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Perspectives
Studies in Translatology

ISSN: 0907-676X (Print) 1747-6623 (Online) Journal homepage: http://www.tandfonline.com/loi/rmps20

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To cite this article: Marina Ramos Caro (2016): Testing audio narration: the emotional impact of language in audio description, Perspectives, DOI: 10.1080/0907676X.2015.1120760

To link to this article: http://dx.doi.org/10.1080/0907676X.2015.1120760

PERSPECTIVES, 2016
http://dx.doi.org/10.1080/0907676X.2015.1120760

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Testing audio narration: the emotional impact of language in audio description

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ABSTRACT

Around the world, guidelines have been created to establish a clear procedure on how to create audio description. These put emphasis on the objectivity principle. However, in recent years this principle has been widely criticized, and a more narrative approach has been encouraged, although the reception of these opposing styles has not been compared experimentally. At the same time, while emotions play a central role in the filmic experience, the emotional reception of audio description in films has been tested on very few occasions. This paper analyses the differences in the emotional response to two audio description versions: a more objective version vs. a subjective version including metaphors, inferences, and subjective evaluation. We worked with 15 film scenes eliciting disgust, fear, and sadness to analyse how sighted and unsighted participants react at an emotional level. Emotions were measured by means of a Likert questionnaire and measurements of the heart rate. The results point to statistically significant differences between the versions in the case of fear and especially sadness, but not disgust.

ARTICLE HISTORY
Received 5 June 2014
Accepted 14 October 2015

KEYWORDS
Screen translation; audio description; emotions; reception; accessibility

1. Introduction

In order to regulate the practice of audio description (AD), in the last decade many countries have developed guidelines to standardize the creation of AD (France: Morisset & Gonant, 2008; Germany: Benecke & Dosch, 2004; Greece: Georgakopoulou, 2008; USA: American Council of the Blind, 2009). In Spain, the norm UNE 153020 was validated in 2005 by the Spanish Association for Standardization and Certification (AENOR, 2005). Although the majority of these guidelines are rather general (Vercauteren, 2007), most of them coincide in promoting objective and neutral AD in which the describer is limited to describing only what can be objectively seen. However, many voices have begun to stress the need to create more emotional descriptions if the aim is to offer a similar experience to the powerful emotional experience offered by the cinema (Braun, 2008; Haig, 2005a, 2005b; Holland, 2009; Kruger & Kruger, 2010; Salway & Palmer, 2007; Snyder, 2005; Yeung, 2007).

In accordance with dynamic and communicative approaches to translation (Newmark, 1988; Nida, 1964; Nida & Taber, 1969), many authors agree that AD should offer the

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visually impaired a similar experience to that provided by the source texts, i.e. films (AENOR, 2005; Haig, 2005a, 2005b; Holland, 2009; Simoneau-Jörg, 1997; Snyder, 2005; Yeung, 2007). However, while emotions clearly have a central role in the filmic experience (Gordall, 2009; Smith, 2003; Tan, 1994, 1996), the emotional reception of films with AD has yet to be investigated on an experimental basis (cf. Weaver, 2014 for a study on the emotional reception in opera AD). For this reason, an experiment was designed to compare the emotional impact of 15 scenes with AD that elicit emotions (specifically disgust, fear, and sadness) in two different versions: a more objective, mainly descriptive version (AD) and a subjective, narrative version (audio narration, AN). Although objectivity can never be fully achieved (cf. Section 1.1), the more objective version (AD) will be restricted to the description of what can be seen in the scene, whereas the narrative version (AN) will include linguistic tools that totally deviate from neutrality and objectivity, such as metaphors, connotative language, inferences, and the subjective evaluation of the describer (cf. Section 1.2; cf. Weaver, 2010).

1.1. Dissecting the objectivity principle

Many countries (e.g. Spain, the USA, Germany, the UK) seem to agree that AD should describe the images as objectively as possible (AENOR, 2005; American Council of the Blind, 2009; Snyder, 2005, p. 195). However, in recent years, some voices have criticized the objectivity principle for various reasons. For instance, while Doloughan (2005) defends that all acts of translation are interpretative to a certain extent, Haig (2005a) highlights the subjectivity that is always present in film reception. Some authors (Finbow, 2010; Holland, 2009) even apply this idea to the creation of AD itself, stating that 'There is no such point of view, either the narrator's, camera's, character's, or audio describer's, as objective' (Finbow, 2010, p. 219). Thus, all these authors remind us that AD is a human activity, and as such subjectivity can never be fully avoided.

Besides, when analysed closely, the guidelines are ambiguous or contradictory about certain important details related to the objectivity principle, such as the amount of information that should be described and the type of language chosen. For example, according to most guidelines, only neutral adjectives should be used (Benecke & Dosch, 2004), but, at the same time, UK guidelines explicitly encourage the use of subjective adjectives: 'Don't shy away from using colours or describing a character as pretty, or handsome, where relevant to the story' (Rai, Greening, & Leen, 2010, p. 110). Another controversial issue is the description of emotions; although most guidelines recommend describing the emotions of characters (e.g. Benecke & Dosch, 2004; Morisset & Gonant 2008), the general recommendation is to do so in an objective way (e.g. guidelines in the UK and Germany). However, the description of emotions always implies a certain degree of interpretation on the part of the describer (Vercauteren, 2007); thus some guidelines (e.g. in Germany and Greece) specifically recommend avoiding this information and simply describing the physical gestures and body movements of characters.

Other controversial topics are the lexical selection of verbs, the inclusion of inferences, and the use of metaphors. The use of verbs is rather polemic, for both the UK and US guidelines encourage describers to use varied and vivid verbs, such as *sashay*, *stroll*, *skip*, *stumble*, or *saunter* instead of *walk*; terms that imply a certain degree of subjectivity. At the same time, most guidelines prohibit describers from interpreting or making

inferences about what is happening on screen: 'subjective or qualitative judgments or comments get in the way—they constitute an interpretation on the part of the describer and are unnecessary and unwanted' (Rai et al., 2010, p. 76). In order to avoid inferences, some guidelines (e.g. Germany, Greece, and the USA) recommend mentioning only what can be seen in the scene; for instance, describing the death of a character by the visible physical changes experienced by the character ('his head lolls back and his eyes close'). Lastly, most guidelines agree that metaphorical or poetic language should be avoided (e.g. Spain, Germany). However, US guidelines (American Council of the Blind, 2009) specifically encourage the inclusion of metaphors for the purpose of evoking vivid images. All these ambiguities and controversies result in heterogeneous AD styles in different countries and even within the same AD tradition, as several previous studies have noted (Bourne & Jiménez, 2007; Jiménez et al., 2010; Matamala & Rami, 2009; Seibel, 2007). Lastly, the inclusion of subjective details in Spanish AD has been analysed from a reception point of view in several studies (Herrador Molina, 2006; Luque, 2009), which have shown that, despite common rejection, metaphors and other literary devices are usually accepted by the audience.

When trying to determine the textual category of AD, we also find two opposing views. On the one hand, some authors defend from a more conservative point of view the idea that AD is a type of informative (Poethe, 2005) or descriptive (Chapado Sánchez, 2010) text, highlighting that the function of AD is to merely describe what can be seen objectively or transmit the necessary information for understanding the film. On the other hand, other authors disagree with this perspective (Jiménez et al., 2010) and attribute a more active role to AD in the meaning-creation process of the film, considering it as a type of narrative (Rodríguez Posadas, 2007) or literary text (Rodríguez Domínguez, 2007). Simoneau-Jörg (1997, pp. 31–32) goes even further in this direction, stating that the function of AD is 'to enable the blind receiver to experience the same emotions and feelings as the sighted audience'.

After all the constraints and criticisms that the objectivity principle has received in recent years, some authors have started to defend a more proactive role, suggesting that AD should be set aside and objectivity forgotten in pursuit of AN, a more narrative type of description more committed to the function of eliciting a strong response in the audience, even at the expense of violating objectivity the principle. Some authors already defended this more interventionist type of AD several years ago (Holland, 2009; Yeung, 2007). For example, Yeung (2007, p. 41) stated:

> There are two possible positions describers can take. They can take the subsidiary role of co-narrators translating certain signs for the unsighted audience. Co-narrators perform a task similar to "filling blanks". But describers can also take the pro-active role of independent narrators, taking control of the overall product by making their own narration, the dialogues and the soundtrack work together. They might even incorporate an introduction to cinema or the film before the film starts and create a unique experience for the audience.

In fact, in 2007 Yeung was already defending the idea that describers should take control of AD by making a more narrative description of the images, and, more recently, two studies named this type of AD audio narration, a modality that should offer 'a more thorough, albeit more subjective, descriptive access to visual media for the blind and partially sighted' (Finbow, 2010, p. 227). Kruger (2010) also defends AN, arguing that a more narrative perspective is needed in order to supplement the narrativity of images. With this

aim, AN would play the role of the narrator of literary texts and would make use of literary and linguistic devices to achieve a greater psychological immersion in the scene. In the next section we will address the concept of literary emotions and some of the devices used by storytellers in order to elicit an emotional response in the audience. In the present paper, these linguistic devices will be used to create the AN of scenes of sadness, disgust, and fear, which will be compared to the AD of the same scenes in order to analyse the emotional impact of both.

1.2. Emotions and language

The fact that linguistic stimuli and literary texts[1] are capable of eliciting emotions has been proven at a cognitive (Kuijpers, 2009; Vrana, Cuthbert, & Lang, 1986) and physiological level (Oatley & Gholamain, 1997; Oetelaar, Tellegen, & Wober, 1997). Two concepts highlight the importance of emotional language in literary texts. On the one hand, several studies prove that emotional language favours the creation of mental images when reading, using a quantitative (Goetz, Sadoski, Stowe, Fetsco, & Kemp, 1993; Goetz & Sadoski, 1996; Sadoski & Goetz, 1985; Sadoski, Goetz, & Kangiser, 1988) or qualitative (Sadoski, Goetz, Olivarez, Lee, & Roberts, 1990) methodology. László (1990) even demonstrated that mental images created by literary reading are as vivid as those acquired from real-life experiences, in contrast to what happens with more descriptive texts. These studies underline the importance of using literary language in order to elicit an emotional response in the audience. But what are the linguistic devices used by writers in order to create a certain emotional effect? In literature, some of the most widely mentioned devices for increasing the emotional potential of texts are: the narrator's point of view, evaluation, and rhetorical figures such as metaphors.

The influence of the narrator's point of view on the emotional reception of (loss) stories has been studied by Habermas and Diel (2010). These authors explain that storytellers use certain devices to manipulate the narrator's point of view in order to elicit an emotional response in the reader, such as the verb tense used (present vs. past), or the subjectivity level of the narrator's perspective. For instance, whereas an objective narrator gives information exclusively on the physical and external features of the action and characters, a subjective narrator includes information on their mental and emotional state. Habermas and Diel (2010) showed that an impersonal perspective elicits a very low emotional response, even causing feelings of rejection in readers. Cupchik and Laszlo (1994) also compared the reader's response to texts focused on actions and texts focused on experiences, showing that the latter were better appreciated and elicited a stronger emotional reaction. Something similar happens when the reception of emotional and descriptive texts is compared (Cupchik, Leonard, Axelrad, & Kalin, 1998). Emotional texts prompted a stronger cognitive and emotional impact in readers, required a lower reading speed, and were remembered in greater detail than descriptive texts.

Another important device for the elicitation of emotions in readers is evaluation. The concept of evaluation was first introduced by Labov (1972) as one of the basic mechanisms of storytelling. According to the author, the construction of a narrative implies attributing a meaning to isolated pieces of information. With this aim, narrators resort to affective expressions that give importance to and join all those isolated elements. In this sense, evaluation mechanisms are the devices used by narrators to share their values and

beliefs with the readers in order to give a meaning to the story. Hunt and Vipond (1988; Vipond and Hunt, 1984) applied this concept of evaluation to the process of reading literary texts. The authors tested the importance of lexical selection for the emotional impact of texts, creating a neutral and evaluative version of the same story and including in the latter connotative lexical units that give information on the stance taken by the narrator. For instance, a certain passage was described as 'they *crowded* into our narrow little hall, and *tramped* around' in the evaluative version as opposed to 'they *came* into our narrow little hall, and *walked* around' in the neutral version. The authors tested the response of 96 participants to the two types of texts and found statistically significant differences between them, concluding that evaluative devices are a basic mechanism of literary texts, being responsible for the attribution of emotions to the same.

Lastly, the concept of *foregrounding* (Garvin, 1964; Mukarovský, 1932/1964) highlights the importance of poetic language in literary texts. According to foregrounding theory (Miall, 2007; Miall & Kuiken, 1994; van Peer, 1986, 2007; Zwaan, 1993), the use of unusual or unstandardized language results in a higher emotional impact of the texts, because it defamiliarizes the readers and facilitates emotions related to previous personal experiences. The theory has been tested empirically in some interesting research. For instance, some studies (Miall & Kuiken, 1994; Sikora, Kuiken, & Miall, 1998; van Peer, 1986) demonstrated that readers remember better those linguistic elements that stand out in the text and feel stronger emotions when presented with highly foregrounded text passages. The effect of the defamiliarization process prompted by foregrounded language has also been tested on the brain using electroencephalography (EEG) techniques and event-related potentials (Bohrn et al., 2012; Hoorn, 1996; Kutas & Hillyard, 1982). The results described so far show specific patterns of activation in the areas specialized for affect when participants were presented with highly foregrounded passages. More specifically, metaphors are a typical example of foregrounded language capable of prompting emotions by means of suggestion (Oatley, 2003). The emotional power of metaphors has also been tested empirically in several studies using EEG (Hoorn, 1997, 2001) and functional magnetic resonance imaging (Bambini, Gentili, Ricciardi, Bertinetto, & Pietrini, 2011; Bohrn et al., 2012a; 2012b). Evidence suggests a clear difference in the activation patterns between metaphorical and non-metaphorical language, the right hemisphere showing higher involvement in the case of novel metaphors. Rojo, Ramos, and Valenzuela (2014) also tested the emotional reception of metaphors using a heart rate monitor and reported a higher emotional response to metaphorical expressions.

In this section, we have described several tools present in literary and narrative texts for the elicitation of emotions in readers, such as inference, the description of the emotional state of the characters, and metaphors (Cupchik et al., 1998; Habermas & Diel, 2010; László, 1990; Miall, 2006). All these tools will be included in the AN version created for the present study in order to compare its emotional impact with the response of the audience to the AD.

1.3. Measuring emotions

Emotions are a multi-componential phenomenon that escapes an easy definition. In fact, the study and measurement of emotion is rather recent and controversial, for it has long been considered an immeasurable construct (Panksepp, 2008). Even today there are

conflicting views among researchers in relation to many characteristics of this phenomenon, such as the inclusion or exclusion of cognition in the emotional process (e.g. Moors & Scherer, 2013; Robinson, 2005; Scherer, Schorr, & Johnstone, 2001). For this reason, Scherer (2005) attempted to provide a comprehensive consensus definition, describing emotions in terms of the five components that co-occur in an emotional episode. According to Scherer (2005, p. 697), emotions are 'an episode of interrelated synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism'. These five subsystems are, namely, the cognitive, neuro-physiological, motivational, motor expression, and subjective feeling components.

When an emotional episode takes place, all or some of these subsystems react conjointly and leave measurable evidence of that emotional reaction in the body. For instance, the motor expression subsystem can be measured by observing changes in bodily and facial movements. The subjective feeling is the most commonly measured component: with the help of questionnaires and interviews, the researcher investigates what subjects feel (Rottenberg, Ray, & Gross, 2007). However, this kind of retrospective data presents the drawback of not being completely objective, so that other, more objective, measurements have recently begun to be included in an attempt to obtain a more realistic picture of an emotional episode. Study of the neuro-physiological component has typically involved the measurement of galvanic skin response (Wiens, Katkin, & Öhman, 2003), heart rate and heart variability (Appelhans & Luecken, 2006), and cortisol levels in blood and saliva (Sudheimer, 2009). In order to measure the emotional reaction of blind and sighted audiences when presented with films with and without AD, the study designed in the present paper explores the physiological and subjective components of emotions by measuring participants' heart rate and subjective feelings. Heart rate is an indicator of emotions that is relatively inexpensive and easy to measure, while providing information that can be related to differences in the intensity of the emotion (Zillmann, 1996). In addition, the subjective feeling of participants was measured using a self-report questionnaire.

2. Studying the emotional response of AD and AN

2.1. Aim and hypothesis

The main aim of the present study is to determine whether there are differences between the emotional reaction elicited by two different AD versions of the same scenes: a more descriptive, neutral version (AD); and a more narrative and emotional version (AN). The main hypothesis established is that the AN version presented will be able to prompt a stronger emotional reaction in the participants than the AD version.

2.2. Materials and stimuli

From all six basic emotions described by Ekman (1992: rage, disgust, fear, happiness, sadness, and surprise), three were discarded for being difficult to induce in a laboratory setting (rage, happiness, and surprise; Rottenberg et al., 2007); thus we finally decided to work with disgust, fear, and sadness. For the present study 15 stimuli were selected. Previous studies have selected and validated film scenes that elicit basic emotions (Gross & Levenson, 1995; Philippot, 1993; Rottenberg et al., 2007; Schaefer, Nils,

Sanchez, & Philippot, 2010; Tomarken, Davidson, & Henriques, 1990). From all the validated scenes in these studies, we made a selection according to the following criteria: (1) scenes had to be describable (i.e. with gaps left between the dialogues and music in which the description could be inserted) and dubbed into Spanish; (2) scenes validated in more recent studies (Rottenberg et al., 2007; Schaefer et al., 2010) were preferred to those selected more than 10 years ago (Gross & Levenson, 1995; Philippot, 1993; Tomarken et al., 1990); (3) from the films left after applying these two criteria, lesser-known film scenes were preferred in order to avoid an exposure effect in the participants, although we could not totally avoid including some famous scenes (from, for example, *The Godfather* and *The Shining*)[2]; (4) shorter scenes (less than four minutes) were chosen, with the intention of not exhausting our subjects with an overly long experiment. Through this selection process we chose the 15 scenes included in Table 1.

Although all stimuli were first validated in English or French, Fernández Megías, Pascual, Soler Ribaudi, and García Fernández-Abascal (2011) confirmed that most of them were capable of inducing the target emotions in their Spanish dubbed version. Moreover, most of them have been widely used as emotional stimuli in Spanish (Beneyto, 2010).

After editing the films to obtain the desired scenes using the software Imovie, two versions of the AD of all clips were created, treating the scenes as whole stories, i.e. overlooking the fact that they had been isolated from a whole film. Although this decision has a clear impact on the narrative reception of the films, it was done so in order to treat the description the same way previous studies in Psychology had treated the selected scenes when validating them, i.e. as isolated clips. The AD version was created following the criterion of strictly avoiding the subjective point of view of the describer and was afterwards revised by two professional audio describers. For the creation of the AN version, we established a categorization of the features reviewed in Section 1.2 (Emotions and language) which are commonly used by writers to enhance the emotional power of their texts. This includes three main categories: subjective information, lexical choice, and rhetorical figures.

1. Subjective information: subjective descriptions, evaluations, and inferences.
   1.1 STATE: information on the emotional state of characters that is omitted or neutrally expressed in the AD version.

   Example: 'Bambi está *desolado*' ('Bambi was shattered') vs. 'Bambi baja la cabeza' ('Bambi bows his head').

Table 1. Film clips selected as stimuli.

Disgust		Fear		Sadness	
Film	Source	Film	Source	Film	Source
1. *The Godfather*	Tomarken et al. (1990)	2. *Halloween*	Philippot (1993)	3. *Bambi*	Rottenberg et al. (2007)
4. *Trainspotting*	Schaefer et al. (2010)	5. *The Shining*	Rottenberg et al. (2007)	6. *City of Angels*	Schaefer et al. (2010)
7. *Maria's Lovers*	Tomarken et al. (1990)	8. *The Silence of the Lambs*	Rottenberg et al. (2007)	9. *The Lion King*	Rottenberg et al. (2007)
11. *The Dentist*	Schaefer et al. (2010)	10. *Scream 2*	Schaefer et al. (2010)	13. *Dead Man Walking*	Schaefer et al. (2010)
14. *Pink Flamingos*	Rottenberg et al. (2007)	12. *The Shining*	Schaefer et al. (2010)	15. *Return to Me*	Rottenberg et al. (2007)

1.2 EVAL: description including the personal evaluation of the describer.
Example: 'Una rata asquerosa' ('A *disgusting* rat'), 'Un WC repugnante ('A *repugnant* WC'), 'un ciervo *imponente*' ('an *impressive* deer').
1.3 INF: inference or (over)interpretation of a fact, which adds information to the scene.
Example: 'La mujer le alarga el brazo *ofreciéndole su apoyo*' ('The woman stretches her arm, *offering support*'), 'Bambi corre *con todas sus fuerzas*' ('Bambi runs *as fast as he can*'), 'Comen un *jugoso bocado*' ('they eat *a succulent bite*'), 'La madre *sospecha*' ('The mother *suspects*'), '*a salvo*, Bambi sale de la madriguera' ('*Once safe*, Bambi gets out of the lair').

2. LEX: use of a connotative or emotionally loaded word in spite of its neutral equivalent.
Example: Observar vs. *espiar* (Observe vs. *spy*), comer vs. *deleitarse* (eat vs. *eat with relish*), correr vs. *brincar* (run vs. *hop*), ciervo joven vs. *cervatillo* (young deer vs. *fawn*).
3. MET: use of a metaphor.
Example: 'Sale disparado' vs. 'sale corriendo' ('he flew off (like a bullet)' vs. 'he started running'), 'se le hiela la sangre en las venas' vs. 'estaba muy asustado' ('he was very scared' vs. 'his blood froze in his veins').

Although previous studies prove that intonation plays an important role in the reception of AD (Iglesias, Martínez, & Chica, 2011), we decided to record both AD versions with a neutral intonation, following the actual trend in Spanish AD (AENOR, 2005, p. 9). The ideal way to obtain a neutral recording is to make a preselection of neutral voices and present them to subjects, allowing them to decide which recording is the most neutral. However, lack of funding forced us to work with an amateur actress who recorded the AD. She was given clear and explicit instructions to describe the scenes in both versions equally, using a neutral intonation.

2.3. Participants

Forty Spanish participants took part in the experiment, 20 of them sighted and 20 visually impaired (totally blind). Although people with different kinds of disability comprise the main audience of AD, we decided to include a group of sighted participants in the study to ascertain whether the results could also be applicable to other audiences. The original study included a comparison between both groups (sighted vs. visually impaired; cf. Ramos, 2015), but for the present paper we decided to concentrate exclusively on the comparison between the versions due to space limitation (AN vs. AD).

All sighted participants were recruited from the University of Murcia, whereas the blind participants were contacted through the National Organization for the Blind (ONCE) at its various centres in the cities of Granada, Murcia, Alicante, and Madrid. The sample was balanced for gender (50% of participants were men and 50% were women) and the age of participants ranged from 25 to 40 years old, the mean age of participants being 31.5. This specific age range was chosen because young audiences are usually more familiar with audiovisual products of the type used in the present experiment. All the blind participants were completely blind, some of them congenitally blind, the rest having lost their sight at a later point in life. We balanced all groups, i.e. distributed them equally in order to make them comparable regarding the number of congenitally and acquired visually impaired participants.

Before performing the experiment, all subjects completed a questionnaire about their socio-economic background and their spectatorial preferences, which is a modified version of the one designed by Luque (2009). We also included two other questions concerning factors that could influence the emotional response of subjects and therefore had to be controlled: which day on their menstrual cycle women were (Chen, Cheng, & Luo, 2011) and their smoking behaviour (Keeley & Driscoll, 2013; Nesbitt, 1973). In general, all groups were balanced, although slight differences remained. Sighted participants were slightly younger than the visually impaired (mean age 30 vs. 34 years old) and in general had a higher level of education. They also had a higher rate of exposure to films than the visually impaired (more than 70% of sighted participants watched more than four films/month, whereas only 50% of unsighted participants did). Two main groups were created, each composed of two sub-groups, who listened to different versions of the AD.

- Group A: 20 visually impaired participants listened to the AD version of the scenes (VI-AD).
- Group A.1: 10 participants presented with six clips with AD (clips 2, 4, 6, 10, 11, and 13) and six clips with AN (clips 3, 5, 7, 9, 12, and 14).
- Group A.2: 10 participants presented with six clips with AD (clips 3, 5, 7, 9, 12, and 14) and six clips with AN (clips 2, 4, 6, 10, 11 and 13).
- Group B: 20 blindfolded sighted participants listened to the AD version of the scenes (S-AD).
- Group B.1: 10 participants presented with six clips with AD (2, 4, 6, 10, 11, and 13) and six clips with AN (3, 5, 7, 9, 12 and 14).
- Group B.2: 10 participants presented with six clips with AD (3, 5, 7, 9, 12, and 14) and six clips with AN (2, 4, 6, 10, 11 and 13).[3]

The aim of the design was to obtain the effect of subjectivity or objectivity in AD for a certain emotion, and not for a specific film clip. For this reason, all the results were computed for each subject and each type of emotion, e.g. the mean rate was obtained for all fear films with AD and another mean was obtained for all fear films with AN.

2.4. Instruments

Three instruments were used to measure the response of participants: a self-report questionnaire measured the subjective feeling component of all participants; the physiological component was measured through the study of participants' heart rate; and a retrospective questionnaire was used to gather information on the blind participants' opinion on the AD.

As mentioned above, the subjective feeling component can be measured through questionnaires. In this case we selected a validated self-response questionnaire that is frequently used to measure the subjective feeling component of emotion. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; PANAS-X, Watson & Clark, 1994) asks the subjects to rate the intensity of their emotions in a 5-point Likert scale. In its extended version, the authors included several items that describe certain emotional states, such as *active*, *alert*, *inspired*, *ashamed*, *fearful*, *sad*, or

Table 2. Items included in the self-report questionnaire.

Disgust films	DISGUSTED, FEELING OF LOATHING
Fear films	AFRAID, SCARED, FRIGHTENED
Sadness films	SAD, SORROWFUL
General items (all films)	PLEASANTNESS (VALENCE), DISTRESSED, ALERT, CURIOUS, SURPRISED, NERVOUS, ACTIVE, ANXIOUS

nervous. The questionnaire presents a very high reliability and internal consistency (Cronbach's Alpha: >0.83), is easily administered, and has been widely used to measure the emotional reaction of subjects, including to film scenes (Feinstein et al., 2010; Rottenberg et al., 2007).

The full version of the questionnaire was only used to evaluate the emotional state of participants before taking part in the experiment; however, to measure the emotional response to every film scene, we selected only the most relevant items, i.e. emotional labels related to the target emotion (e.g. fear, sadness, disgust) or those describing general emotional states that can accompany those target emotions (e.g. *alert*, *active*, *anxious*) in order to avoid tiring the participants with an overly long experimental protocol. Table 2 shows all the items included in the questionnaire. The instructions presented in the questionnaire are as follows:

> We will now present you some words which describe certain emotions. Please, rate each of them, saying to what extent you have felt the following emotions during the film (from 1 to 5; 1 = very slightly or not at all, 2 = a little; 3 = moderately, 4 = quite a bit, 5 = extremely).

The valence of the films was also assessed, which is the perceived positivity or negativity of the emotions elicited, a characteristic of emotions related to the tendency to approach or flee from the elicitor (Mehrabian & Russell, 1974). With this aim, participants were asked to rate from 1 to 10 how pleasant or unpleasant the film had appeared to them (1 = totally pleasant; 10 = totally unpleasant) and whether they had seen or heard the scenes before. Due to the fact that it was impossible for blind participants to read the questionnaires, the questions were read aloud to all participants in order to standardize the procedure between all groups. Table 2 shows the items included in the self-report questionnaire designed to assess the emotional response to films.

Additionally, the physiological component of emotions was assessed. As previously explained, the physiological component can be tracked by various bodily symptoms, such as galvanic skin response (Wiens et al., 2003), hormonal secretion (Sudheimer, 2009), or heart rate (HR) and heart rate variability (Newell, 2005). For the present study we decided to use a heart monitor to measure HR of participants, which was deemed as the most useful technique in this case, as the apparatus is easily transportable and the technique is easy to administer, as well as being relatively inexpensive. Moreover, heart monitors have already been validated as an effective method to measure HR and HR variability in situations of physical and mental stress (Goodie, Larkin, & Schauss, 2000). In this case, a POLAR RS-800CX heart monitor was used, which comes with an H3-coded chest transmitter, a Polar ProTrainer 5 software program to analyse average, minimum, and maximum HR, and a USB adapter to connect it to a PC.

Lastly, qualitative data were also gathered through a retrospective questionnaire on the quality of the AD (based on Luque, 2009). In the questionnaire, we asked participants the following.

(1) Whether the language used in the AD was:
   (a) very appropriate,
   (b) quite appropriate,
   (c) not very appropriate, or
   (d) inappropriate.
(2) Whether the language was:
   (a) very easy to assimilate,
   (b) easy to assimilate,
   (c) difficult to assimilate, or
   (d) very difficult to assimilate.
(3) If the description enabled participants to imagine:
   (a) places,
   (b) feelings, or
   (c) actions.
(4) An open question: What did you enjoy most/least about the AD of this clip?

Only the real target audience of the AD, i.e. visually impaired participants, filled in this questionnaire.

2.5. Procedure

The experiment took place in the ONCE centres in Murcia, Granada, Alicante, and Madrid, as well as in the Faculty of Arts at the University of Murcia (Spain). In all cases, we reserved a quiet room with a table and two chairs. The films were played on a 15′ MacBook Pro and through Sennheiser HD 219-S high-end headphones. The participants were received individually and informed of the need to wear a strap with a heart rate sensor attached to their chest in order to record information about their HR when performing the experiment. The two pre-stimulus questionnaires (socio-economic information and previous emotional state) were then read aloud and filled in by the reserachers. The HR baseline was then measured. After these initial measurements, the experiment began. Participants were asked to relax, and were then presented with the stimuli as their HR was being recorded. After each stimulus the post-stimulus questionnaire of the emotional response to the scene was completed orally. Also, after each film, the visually impaired participants answered the questionnaire about the quality of the AD. Following a relaxation period of 60 seconds, the whole process was repeated for each stimuli.

2.6. Control of extraneous variables

Variables such as emotional response present a high inter-subject variability. Including large-scale samples in the experiment can neutralize this variability, but the recruitment of voluntary subjects for reception studies is a difficult task. For this reason, the groups of the present study were composed of a maximum of 20 subjects, an insufficient number to neutralize variability effects. In order to control for the emotional reactivity of participants, we used one stimulus for each emotion (specifically, the scenes from *The Godfather*, *The Silence of the Lambs*, and *Return to Me*) to discard possible extreme cases. We selected the AN version of these stimuli in order to control for the emotional

reactivity of all participants within the same version of the films, regardless of their visual capacity. We also used the same three film clips to control for presentation order effects. In order to do so, stimuli 1 (*The Godfather*), 8 (*The Silence of the lambs*), and 15 (*Return to Me*) would always appear in the same position for each subject. The rest of the stimuli were presented randomly.

2.7. Results and discussion

A Shapiro–Wilk test was performed to analyse the normality of the results, which showed some deviation from normality in 30 of all 68 variables.[4] Given the size of this deviation, a non-parametric statistical test was performed; more specifically, a Wilcoxon signed-rank test, one of the most commonly used tests to compare two related samples, in this case measurements of the emotional response to AD and AN. For each emotion, we will show first the contingency tables including the mean scores for every variable (Tables 3, 4, and 5) and then the results of the Wilcoxon signed-rank test.

2.7.1. Results for disgust

2.7.1.1. Results on the emotional impact of disgust films. Table 3 shows the mean scores obtained for the two versions (AD and AN) and both groups (visually impaired and sighted) regarding disgust films. HR data are the mean measurements of the HR during the viewing of the films. Items of the self-report questionnaire range from 1 to 5: 1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; 5 = extremely. However, valence data (pleasant/unpleasant) range from 1 to 10 (1 = totally pleasant; 10 = totally unpleasant).

Although the ratings for the AN version (see Table 3) were higher for all items of the questionnaire, the statistical test performed pointed to no statistically significant differences between the two versions, either for the blind or the sighted participants. However, it is important to note the differences obtained between the two versions for some important items, such as HR, where the AN version increased the HR of the visually impaired participants by over 1 beat/min more than the AD.

2.7.1.2. The quality of AD for disgust. As previously explained, the questionnaire on the quality of AD was only completed by the 20 visually impaired participants. Three questions asked the participants to rate the appropriateness of the language, the degree of

Table 3. Results for *disgust*.

	Visually impaired		Sighted	
	AD	AN	AD	AN
HR	0.85	1.98	2.13	2.8
UPSET	3.78	3.9	3.55	3.8
ALERT	3.35	3.3	2.93	3.03
DISGUSTED	4.25	4.28	4.33	4.43
CURIOUS	2.95	2.78	2.98	3
SURPRISED	3	3.1	3.28	3.25
NERVOUS	2.9	3.15	3.1	3.13
ACTIVE	3.25	3.23	2.9	3.05
LOATHING	4.2	4.2	3.83	4.05
ANXIOUS	2.88	3.08	3.25	3.33
PLEASANT/UNPLEASANT	8.4	8.73	8.23	8.13

Table 4. Results for *fear*.

	Visually impaired		Sighted	
	AD	AN	AD	AN
HR	1.42	1.65	3.85	4.7
UPSET	3.42	3.57	2.85	3.1
ALERT	3.8	3.93	3.57	3.83
AFRAID	3.33	3.43	3.1	3.18
CURIOUS	3.23	3.65	3.44	3.5
SURPRISED	2.78	3.1	2.7	2.88
NERVOUS	3.33	3.43	3.28	3.5
ACTIVE	2.43	3.68	3.3	3.3
SCARED	3.23	3.33	2.75	2.85
ANXIOUS	2.68	3.18	2.75	2.95
FRIGHTENED	3.1	3.13	2.73	2.95
PLEASANT/UNPLEASANT	7.18	7.23	5.75	6.18

difficulty to assimilate the language, and whether the AD enabled participants to imagine places, feelings, and actions. Table 6 summarizes the results obtained, portraying the number of participants who answered each question. Each of the 20 subjects listened to two clips in each version for the emotion of sadness, which makes 40 answers for each type of AD. The numbers in the table refer to the number of participants who answered each question.

Table 6 shows that, for the emotion of disgust, all participants considered the language in both versions appropriate or very appropriate, with slightly higher scores for the AN versions. At the same time, subjects also considered both versions easy to assimilate. Lastly, all participants could imagine locations, feelings, and actions, also with a slightly better result for the AN version for places (39 vs. 33), feelings (39 vs. 37), and actions (39 vs. 38).

One last question asked participants to list the features of the AD that they had enjoyed the most and the least. Participants were not forced to answer this question, so they only commented on features they especially liked and/or disliked. All answers have been summarized in Table 7 and correspond to one of the following four categories: the quality of the AD, the voice and narration style, the content of the description, and the subjective/objective details of the AD.

As can be seen in Table 7, the AN version received more comments than the AD. While five participants praised the quality of the AN versions, three participants did so for the AD version. In relation to the voice and narration style, which was exactly

Table 5. Results for *sadness*.

	Visually impaired		Sighted	
	AD	AN	AD	AN
HR	1.43	0.63	3.45	3.8
UPSET	3.15	3.75	2.73	3
ALERT	3.18	3.4	2.65	3.05
sad	3.8	4.2	3.65	3.9
CURIOUS	2.98	3.05	2.15	2.5
SURPRISED	2.43	2.55	2.28	2.5
NERVOUS	3.07	3.25	2.58	3.23
ACTIVE	3.25	3.23	2.4	3.05
SORROWFUL	3.38	3.65	3.05	3.3
ANXIOUS	2.73	3.03	3.08	3.28
PLEASANT/UNPLEASANT	6.48	6.7	5.6	6.43

Table 6. Quality of AD for *disgust*.

	Appropriateness of language				Ease of assimilation				Imagination of locations		Imagination of feelings		Imagination of actions	
40 answers	Very appr.	Appr.	Little appr.	Unap.	Very eas.	Easy.	Diff.	Very dif.	Y	NO	Y	NO	Y	NO
AD	13	27	0	0	26	14	0	0	33	7	37	3	38	2
AN	14	26	0	0	26	14	0	0	39	1	39	1	39	1

the same for both versions, the comments collected are rather striking, as two participants complained about the dullness of the voice only for the AN version, whereas one participant seemed to enjoy it. Regarding the content of the descriptions, all comments collected mentioned the quantity of information for both versions, a negative comment for each version and a positive comment for AD version. Finally, the inclusion of subjective details received four positive critiques. These results show that both AD and AN are positively received.They also show that personal preferences affect the reception of the different features of AD and AN regardless of the inclusion of subjective and/or emotional details.

2.7.1.3. Discussion on disgust. The hypothesis of the study was neglected for the emotion of disgust, for no statistically significant differences were found between the versions. This lack of statistically significant differences between the versions may be explained by previous findings (Ramos, 2015), which show that, for films of disgust, the especially visual nature of scenes relies highly on the verbal description for blind audiences to access the scenes. It might be the case that, for scenes of disgust, it is so crucial to offer a description of the images (regardless its nature), that the inclusion or exclusion of narrative, subjective, and emotional details shifts to the background.

However, the tendency observed in the data still points to a slight superiority in emotionality of the AN version (cf. Table 3) that should be further studied. These results imply

Table 7. Comments on the AD of *disgust* scenes, 'What did you like/dislike the most?'

	AD	AN
Quality	• Great AD, very well described • Very good AD • Very good AD	• Good description • Very good because illustrative • Great description • Very good description • Good description
Voice/narration		• Voice too monotonous • I don't like the voice • I like the pace of the narration, very relaxing
Content	• Good AD because concise • I prefer less description • Too illustrative	• Too much explanation
Subj/obj		• Subjectivity ('disgusting') is good to increase emotionality • Subjectivity ('repugnant') is good because it's very descriptive • I really like the inclusion of subjective details such as 'disgusting rat'

that the inclusion of subjective details is not necessarily inadequate and may even be advantageous in some cases, thus should not be fully discarded. Furthermore, the qualitative data obtained confirm these results. This conclusion may add weight to the voices that demand a more emotional implication on the part of the audio describers (Haig, 2005a; 2005b; Holland, 2009); contrary to what some authors first thought (Vázquez, 2006), the inclusion of this type of information does not hinder the enjoyment of films, and might even enhance their emotional reception.

2.7.2. Results for fear

2.7.2.1. Results on the emotional impact of fear films. Table 4 shows the mean scores for both versions (AD and AN) regarding the films of fear for the groups of visually impaired and sighted participants. HR data are the mean measurements of HR during the viewing of the films. All items of the self-report questionnaire range from 1 to 5: 1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; 5 = extremely. However, valence data (pleasant/unpleasant) range from 1 to 10 (1 = totally pleasant; 10 = totally unpleasant).

Again, the AN version obtained higher scores for most variables. However, statistically significant differences were only found for one variable in each case of visually impaired and sighted participants.

For the group of visually impaired participants, the Wilcoxon signed-rank test revealed statistically significant differences between the versions for the variable of ANXIOUS ($p = 0.09$). Figure 1 shows the results for both AD (white bar) and AN (dark, squared bar) versions. Figure 1 shows that participants felt more anxious when presented with the AN version of the AD, rated as a 3.18 (vs. 2.68 for the AD version).

In contrast, for the group of sighted participants, the Wilcoxon signed-rank showed that HR was the only variable with a statistical significance between the groups ($p = 0.061$). Again, the AN version produced a stronger increase in participants' HR than the AD version (3.8 vs. 4.7 beats/min). Figure 2 illustrates these differences.

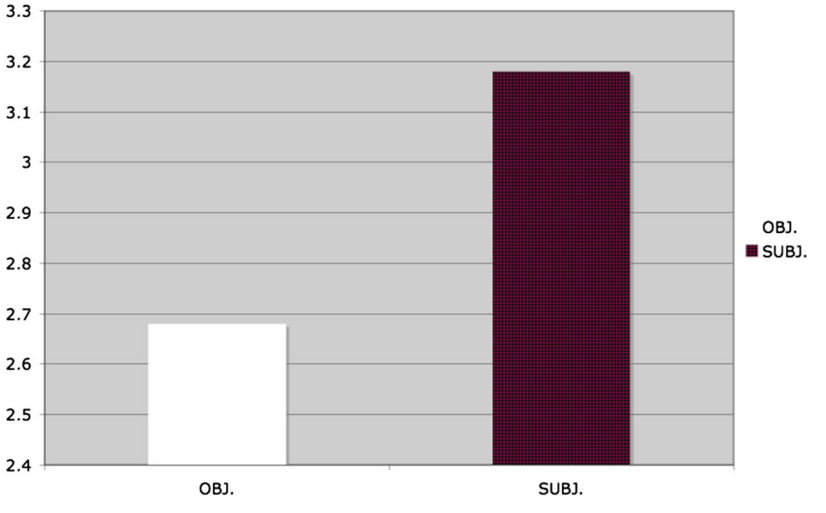

Figure 1. Statistically significant differences between the versions for visually impaired participants for *fear* (ANXIOUS).

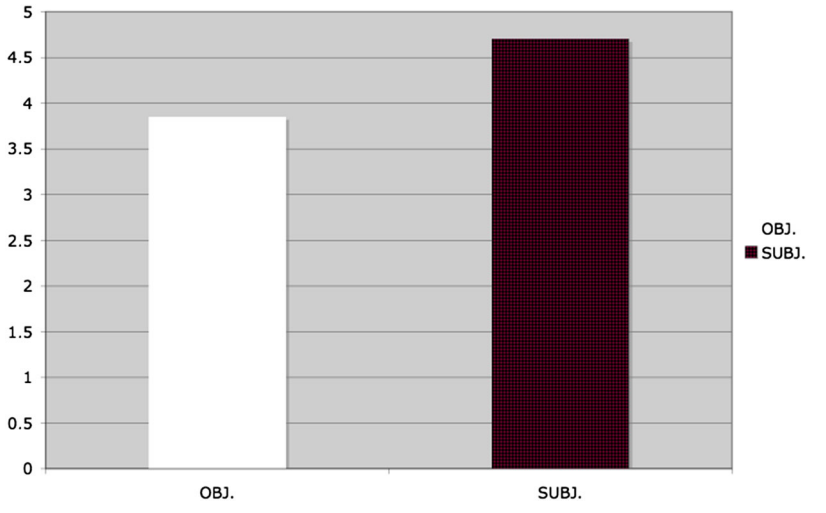

Figure 2. Statistically significant differences between the versions for sighted participants for *fear* (HR).

2.7.2.2. The quality of AD for fear. The opinions obtained through the questionnaire on the quality of the AD for fear are very similar to the results obtained for disgust. Table 8 reflects the answers to the questions on the appropriateness of language, the ease of assimilation, and the capacity to imagine locations, feelings, and actions. The numbers in the table refer to the number of participants who answered each question.

A great majority of participants considered the language of both versions to be appropriate or very appropriate, although the AN version received better ratings. Only one participant thought the language of the AD version was little appropriate. The same occurred in relation to the ease of assimilation: although both versions were considered to be easy or very easy to assimilate, the AN version seemed slightly easier to assimilate. Lastly, when listening to the AN version, participants found it easier to imagine locations (38 vs. 36), feelings (40 vs. 35), and actions (40 vs. 38). Especially interesting is the difference between these results for the capacity to imagine feelings: all participants could imagine the feelings of the characters when listening to the AN version, whereas five participants reported that the AD version did not enable them to imagine the feelings.

We will now proceed to describe the comments gathered in the open question. Table 9 summarizes all comments, again on four different topics: the overall quality of the AD, the voice and narration style, the content of the descriptions, and the inclusion of subjective details.

Again, the AN version induced more comments than the AD version. The overall quality of the AD is praised in both versions, although the AN version received more positive comments. Regarding the voice and narration style (which was treated equally for both versions), in this case the AD version was criticized twice while the AN version was praised.

Table 8. Quality of AD for *fear*.

	Appropriateness of language				Ease of assimilation				Imagination of locations		Imagination of feelings		Imagination of actions	
40 answers	Very appr.	Appr.	Little appr.	Unap.	Very eas.	Easy.	Diff.	Very dif.	Y	NO	Y	NO	Y	NO
AD	11	28	1	0	21	19	0	0	36	4	35	5	38	2
AN	16	24	0	0	23	17	0	0	38	2	40	0	40	0

Table 9. Comments on the AD of *fear* scenes, 'What did you like/dislike the most?'

	AD VERSION	AN VERSION
Quality	• Very good because descriptive	• Very well described • Everything perfect, the AD gets you into the scene • I give a 10 to the scene • Good description, accurate and simple
Voice/ narration	• The voice is too neutral and hinders emotion • Impersonal voice, it does not distract attention	• I like it because the voice is neutral
Content	• Long periods of silence make me nervous	• The story is difficult to follow • Lexical repetition takes me out of the scene
Subj/obj	• I miss a more emotional content, the description of the feelings • Too neutral; it breaks the tension	• I like subjective information such as 'mysteriously', it fosters suspense • 'The blood froze in her veins': too abstract, difficult to imagine

The content of the AD received several criticisms in both versions: the AD version was criticized for leaving long periods of silence (which were intentionally left to give importance to the music), whereas one participant complained that the story was too difficult to follow in the AN version, and another participant did not like the lexical repetition. Lastly, regarding the inclusion of subjective details, the AD version was criticized precisely for being too neutral and leaving out the descriptions of feelings, whereas the AN version was praised for the inclusion of evaluative devices and criticized for the use of metaphors.

2.7.2.3. Discussion on fear. As we have seen, the AN version obtained better results than the AD version for all items (cf. Table 4). However, only in the case of two variables were the differences between the versions large enough to show statistical significance. The self-report questionnaire revealed that the visually impaired became significantly more anxious with the AN than with the AD version. Being anxious is an emotional state related to fear and the concepts can even be considered interchangeable. Taking this into account, we can say that, for visually impaired participants, the AN version managed to increase the emotional impact of the scenes. For the group of sighted participants, on the other hand, the emotional impact was not significantly reflected in the self-report questionnaire, but was by the HR data: the AN version caused a significantly greater increase in HR. The tendencies observed in the quantitative data were to a certain extent confirmed by the questionnaire on the quality of AD completed by visually impaired participants: although both versions received similar comments, the language of the AN seemed to be better appreciated than the language of the AD. Furthermore, the subjective details of the AN version enabled participants to better imagine the locations, actions, and, especially, the feelings of the characters. Only one participant critically commented on the inclusion of metaphors, which contradicts the results found by Luque (2009) on the reception of metaphors in AD.

All these results suggest that the inclusion of subjective details in the AD may facilitate the comprehension and imagination of fear scenes, which resulted in greater emotional reception by sighted participants, as revealed by the greater increase of the HR, and by

visually impaired participants, as shown in the self-repost questionnaire (specifically, for the variable ANXIOUS). Unlike in the scenes of disgust, language seems to play a bigger part in the description of fear scenes. This difference might be related to the differences found by Ramos (2015) in the nature of both types of scene. Disgust scenes – at least those used in the study – are prominently visual and lack other linguistic or musical components; therefore, what is vital for the reception of disgust scenes is the description of what can be seen in the scene, regardless the inclusion or exclusion of subjective and emotional information. In contrast, fear scenes were more narrative, meaning that the mention of emotions and other evaluative mechanisms is more necessary for the emotional involvement of the audience.

2.7.3. Results for sadness

2.7.3.1. Results on the emotional impact of sadness films. Table 5 shows the mean scores obtained for sadness, for the two versions (AD vs. AN) and the two groups analysed (visually impaired and sighted participants). HR data are the mean measurements of the HR during the viewing of the films. All items of the self-report questionnaire range from 1 to 5: 1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; 5 = extremely. However, valence data (pleasant/unpleasant) range from 1 to 10 (1 = totally pleasant; 10 = totally unpleasant).

Again, the results show that the AN version obtained higher scores for most variables, an exception being the HR data of the visually impaired participants (greater that 1.4 beats/min for the AD version vs. greater than 0.6 beats/min for the AN version). For the group of sighted participants, the Wilcoxon signed-rank revealed statistically significant differences for three variables: NERVOUS (0.08), ACTIVE (0.038), and PLEASANT/UNPLEASANT (0.035). However, for the group of visually impaired participants, only the variable UPSET (0.024) showed a significant difference between the versions. Figures 3 (sighted) and 4 (visually impaired) illustrate the comparison between the AD (white bars) and AN (dark, squared bars).

Figure 3 shows that sighted participants became more NERVOUS (3.22 out of 5) and ACTIVE (3.05 out of 5) when presented with the AN version of the clips as opposed to

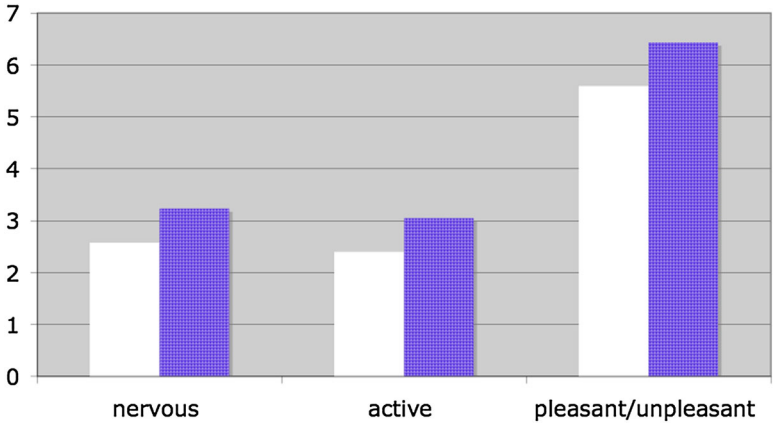

Figure 3. Statistically significant differences between the versions for sighted participants for *sadness* (NERVOUS, ACTIVE, PLEASANT/UNPLEASANT).

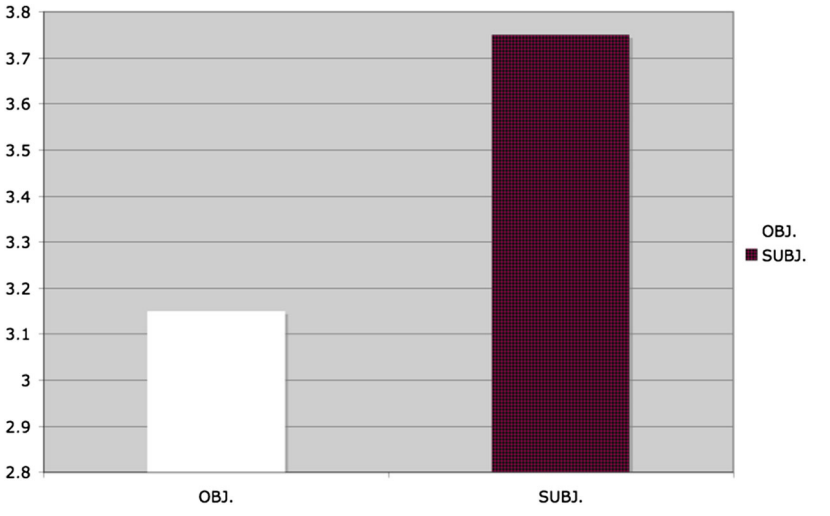

Figure 4. Statistically significant differences between the versions for visually impaired participants for *sadness* (UPSET).

the AD (2.57 and 2.4, respectively). Participants also considered that the films with the AN were very unpleasant (around 6.5 out of 10) in contrast with the AD (5 out of 10).

Figure 4 shows that people with visual disability felt significantly more UPSET when listening to the films with the AN version than the AD (around 4 out of 5 vs. 3 out of 5).

2.7.3.2. The quality of AD for sadness. The questionnaire on the quality of the AD asked participants whether they thought the language of the AD was appropriate and easy to assimilate, and whether they could imagine the locations, the actions, and the feelings of characters. Table 10 summarizes the results for the emotion of sadness. They refer to the number of participants who answered each question.

For sadness, most participants considered the language to be appropriate in both versions (cf. Table 10). However, the results are slightly worse than for the other two emotions, since two people considered the language of the AD version 'little appropriate'. Nonetheless, the results for the AN version are still better than for the AD version. Regarding the assimilation of the language, the language was easily assimilated in both versions. Lastly, most participants could imagine locations, actions, and emotions, the results for the AN version still being slightly better. Two participants even mentioned that they were unable to imagine the feelings of characters when listening to the AD version. Table 11 summarizes the comments obtained through the open question.

As happened with *disgust* and *fear*, the AN version received more comments. Regarding the overall quality of the language used, the AN version received four positive comments

Table 10. Quality of AD for *sadness*.

	Appropriateness of language				Ease of assimilation				Imagination of locations		Imagination of feelings		Imagination of actions	
40 answers	Very appr.	Appr.	Little appr.	Unap.	Very eas.	Easy.	Diff.	Very dif.	Y	NO	Y	NO	Y	NO
AD	11	27	2	0	25	15	0	0	36	4	38	2	39	1
AN	12	28	0	0	24	16	0	0	38	2	40	0	39	1

Table 11. Comments on the AD of *sadness* scenes, 'What did you like/dislike the most?'

	AD	AN
Quality	• The AD puts you in the action • The settings are not completely clear	• I like the description of the forest • Very good AD • Good AD • I wanted to stop listening because it was too impressive, too good a description
Voice/ narration	• The voice does not match the style of the film; too neutral tone • The voice is too impersonal for such a film • The voice lacks emotions	• I don't like the intonation • Very good diction; the voice is clear and nice
Content	• Very good description of the place • Good because concise • Too much information • Redundant information (she is crying)	• Too much silence when they are injecting the lethal solution • I did not understand it well
Subj/obj		• It is irrelevant to say that the character is very sad • The metaphor 'the blood froze in her veins' is too literary, it takes me out of the scene, too subjective • I don't like being told that she dies; it is too objective • Very good because the music accompanies and the adjectives accentuate the situation

for the good descriptions and the capacity to elicit emotions, whereas the AD version received one positive and one negative comment. In relation to the voice and narration style, the neutral intonation was criticized both in the AD (three comments) and AN (one comment) versions. However, one participant did praise the clarity of the voice on the AN. Again, the contradictory comments on the narration style show that personal preferences can be rather arbitrary, since this feature was treated equally for both versions.

In regard to the content of the descriptions, the AD received two positive and two negative comments, the latter related to the redundancy of information. The AN only received criticisms for the content, arguing that long silences are annoying and that one scene was difficult to understand. The inclusion of subjective details was also criticized. Two participants rejected metaphors and one subject did not like the explanation of the feelings. Lastly, one participant praised the abundance of adjectives, typical of the AN, considering the combination of adjectives with music to be very effective in the creation of emotions. These qualitative results show that participants are more critical with the language used for sadness than for fear or disgust scenes in both versions.

2.7.3.3. Discussion on sadness. As with the other two emotions, the AN version seemed to prompt a stronger emotional impact in the audience than the AD version, especially for the group of sighted participants, for whom this superiority was evident in three variables (NERVOUS, ACTIVE, and VALENCE). For the group of visually impaired participants, the AN versions obtained significantly better results for the variable UPSET. The fact that the difference between the versions was greater for sadness than for fear and, especially, for disgust can also be explained by the results found by Ramos (2015) in a previous experiment on

the emotional impact of AD. The author showed that sadness scenes have a strong narrative character, which solidly relies on linguistic cues and music to convey meaning and emotions. As Smith (2006–2007) explained, films manage to elicit emotions by the use of redundant cues that, as Ramos (2015) demonstrates, are very evident in sound for the scenes of sadness. In this kind of scene, AD seems to be less necessary than in other, more visual, scenes, such as disgust, as sadness is elicited by the dialogues and music of the scenes alone (Juslin, Liljeström, Laukka, Västfjäll, & Lundqvist, 2011; Vuoskoski & Eerola, 2012). In this kind of scene, the choice of language seems to play an especially relevant role.

The comments obtained in the questionnaire also support these findings: participants seemed to give more importance to language in the case of sadness than for the other two emotions because they were more critical about the content, the appropriateness, and the inclusion of subjective details in both versions. The fact that the meaning and emotional potential of the film can be grasped through music and dialogue alone might make the use of metaphors and other subjective information dispensable and even redundant, as subjects already feel emotions without the AD. This does not mean, however, that all subjective details should be suppressed: despite some criticisms, the AN version still obtained better results for all items and better comments on the quality, language, and capacity of AD to conjure up locations, actions, and emotions.

What these data seem to reveal is that language acquires a special importance in sadness scenes, highlighting the fact that the AD should be developed carefully to avoid the inclusion of redundant information, something already mentioned by Peli, Fine, and Labianca (1996). At the same time, it is necessary to let music do its job in the emotion-creation process, and leave it in the prominent position it deserves. Nonetheless, another in-depth study should be conducted to determine exactly what kind of subjective information is accepted and effective in sadness scenes by recording the emotional reaction of participants dynamically in time (Krumhansl, 1997) and testing the efficacy of different types of AN versions of AD.

2.8. General discussion and conclusions

The main aim of the present study was to compare the emotional impact of a more objective and neutral AD version with a more narrative version, including subjective and emotional details (AN). Our results show that in the context of this study the AN version elicits a stronger emotional response in the audience in most cases, especially for scenes of fear and sadness. Also, contrary to the belief of those promoting the objectivity criterion, subjective and emotional details, such as inferences, metaphors, information on the subjects' emotional state, and evaluation tools are widely accepted by the audience.

However, our results show a clear divergence between the data obtained for the three emotions analysed: whereas no statistically significant differences were found between AD and AN for scenes of disgust, the statistical tests revealed more important differences for fear and, especially, sadness. These differences observed between the three emotions can be interpreted in relation to those obtained by Ramos (2015). The author tested the emotional impact of scenes of sadness, fear, and disgust in three modalities (scenes with sound and images, scenes with only sound, and scenes including a verbal description

of the images) and showed that the necessity of describing the images for visually impaired and blindfolded sighted audiences depends to a great extent on the nature of the films: in the study, scenes of disgust are mainly visual and thus need to be described for those who cannot see, whereas fear and, especially, sadness scenes tend to contain sound cues which help those audiences obtain the meaning and emotional content independently of the verbal description. We could thus argue that these results also explain the differences found between the emotions in the present study. When it comes to the most visual scenes (such as those eliciting disgust), our data reveal the importance of AD for describing the visual content, which cannot be inferred from the sound. In such cases, the inclusion of emotional details, although accepted by participants, does not represent a big difference in terms of triggering emotions in the audience. In contrast, in more narrative scenes, such as those eliciting fear and, especially, sadness, language has much more relevance. In such cases, the soundtrack of the film can trigger emotions on its own, so the AD becomes an ancillary channel of information. In this kind of narrative scene, language seems to dominate the other audible elements: our results imply that, for scenes eliciting fear or sadness, an AN version will obtain better results than the AD version, even though some subjective details were criticized by the subjects for the emotion 'sadness'. It is thus advisable to act with extreme care in the selection of language when audio describing scenes which already rely on a rich source of audio information. The results of the study suggest that each type of scene presents certain problems, which should be dealt with on an individual basis. Some authors (Braun, 2008; Poethe, 2005; Ramos & Rojo, 2014) already signalled the need to adapt AD to the style of the film. Moreover, the results from the present research indicate that the characteristics of each scene (or each film genre) should determine the basic details in the elaboration of AD, such as the amount of information or the lexical choice. This supports the creation of modular rules (Vercauteren, 2007) specifying different guidelines for each type of scene.

However, the main conclusion drawn from the present study is more fundamental: our results imply that more emotional AD can be offered or, at least, that there is no reason not to make use of this kind of information. For the scenes of fear and sadness, the AN prompted a stronger emotional reaction in the audience than the AD. Furthermore, the qualitative data gathered in the retrospective questionnaires showed that visually impaired participants fully accept and enjoy the inclusion of subjective and emotional information. In this sense, the results from the study can open the door to start accepting, or at least further researching the potential effects of, recent suggestions by authors who demand more involvement on the part of the audio describer and advocate an audio-narration that includes subjective details, rather than a more objective AD (Kruger, 2010; Finbow, 2010). Although we were not able to draw strong conclusions on the differences between both versions, we did show that AN is a viable option that should not be fully discarded. The present study thus shows that there are other possible ways of elaborating an AD and that, based on techniques taken from literature, audio describers should not simply fill in the blanks but take control of the narration in order to create a unique experience for the audience (Yeung, 2007). The results from this study are merely a small contribution in this sense, though they suggest that the time has come to overcome the fear of abandoning objectivity and faithfulness to the source text and create something similar to the special experience that cinema offers.

It is, however, necessary to note some of the limitations and drawbacks of the present study. First, the comments of the participants underline the different tastes and inclinations of an audience. What some participants praise is precisely the target of other participants' criticism; it will never be possible to please everyone. However, this is exactly why it is important to conduct controlled large-scale reception studies such as the one presented here, as they help us assess the preferences and needs of an audience. Another important limitation of the study is the fact that, despite all the physiological and psychological measurements of emotions, the statistical analyses show that the differences between versions are not large enough to draw definite conclusions. However, the tendencies observed are encouraging enough to continue research in this direction, and we hope that this contribution might be the first step in the study of the emotional impact of AD and the reception of more subjective and narrative types of translation. In this sense, it would be highly advisable to widen the scope of the study, including larger and different samples, diverse physiological measurements of emotions (e.g. galvanic skin response, Wiens et al., 2003; heart variability, Appelhans & Luecken, 2006; cortisol secretion, Sudheimer, 2009), and other target emotions (happiness, rage, surprise) in order to obtain a clearer picture of the impact the linguistic selection may have on the emotional reception of AD.

Notes

1. Miall and Kuiken (1999) define literariness in the light of previous findings on the processing of texts and propose a three-component model of literary texts involving foregrounded text features, readers' defamiliarizing responses to them, and the modification of personal meaning as a consequence. The main result of their study is that feeling, not cognition, is the main vehicle for the processes of literary understanding.
2. Prior exposure to films was controlled (cf. Section 2.4).
3. Clips 1, 8, and 15 were used as a control. This is explained later in the paper, under section 2.6, Control of extraneous variables.
4. For each of the 15 films, the variables are the selected items of the PANAS-X (cf. Table 2) and HR data.

Acknowledgements

I would like to thank Dr. Ana Mª Rojo López for her extremely valuable help and support in the process of conducting and writing this piece of research.

Disclosure statement

No potential conflict of interest was reported by the author.

Funding

This research is supported by the Spanish Ministry of Economy and Competitivity (Grant FFI2013-45553-C3-3-P) and the Seneca Foundation, Regional Agency of Science and Technology (Grant 19238/PI714).

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Filmography

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