta.

Aaah!

PRIMERISIMO PLANO AL TELEFONO.

Le llama RAMÓN.

PLANO MEDIO CORTO.

CLAUDIA cuelga el teléfono.

FIN

## **APPENDIX D**

### **Materials**



## HOJA DE INFORMACIÓN SOBRE EL EXPERIMENTO

El objetivo principal de este estudio es la mejora de la calidad de los subtítulos para personas con diversidad auditiva y sordas en los medios de comunicación. En concreto, el estudio pretende obtener datos sobre la experiencia y preferencias de los participantes en cuanto a la información sonora que aparece en la pantalla.

Su participación en el experimento consistirá en lo siguiente: tendrá que ver un cortometraje de aproximadamente siete minutos y llenar un cuestionario sobre sus preferencias y experiencia del visionado.

Su participación es totalmente voluntaria y se puede retirar del estudio en cualquier momento sin tenerlo que justificar de ninguna manera y sin que esto le repercuta de ninguna manera.

Sus datos serán totalmente anónimos ya que en la hoja en la que se tiene que responder preguntas sobre el ámbito personal, habrá un código de identificación NO vinculado a su nombre y apellidos.

NO recibirá compensación económica por su participación en este estudio, el cual se usará SIN ánimo de lucro.

Las investigadoras que llevarán a cabo el experimento son Aikaterini Tsaousi (que participará en las pruebas) y la Dra. Pilar Orero Clavero (que dirige la investigación). Aikaterini Tsaousi es la responsable y puede contactar con ella mediante el correo electrónico [aikaterini.tsousi@uab.cat](mailto:aikaterini.tsousi@uab.cat).

Si quiere continuar informado de las evoluciones de la investigación, solo tiene que pedírselo a la investigadora responsable en el correo electrónico anterior.

**¡MUCHAS GRACIAS por su participación!**

(Nota: en la siguiente hoja está el consentimiento informado, que se debe firmar para poder formar parte en el estudio)

## CONSENTIMIENTO INFORMADO

Título del experimento: La transmisión de efectos sonoros en el subtulado para sordos y personas con diversidad auditiva

Yo, (NOMBRE Y APELLIDOS)

- He leído la hoja informativa que me han dado y también el consentimiento informado.
  - He recibido suficiente información sobre el estudio y la he entendido.
  - He podido hacer preguntas sobre el estudio.
- 
- Entiendo que mi participación es voluntaria.
  - Entiendo que mi participación NO es remunerada.
  - Entiendo que mi información será confidencial.
  - Entiendo que me puedo retirar del estudio cuando quiera y sin tener que dar explicaciones ni sin que me repercuta negativamente.

Doy mi conformidad libremente para poder participar en el estudio.

Fecha:

Firma de la investigadora  
Aikaterini Tsaousi

Firma del participante

(Nota: en la hoja anterior se puede leer la información sobre el estudio)

1. Indique su edad: [ ]
2. Indique su sexo:
  - Hombre
  - Mujer
3. Indique su tipo de pérdida auditiva:
  - Parcial
  - Profunda
4. Indique su grado de pérdida auditiva:
 

|                        |                                              |
|------------------------|----------------------------------------------|
| Porcentaje aproximado: | Oído izquierdo [ %]                          |
|                        | Oído derecho [ %]                            |
|                        | <input type="checkbox"/> No sé/No me acuerdo |
5. Indique la edad del comienzo de la pérdida auditiva:
 

De nacimiento

Posterior al nacimiento - Indique la edad [ ]
6. Indique si hace uso de:
 

(escoja sólo una opción)

Implante coclear - Indique la edad en la que lo recibió: [ ]

Audífono(s)

Ninguno de los dos
7. ¿Suele hacer lectura labial?
  - Sí
  - No
8. ¿Suele oralizar?
  - Sí
  - No
9. Indique si es nativo de:
 

Catalán

Castellano

Lengua de signos Catalana (LSC)

Lengua de signos Española (LSE)

Otros: (indique el/los idioma/s)

---
10. Para su comunicación diaria, utiliza:
 

(escoja sólo una opción)

  - Exclusivamente lengua de signos
  - Exclusivamente lengua oral
  - Más lengua de signos que lengua oral
  - Más lengua oral que lengua de signos
  - Ninguna de las anteriores: (indique una alternativa)

---

11. Indique el grado máximo de estudios que ha finalizado:  
*(escoja sólo una opción)*

- Primaria
- E.S.O.
- Carrera universitaria
- Posgrado
- Doctorado

15. Indique cuán importante es para usted que aparezca la siguiente información en los subtítulos:

*(marque sólo una casilla para cada fila)*

12. Mayoritariamente ve películas en:  
*(escoja sólo una opción)*

- Televisión
- Cine
- Ordenador
- DVD
- Tablet
- Móvil

|                             | Nada importante | Poco importante | Méda igual | Algo importante | Muy importante |
|-----------------------------|-----------------|-----------------|------------|-----------------|----------------|
| Lo que dicen los personajes | 1               | 2               | 3          | 4               | 5              |
| Identificar quien habla     | 1               | 2               | 3          | 4               | 5              |
| Los sonidos                 | 1               | 2               | 3          | 4               | 5              |
| La música                   | 1               | 2               | 3          | 4               | 5              |

13. Suele ver películas con:

*(escoja sólo una opción)*

Interpretación de lengua de signos

Subtítulos

Ninguno de los dos

*(escoja sólo una opción)*

16. Para los sonidos (que no son de habla o música), prefiero que en los subtítulos aparezca:

*(escoja sólo una opción)*

Una descripción textual – p.ej. si alguien se ríe en la película que apareza: (Risas)

Un ícono o un emotícono – p.ej. si alguien se ríe en la película que apareza: :-D

Nada

Otro(s): *(describa su preferencia alternativa)*

---

Indique la medida en la que está de acuerdo con cada proposición.

| Muy en desacuerdo                                                                                                             | En desacuerdo | Ni en desacuerdo, ni de acuerdo | De acuerdo | Muy de acuerdo |
|-------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------|------------|----------------|
| A veces me costaba entender lo que pasaba en la película.                                                                     | 1             | 2                               | 3          | 4              |
| No llegué a comprender el modo de pensar de Claudio.                                                                          | 1             | 2                               | 3          | 4              |
| Me costó seguir el argumento.                                                                                                 | 1             | 2                               | 3          | 4              |
| Mientras veía la película estaba pensando en otras cosas.                                                                     | 1             | 2                               | 3          | 4              |
| Me costó concentrarme en la película.                                                                                         | 1             | 2                               | 3          | 4              |
| Estraba más atento/a a lo que pasaba a mi alrededor que en la película.                                                       | 1             | 2                               | 3          | 4              |
| Durante la proyección, estaba físicamente en el aula pero mentalmente estaba en el mundo paralelo de la película.             | 1             | 2                               | 3          | 4              |
| La película creó un mundo que desapareció de repente cuando este se acabó.                                                    | 1             | 2                               | 3          | 4              |
| A veces durante la proyección, me vi más involucrado/a en el mundo de la película que en el mundo real.                       | 1             | 2                               | 3          | 4              |
| La película me impactó emocionalmente.                                                                                        | 1             | 2                               | 3          | 4              |
| Durante la proyección, cuando los protagonistas estaban felices, me sentía contento/a y, cuando ellos sufrían, lo pasaba mal. | 1             | 2                               | 3          | 4              |
| Sentí pena por los protagonistas.                                                                                             | 1             | 2                               | 3          | 4              |
| He disfrutado la película.                                                                                                    | 1             | 2                               | 3          | 4              |
| No volvería a ver una historia semejante.                                                                                     | 1             | 2                               | 3          | 4              |
| Me ha gustado la película.                                                                                                    | 1             | 2                               | 3          | 4              |

1. En la película que acaba de ver, ¿le ha gustado el uso del siguiente ícono?

(escoja sólo una opción)



- Sí     No

3. ¿Cuál cree que es el ícono más adecuado para identificar el sonido de teléfono en cada una de las siguientes situaciones en una película?

(escoja sólo una opción)



Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el/la protagonista mira hacia el origen del sonido de teléfono:



Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el volumen del sonido de teléfono se incrementa:



Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el sonido del teléfono significa algo importante para los protagonistas:



Otro: (*indique una alternativa*) \_\_\_\_\_

4. Queremos conocer cuál es su opinión sobre la información del sonido del teléfono en los subtítulos:

*(marque sólo una casilla para cada frase)*

| Muy en desacuerdo                                                                            | En desacuerdo | Ni en desacuerdo, ni de acuerdo | De acuerdo | Muy de acuerdo |
|----------------------------------------------------------------------------------------------|---------------|---------------------------------|------------|----------------|
| Prefiero una descripción textual, por ejemplo que aparezca en pantalla:<br>(teléfono suena)  | 1             | 2                               | 3          | 4              |
| Prefiero que se utilicen distintos íconos para cada tipo de sonido                           | 1             | 2                               | 3          | 4              |
| Me gustó el uso de un solo tipo de ícono                                                     | 1             | 2                               | 3          | 4              |
| El uso del mismo ícono no me dio a entender los distintos modos en que sonaban los teléfonos | 1             | 2                               | 3          | 4              |
| En general me gustó el uso de íconos para los sonidos                                        | 1             | 2                               | 3          | 4              |
| El uso de íconos me entorpeció el visionado                                                  | 1             | 2                               | 3          | 4              |

Espacio para comentarios:

1. En la película que acaba de ver, ¿cuál ha sido el ícono que más le gustó?



(escoja sólo una opción)

Todos  
Ninguno  
No sé/No me acuerdo

2. ¿Por qué?  
*(explique con sus propias palabras)*



Otro: *(indique una alternativa)* \_\_\_\_\_

Cuando el protagonista mira hacia el origen del sonido de teléfono:



Otro: *(indique una alternativa)* \_\_\_\_\_

Cuando el volumen del sonido de teléfono se incrementa:



Otro: *(indique una alternativa)* \_\_\_\_\_

Cuando el sonido del teléfono significa algo importante para los protagonistas:



Otro: *(indique una alternativa)* \_\_\_\_\_

3. ¿Cuál cree que es el ícono más adecuado para identificar el sonido de teléfono en cada una de las siguientes situaciones en una película?  
(escoja sólo una opción)  
Para varios teléfonos sonando de fondo en un despacho:

4. Queremos conocer cuál es su opinión sobre la información del sonido del teléfono en los subtítulos:

*(marque sólo una casilla para cada frase)*

| Muy en desacuerdo                                                                             | En desacuerdo | Ni en desacuerdo, ni de acuerdo | De acuerdo | Muy de acuerdo |
|-----------------------------------------------------------------------------------------------|---------------|---------------------------------|------------|----------------|
| Prefiero una descripción textual, por ejemplo que aparezca en pantalla:<br>(teléfono suena)   | 1             | 2                               | 3          | 4              |
| Prefiero que se utilice siempre el mismo ícono para cada tipo de sonidos                      | 1             | 2                               | 3          | 4              |
| Me gustó el uso de diferentes tipos de íconos                                                 | 1             | 2                               | 3          | 4              |
| Los diferentes íconos me ayudaron a entender los distintos modos en que sonaban los teléfonos | 1             | 2                               | 3          | 4              |
| En general me gustó el uso de íconos para los sonidos                                         | 1             | 2                               | 3          | 4              |
| El uso de íconos me entorpeció el visionado                                                   | 1             | 2                               | 3          | 4              |

Espacio para comentarios:

1. En la película que acaba de ver,  
¿le ha gustado el uso del siguiente subtítulo?

(escoja sólo una opción)

(teléfono suena)

- Sí
- No

2. ¿Por qué?

(explique con sus propias palabras)

3. ¿Cuál cree que es el subtítulo más adecuado para identificar el sonido de teléfono en cada una de las siguientes situaciones en una película?:

(escoja sólo una opción)

Para varios teléfonos sonando de fondo en un despacho:

(teléfono suena)

(llamada importante)

(teléfono aumentando volumen)

(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el/la protagonista mira hacia el origen del sonido de teléfono:

(teléfono suena)

(llamada importante)

(teléfono aumentando volumen)

(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el volumen del sonido de teléfono se incrementa:

(teléfono suena)

(llamada importante)

(teléfono aumentando volumen)

(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el sonido del teléfono significa algo importante para los protagonistas:

(teléfono suena)

(llamada importante)

(teléfono aumentando volumen)

(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

4. Queremos conocer cuál es su opinión sobre la información del sonido del teléfono en los subtítulos:

*(marque sólo una casilla para cada frase)*

| Muy en desacuerdo                                                                                                                            | En desacuerdo | Ni en desacuerdo, ni de acuerdo | De acuerdo | Muy de acuerdo |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------|------------|----------------|
| Prefiero un ícono, por ejemplo que aparezca en pantalla:  | 1             | 2                               | 3          | 4              |
| Prefiero que se utilicen diferentes descripciones para cada tipo de sonidos                                                                  | 1             | 2                               | 3          | 4              |
| Me gustó el uso del mismo subtítulo para todos los sonidos de teléfono                                                                       | 1             | 2                               | 3          | 4              |
| El uso del mismo subtítulo no me dio a entender los distintos modos en que sonaban los teléfonos                                             | 1             | 2                               | 3          | 4              |
| En general me gustó el uso de descripciones para los sonidos                                                                                 | 1             | 2                               | 3          | 4              |
| El uso de descripciones de sonido me entorpeció el visionado                                                                                 | 1             | 2                               | 3          | 4              |

Espacio para comentarios:

1. En la película que acaba de ver, ¿le ha gustado el uso del siguiente subtítulo?

(escoja sólo una opción)

- Sí
- No

2. ¿Por qué?

(explique con sus propias palabras)

3. ¿Cuál cree que es el subtítulo más adecuado para identificar el sonido de teléfono en cada una de las siguientes situaciones en una película?

(escoja sólo una opción)

Para varios teléfonos sonando de fondo en un despacho:

(teléfono suena)  
(llamada importante)  
(teléfono aumentando volumen)

(ring ring)  
Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el/la protagonista mira hacia el origen del sonido de teléfono:

(teléfono suena)  
(llamada importante)  
(teléfono aumentando volumen)  
(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el volumen del sonido de teléfono se incrementa:

(teléfono suena)  
(llamada importante)  
(teléfono aumentando volumen)  
(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

Cuando el sonido del teléfono significa algo importante para los protagonistas:

(teléfono suena)  
(llamada importante)  
(teléfono aumentando volumen)  
(ring ring)

Otro: (*indique una alternativa*) \_\_\_\_\_

4. Queremos conocer cuál es su opinión sobre la información del sonido del teléfono en los subtítulos:

*(marque sólo una casilla para cada frase)*

| Muy en desacuerdo                                                                                                                               | En desacuerdo | Ni en desacuerdo, ni de acuerdo | De acuerdo | Muy de acuerdo |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------|------------|----------------|
| Prefiero un ícono, por ejemplo que aparezca en pantalla:<br> | 1             | 2                               | 3          | 4              |
| Prefiero que se utilicen diferentes descripciones para cada tipo de sonidos                                                                     | 1             | 2                               | 3          | 4              |
| Me gustó el uso del mismo subtítulo para todos los sonidos de teléfono                                                                          | 1             | 2                               | 3          | 4              |
| El uso del mismo subtítulo no me dio a entender los distintos modos en que sonaban los teléfonos                                                | 1             | 2                               | 3          | 4              |
| En general me gustó el uso de descripciones para los sonidos                                                                                    | 1             | 2                               | 3          | 4              |
| El uso de descripciones de sonido me entorpeció el visionado                                                                                    | 1             | 2                               | 3          | 4              |

Espacio para comentarios:



5. Mark your age: [ ]

6. Mark your age:  Male  Female

7. ¿Do you usually lip read?

Yes

No

7. Mark your type of hearing loss:

- Partial
- Profound

8. ¿Do you usually oralize?

Yes

No

9. Indique si es nativo de:

(you can choose more than one options)

Catalan

Spanish

Catalan sign language (LSC)

Spanish sign language (LSE)

Other(s): (*indicate which*)  
\_\_\_\_\_

4. Mark your grade of hearing loss:

Approximate percentage: Left ear [ %]  
Right ear [ %]

- I don't know/ I don't remember

5. Mark the age at which your hearing loss began:

Since birth

Later in life – Mark the exact age [ ]

10. For your everyday communication, you use:

(choose only one option)

Only sign language  
Only oral language

More sign language than oral language  
More oral language than sign language

None of the above: (*indicate an alternative*)  
\_\_\_\_\_

Cochlear implant – Mark the exact age you received the implant: [ ]

Hearing aid(s)

None of the above

11. Mark the maximum degree of studies that you have completed:

(choose only one option)

- Primary
- Secondary
- College degree
- Postgraduate degree
- PhD

14. You prefer to watch films with:

(choose only one option)

- Sign language interpreting
- Subtitles
- None of the above

15. Indicate how important it is for you to have information included in the subtitles about the following elements:

(mark only one option for each line)

|                         | Not important | A little important | Indifferent | Quite important | Very important |
|-------------------------|---------------|--------------------|-------------|-----------------|----------------|
| What the characters say | 1             | 2                  | 3           | 4               | 5              |
| Identify the speaker    | 1             | 2                  | 3           | 4               | 5              |
| Sounds                  | 1             | 2                  | 3           | 4               | 5              |
| Music                   | 1             | 2                  | 3           | 4               | 5              |

12. In which format do you usually watch films:  
(choose only one option)

- Television
- Cinema
- Desktop/Laptop
- DVD
- Tablet
- Smart phone

16. For sounds (not dialogue or music), I prefer the following information included in the subtitles:

(choose only one option)

- Sign language interpreting
- Subtitles
- None of the above

13. You usually watch films with:

(choose only one option)

- A written description – e.g. if somebody laughs, the following subtitle appears: (Laughs)
  - An icon or emoticon – e.g. if somebody laughs, the following emoticon appears: :-D
  - Nothing
  - Other(s): (describe your alternative preference)
-

Indique la medida en la que está de acuerdo con cada proposición.

| I totally disagree                                                                                              | I disagree | I neither agree, nor disagree | I agree | I totally agree |
|-----------------------------------------------------------------------------------------------------------------|------------|-------------------------------|---------|-----------------|
| At points, I had a hard time making sense of what was going on in the film.                                     | 1          | 2                             | 3       | 4               |
| I didn't understand Claudio's way of thinking.                                                                  | 1          | 2                             | 3       | 4               |
| I had a hard time recognizing the thread of story.                                                              | 1          | 2                             | 3       | 4               |
| I found my mind wandering while the film was on.                                                                | 1          | 2                             | 3       | 4               |
| I had a hard time keeping my mind on the film.                                                                  | 1          | 2                             | 3       | 4               |
| My attention was focused more on my surroundings than on the film.                                              | 1          | 2                             | 3       | 4               |
| During the film, my body was in the room, but my mind was inside the world created by the story.                | 1          | 2                             | 3       | 4               |
| The film created a new world, and then that world suddenly disappeared when the film entered.                   | 1          | 2                             | 3       | 4               |
| At times during the film, the story was closer to me than the real world.                                       | 1          | 2                             | 3       | 4               |
| The story affected me emotionally.                                                                              | 1          | 2                             | 3       | 4               |
| During the film, when the protagonists succeeded, I felt happy, and when they suffered in some way, I felt sad. | 1          | 2                             | 3       | 4               |
| I felt sorry for the protagonists.                                                                              | 1          | 2                             | 3       | 4               |
| I enjoyed the film.                                                                                             | 1          | 2                             | 3       | 4               |
| I would not watch another similar story.                                                                        | 1          | 2                             | 3       | 4               |
| I liked the film.                                                                                               | 1          | 2                             | 3       | 5               |

1. In the film you just watched, did you like the use of the following icon?  
*(choose only one option)*



- Yes     No

3. Which of the following icons do you think is more appropriate to identify the sound of the phone ringing in each of the following contexts in a film?  
*(choose only one option)*

For various phones ringing in the background of an office:



2. Why?  
*(explain in your own words)*

Other: *(indicate and alternative)* \_\_\_\_\_



When the protagonist looks towards the source of the sound:



Other: *(indicate an alternative)* \_\_\_\_\_

When the volume of the phone ringing increases:



Other: *(indicate an alternative)* \_\_\_\_\_

When the sound of the phone ringing is significant for the protagonists:



Other: *(indicate an alternative)* \_\_\_\_\_

8. We would like to know your opinion regarding the information about the phone ringing on the subtitles

*(mark only one option for each line)*

| I totally disagree                                                                                       | I disagree | I neither agree, nor disagree | I agree | I totally agree |
|----------------------------------------------------------------------------------------------------------|------------|-------------------------------|---------|-----------------|
| I prefer a written description, for example the following subtitle to appear on screen:<br>(phone rings) | 1          | 2                             | 3       | 4<br>5          |
| I prefer different icons to appear for different types of sounds                                         | 1          | 2                             | 3       | 4<br>5          |
| I liked the use of a single type of icon                                                                 | 1          | 2                             | 3       | 4<br>5          |
| The use of the same icon did not help me understand the different ways in which the phones rang          | 1          | 2                             | 3       | 4<br>5          |
| In general I liked the use of icons for the sounds                                                       | 1          | 2                             | 3       | 4<br>5          |
| The use of icons obstructed the projection of the film                                                   | 1          | 2                             | 3       | 4<br>5          |

Comments:

1. In the film you just watched, which icon did you like the most?

*(choose only one option)*



All

None

I don't know/I don't remember

2. Why?

*(explain in your own words)*

3. Which of the following icons do you think is more appropriate to identify the sound of the phone ringing in each of the following contexts in a film?

*(choose only one option)*

For various phones ringing in the background of an office:



Other: *(indicate an alternative)* \_\_\_\_\_

When the protagonist looks towards the source of the sound:



Other: *(indicate an alternative)* \_\_\_\_\_

When the volume of the phone ringing increases:



Other: *(indicate an alternative)* \_\_\_\_\_

When the sound of the phone ringing is significant for the protagonists:



Other: *(indicate an alternative)* \_\_\_\_\_

4. We would like to know your opinion regarding the information about the phone ringing on the subtitles

*(mark only one option for each line)*

| I totally disagree                                                                                       | I disagree | I neither agree, nor disagree | I agree | I totally agree |
|----------------------------------------------------------------------------------------------------------|------------|-------------------------------|---------|-----------------|
| I prefer a written description, for example the following subtitle to appear on screen:<br>(phone rings) | 1          | 2                             | 3       | 4               |
| I prefer the same icon to appear for different types of sounds                                           | 1          | 2                             | 3       | 4               |
| I liked the use of different icons                                                                       | 1          | 2                             | 3       | 4               |
| The use of different icons helped me understand the different ways in which the phone rang               | 1          | 2                             | 3       | 4               |
| In general I liked the use of icons for the sounds                                                       | 1          | 2                             | 3       | 4               |
| The use of icons obstructed the projection of the film                                                   | 1          | 2                             | 3       | 4               |

Comments:

2. In the film you just watched, did you like the use of the following subtitle?

(choose only one option)

- Yes
- No

2. Why?

(explain in your own words)

3. Which of the following subtitles do you think is more appropriate to identify the sound of the phone ringing in each of the following contexts in a film?

(choose only one option)

For various phones ringing in the background of an office:

- (phone rings)
- (important call)
- (volume increases)
- (ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the protagonist looks towards the source of the sound:

- (phone rings)
- (important call)
- (volume increases)
- (ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the volume of the phone ringing increases:

- (phone rings)
- (important call)
- (volume increases)
- (ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the sound of the phone ringing is significant for the protagonists:

- (phone rings)
- (important call)
- (volume increases)
- (ring ring)

Other: (indicate an alternative) \_\_\_\_\_

5. We would like to know your opinion regarding the information about the phone ringing on the subtitles

*(mark only one option for each line)*

| I totally disagree                                                                                  | I disagree                                                                           | I neither agree, nor disagree | I agree | I totally agree |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------|---------|-----------------|
| I prefer an icon, for example the following to appear on screen:                                    |  | 1                             | 2       | 3               |
| I prefer different descriptions to appear for different types of sound                              |                                                                                      | 1                             | 2       | 3               |
| I liked the use of the same subtitle for all sounds of the phone ringing                            |                                                                                      | 1                             | 2       | 3               |
| The use of the same subtitle did not help me understand the different ways in which the phones rang |                                                                                      | 1                             | 2       | 3               |
| In general I liked the use of descriptions for the sounds                                           |                                                                                      | 1                             | 2       | 3               |
| The use of descriptions for the sounds obstructed the projection of the film                        |                                                                                      | 1                             | 2       | 3               |
|                                                                                                     |                                                                                      |                               | 4       | 4               |
|                                                                                                     |                                                                                      |                               |         | 5               |

Comments:

1. In the film you just watched, did you like the use of the following subtitle?

(choose only one option)

- Yes
- No

2. Why?

(explain in your own words)

3. Which of the following subtitles do you think is more appropriate to identify the sound of the phone ringing in each of the following contexts in a film?

(choose only one option)

For various phones ringing in the background of an office:

(phone rings)  
(important call)  
(volume increases)  
(ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the protagonist looks towards the source of the sound:

(phone rings)  
(important call)  
(volume increases)  
(ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the volume of the phone ringing increases:

(phone rings)  
(important call)  
(volume increases)  
(ring ring)

Other: (indicate an alternative) \_\_\_\_\_

When the sound of the phone ringing is significant for the protagonists:

(phone rings)  
(important call)  
(volume increases)  
(ring ring)

Other: (indicate an alternative) \_\_\_\_\_

4. We would like to know your opinion regarding the information about the phone ringing on the subtitles

*(mark only one option for each line)*

| I totally disagree                                                                                                                                       | I disagree | I neither agree, nor disagree | I agree | I totally agree |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------|---------|-----------------|
| I prefer an icon, for example the following to appear on screen:<br> | 1          | 2                             | 3       | 4<br>5          |
| I prefer different descriptions to appear for different types of sound                                                                                   | 1          | 2                             | 3       | 4<br>5          |
| I liked the use of the same subtitle for all sounds of the phone ringing                                                                                 | 1          | 2                             | 3       | 4<br>5          |
| The use of the same subtitle did not help me understand the different ways in which the phones rang                                                      | 1          | 2                             | 3       | 4<br>5          |
| In general I liked the use of descriptions for the sounds                                                                                                | 1          | 2                             | 3       | 4<br>5          |
| The use of descriptions for the sounds obstructed the projection of the film                                                                             | 1          | 2                             | 3       | 4<br>5          |

Comments: