1. Introduction

Although the professional practice of audio description (AD) can be traced back to the 1980s, it was not until the early 2000s that academic interest started to flourish. Normally defined as a form of intersemiotic translation (Jakobson, 1959), the study of AD has been traditionally approached by scholars working in Audiovisual Translation and, more specifically, by those interested in Media Accessibility. This chapter will provide a brief overview of the existing research by focusing on both screen AD, which makes cinematic and televised products accessible to blind and partially sighted people (BPS), and non-screen AD, which is delivered in museums and at live events. It should be noted, however, that although AD scholarship is growing rapidly, many areas of this discipline are still under-researched.

2. Research in screen audio description

Most of the research conducted so far has focused on film AD. First in the form of descriptive studies and later complemented by experimental research, the existing body of literature has dealt with three main elements: AD scripts in conjunction with the films that they accompany, sighted viewers and their perception of audiovisual scenes and BPS users and their reception of audio described materials.

2.1 What have we learnt from the study of AD scripts?

Many scholars have taken AD scripts as their object of study, which has furthered our knowledge of the filmic, linguistic, narrative and practical aspects of screen AD.

2.1.1 Filmic aspects of AD

Films are shot in a certain manner to elicit specific responses from the audience, which has led AD researchers to study how the filmic techniques and camera work used by filmmakers are conveyed in audio described texts. Scholars have looked at how audio describers deal...
with written text or graphic elements displayed on screen (Matamala, 2014; Orero, 2011), at the treatment of light and contrast (Maszerowska, 2012, 2013) and they have explored how visually compelling films, in which the image aesthetics are paramount, have been described (Matamala & Remael, 2015). These kinds of studies soon stressed the fact that audio describers employ a variety of strategies to transmit the meaning of filmic techniques to end-users. Since AD scripts are constrained by the time available for each description and given that they work in conjunction with other film elements such as dialogues and sounds, researchers have found that one-size-fits-all solutions are seldom applied. Instead, audio describers carefully analyse each scene in order to find the best possible solution.

In addition to the aforementioned topics and considering the role of camera work in cinema, researchers have explored the use of filmic language in AD. The first guidelines for professional practitioners recommended limiting the cinematic terms since they “may not mean anything” to some users (ITC, 2000: 6). The underlying assumption was that congenitally blind individuals would find it challenging to make sense of the cinematic terms because they had never perceived those techniques. However, research on this topic has found that camera work may help transmit meaning in some scenes and has therefore questioned the recommendations against the inclusion of cinematic language in AD scripts. As Perego (2014: 81) puts it, taking into account the camera work in AD may, in some cases, be “the only way to respect the aesthetic and narrative integrity of the original along with the needs of sight impaired viewers”.

2.1.2 Linguistic aspects of AD

Practitioners avoid interpreting the images for those who cannot perceive them. Instead, they focus their descriptions on the visual elements in films following, whenever possible, the “WYSIWYS (What You See Is What You Say)” approach (Snyder, 2007: 102). With possibly the exception of taboo scenes, which seem to limit the verbalisation of what is shown on screen (Sanz-Moreno, 2017), the WYSIWYS approach favours the provision of visual over narrative information. Consequently, AD texts show particular linguistic properties that have been studied quite extensively.

Research in this area began with several small-scale projects that investigated the linguistic aspects of AD using descriptive and contrastive approaches. Their findings suggested that English ADs showed specific structural components, such as a low incidence of deictic markers or a preponderance of subordinate clauses (Bourne, 2007; Piety, 2004). When comparing ADs in various languages, the first analyses revealed differences in the length, linguistic structures and detail of the descriptions provided (Arma. 2012; Bourne and Jiménez Hurtado. 2007; Matamala and Rami. 2009).

In addition to the aforementioned studies, a set of comprehensive research projects (TRACCE, Television in Words, Reviers’ [2017] doctoral dissertation and Visuals into Words) have investigated the linguistic patterns of AD using corpus methodologies. These projects have found that AD scripts feature local grammars with particular syntactical, semantical and lexical choices. For instance, verbs and nouns tend to be very prominent in AD, while the frequency of adverbs and adjectives seems to be lower (Jiménez Hurtado & Soler Gallego, 2013; Reviers, 2017; Matamala, 2018: Salway, 2007). Also, possibly due to the WYSIWYS approach, adjectives describing people’s mental states, frequent in general language corpora, are seldom present in AD (Arma, 2011; Reviers, 2017). By analysing existing scripts, this line of research has provided evidence that AD has particular linguistic features, which result from its visual focus, multimodal narrative and from the time constraints that audio describers need
to face. Furthermore, although some differences have been identified across languages, AD differs from prototypical spoken and written texts, which has led scholars to theorise about a specific language of AD (Arma, 2012; Salway, 2007), with some even considering that of AD as a specialised language (Reviers et al., 2015).

### 2.1.3 Narrative aspects of AD

AD narratives emerge from the interaction between the AD script, the film dialogues and its soundtrack. In this complex multimodal scheme, research has looked at how practitioners recreate the cohesion and coherence of filmic narratives. Although cohesive mechanisms have not been thoroughly explored in AD, two studies undertaken in Flanders revealed that cohesion was achieved through referential and lexical devices, but also through multimodal redundancy (Remael & Reviers, 2018; Reviers & Remael, 2015). These studies also found that, in order to recreate cohesion in audio described narratives, BPS users may need to interpret implicits and trigger more inferences than sighted viewers, which poses the interesting yet uninvestigated question as to whether audio described films require more cognitive effort than the original audiovisual materials. Media Accessibility scholars have also tackled how intra- and inter-modal coherence are achieved in audio described films (Braun, 2011; Taylor, 2014). They have looked at the functions that different sounds may have, at their interactions with the images (Remael, 2012) and at particular instances, such as silence (Szarkowska & Orero, 2014) and sung music (Igareda, 2012). These studies have highlighted that sound (or absence thereof) is an important meaning conveyor and that audio describers should take advantage of it to build up the narrative coherence of their scripts.

Alongside cohesion and coherence, research has addressed how BPS individuals mentally reconstruct audio described materials. This recreation process is fundamental to understand fictional narratives and it is therefore important for scholars interested in exploring how audiences make sense of audio described films. Additionally, having some insights on how users reconstruct AD narratives could help practitioners select the most relevant contents to include in their scripts (Vercauteren, 2016). In order to conceptualise how BPS audiences recreate audio described narratives, researchers have drawn on Johnson-Laird’s (1983) Mental Model Theory, according to which those attempting to comprehend narrative texts create mental representations of the fictional story. AD users are supposed to outline mental models with the aid of the verbal, aural and any visual information that they perceive. These mental representations are believed to help BPS audiences make sense of the spatio-temporal settings (Vercauteren & Remael, 2014) and of the overall described situations (Braun, 2007), including the characters and, especially, their mental states. Characters are pivotal for the narrative development and their psychology is believed to occupy a central position within the characters’ mental models since their mental states (their emotions, motivations, goals, hopes, beliefs, desires and feelings) catalyse their actions (Fresno, 2016).

It could be argued that understanding how the characters feel and act becomes essential to comprehend a film. Nevertheless, the existing AD literature has signalled the difficulty involved in communicating the characters’ mental states through purely denotative descriptions, particularly when it comes to facial expressions (Igareda, 2011; Mazur, 2014). Since the meaning of some of these gestures is not universal and may not always be straightforward, researchers have discussed moving from the traditional WYSIWYS descriptions to alternative ADs that provide users with the narrative meaning of the images (Szarkowska, 2013; Vercauteren & Orero, 2013; Walczak & Fryer, 2017). These descriptions fall under Kruger’s (2010) “audionarrations”, a term that he coined to account for scripts with different degrees of...
narrativity. At one extreme of the continuum, Kruger (2010: 233) allocates “explicitly descriptive ADs”, which describe merely visual elements and are close to the “clinically objective”, while his “audionarrations” include traces of narrativity and subjective interpretation in order to help users evoke the depicted story. In this regard, Holsanova (2016) notes that the mental imagery created by congenitally blind individuals may differ from that of sighted viewers and she argues in favour of a “meeting of minds perspective” (Holsanova, 2016: 59), in which a dialogue between audio describers and BPS individuals could lead to scripts more aligned to the users’ needs.

2.1.4 Practical aspects of AD

Since AD has traditionally been embraced within Audiovisual Translation, the feasibility of translating scripts was soon put on the table. One of the first reservations, however, had to do with the conveyance of the culturemes present in films, which were thought to lead to coherence gaps in the translated texts due to the time constraints inherent in AD (Gronek et al., 2012). However, while culture-bound elements certainly pose challenges for audio describers (see Jankowska in this volume), skilled practitioners have successfully overcome these difficulties by applying a number of strategies well-known to audiovisual translators, such as explicitation, specification or generalisation, among others (Szarkowska & Jankowska, 2015). Additional reservations against AD translation were related to its time efficiency. Unfortunately, the scarce research dealing with this topic has drawn inconclusive results, with one study conducted in Poland finding AD creation as considerably more time-consuming than translation (Jankowska, 2015) and one research carried out in Catalonia reporting that AD creation took a shorter time than human translation and almost as long as machine translation followed by post-editing (Fernández-Torné & Matamala, 2016).

In addition to the feasibility of AD translation, researchers have begun to explore potential applications of artificial intelligence to the production of AD scripts. The first study assessing the use of machine learning and computer vision for AD purposes (Braun & Starr, 2019) discussed some of the challenges encountered when exploring the creation of semi-automated descriptions. The researchers concluded that, although these technologies might be used when quality is not paramount, they are not ready to successfully deal with complex narrative information such as that produced in film AD (see Braun and Starr in this volume).

2.2 What have we learnt from sighted viewers?

Several research projects have studied how viewers perceive, make sense of and describe audiovisual scenes in order to find criteria that may help select and describe more effectively the visual information contained in films.

The Pear Tree Project, in which participants from eleven countries watched the same mute short film and were asked to explain what they had seen, is an example of this kind of research. Developed as part of the DTV4All project, the aim of this study was to analyse how people from different nationalities perceived the information and wrote about it (Mazur & Kruger, 2012) in order to find cross-linguistic and cross-cultural common trends. However, this proved challenging since the findings of the project showed ample differences in the attention that participants from each country paid to several elements in the film (Mazur & Chmiel, 2012), as well as in the language that they used to describe the story (Taylor & Mauro, 2012).

In this line of research, eye tracking technologies have also been employed to investigate the spectators’ viewing patterns. The experiments conducted so far have found that viewers do
not process everything that they see on screen (Orero & Vilaró, 2012, 2014), that sound effects guide the viewers’ gaze (Vilaró et al., 2012), that narrative saliency could be used as a criteria for audio describers to select relevant information (Kruger, 2012) and that AD has the potential to reinforce the recall of secondary visual elements that tend to be forgotten when no AD is provided (Vilaró & Orero, 2013). In addition, eye tracking technologies have helped create AD scripts that closely reflect the perception of sighted viewers. Interestingly, two studies comparing the reception of original ADs to these modified descriptions found that the latter elicited a better reaction from users (Chmiel & Mazur, 2016; di Giovanni, 2014).

2.3 What have we learnt from BPS users?

In order to find optimal AD strategies, researchers have surveyed end-users’ preferences (e.g., Rai, 2009). Unsurprisingly, the tastes of the BPS have proven to be heterogeneous, which has often led to inconclusive results regarding a variety of aspects, such as the intonation that should be used when voicing AD scripts, the inclusion of cinematic language in the descriptions or the level of detail that should be provided, among many others (Cabeza Cáceres, 2013; Chmiel & Mazur, 2016; Fresno, 2014). Furthermore, although this kind of research informs about what users (dis)like, it does not look at what works best for them in terms of cognition and filmic experience. The next section will explain how, in order to fill this gap, a number of scholars have explored the attitudes of BPS toward different AD styles, but have also conducted reception studies to test how different AD strategies affect the users’ comprehension of, immersion in and emotional response to audio described films. Results are briefly illustrated in the following paragraphs.

2.3.1 Studies exploring filmic and technical aspects of AD

Beginning with filmic aspects of AD, several researchers have tested if BPS audiences understand and enjoy ADs with explicit mentions to the camera work (e.g., “close-up”, “cut”, “wide shot”). In an exploratory study aimed at assessing the potential use of audio introductions, Fryer and Romero-Fresco (2014) created AD scripts that included cinematic terms. According to the authors, 25% of their participants considered the cinematic ADs “too technical”, but these descriptions were generally well accepted by the users (Fryer and Romero-Fresco, 2014: 292). This research was later replicated in Italy (di Giovanni & Morettini, 2012) and Poland (Jankowska, 2013) with comparable results. Another study along similar lines found that congenitally blind respondents preferred standard ADs, whereas those who had acquired blindness late in life favoured their cinematic counterparts. However, no comprehension differences were found across the two styles (Fryer & Freeman, 2013). As far as preferences are concerned, Lopez et al. (2018) surveyed 127 BPS individuals in the UK, who expressed no particular interest in cinematic ADs. More recently, Bardini (2020) compared the reception of standard descriptions, cinematic ADs (which included explicit mentions of filmic techniques and the interpretation of their meaning) and narrative ADs (which re-narrated the scenes and combined iconic descriptions with the interpretation of film language). The author found that cinematic and narrative ADs provided better access than standard ADs to the emotional aspects of the film. The findings of these studies suggest that the inclusion of cinematic language in AD scripts is not perceived as problematic by BPS users and that its integration within narrative ADs may lead to an overall better filmic experience.

Moving on to technical aspects, the use of artificial voices to narrate ADs has received a lot of attention from the academic community. Users’ reaction to synthesised voicing in a variety
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of genres has been tested in Poland and Spain, with ADs voiced by humans being preferred. However, the participants in these tests expressed their willingness to accept artificial voices as a compromise solution when human narrations could not be provided (Fernández Torné & Matamala, 2015; Szarkowska, 2011; Walczak & Szarkowska, 2012).

2.3.2 Studies exploring users’ recall, comprehension, immersion and emotional response

Research on these topics is scarce in AD. However, although much work is still needed to address these issues systematically and comprehensively, a few reception studies have provided the first stepping-stones in this direction.

In an attempt to explore AD memorability, the first research endeavour focusing on recall analysed how BPS users remembered characters. This study revealed that limiting the information provided in the scripts and dividing the characters’ ADs into short units delivered throughout a scene improved the participants’ recall, especially for individuals with lower memory spans (Fresno et al., 2014). This research also found that memory was more efficient for characters’ mental states than for any other feature, thus pointing to the prominence of the characters’ psychology within the mental representations created by AD users. A second reception study that reported on recall was conducted by Chmiel and Mazur (2016), who exposed their BPS participants to scenes that had been audio described following two different styles: one that conveyed the visual elements of the film (descriptive AD) and one that transmitted the narrative effect of what was depicted on screen (narrative AD). According to the researchers, the latter contributed to a more efficient recall of the characters’ names and to a better comprehension of the gestures that they performed. However, when it came to remembering the spatio-temporal location of the plot, no clear advantage was found for either of the two AD styles.

Following with comprehension, research has shown that BPS audiences seem to subjectively perceive the AD narrator’s intonation as an aid to their understanding of audio described scenes (Iglesias Fernández et al., 2015). However, when testing objectively the relationship between intonation and comprehension, research results suggest otherwise. Cabeza Cáceres (2013) explored how the users’ understanding of audio described scenes was influenced by intonation, the speed at which ADs were narrated and the degree of explicitation included in the descriptions. He concluded that ADs with vivid intonations were comprehended equally well as those featuring neutral voices. Nevertheless, his study revealed that his BPS participants achieved comprehension levels comparable to those attained by his control group, formed by sighted individuals, when explicit and slow ADs (delivered at around 14 characters per second) were offered to the users. When speed was increased or explicitation was decreased, comprehension was more likely to be compromised.

Arguably, AD should allow users to comprehend audiovisual materials. Ideally, however, it should offer a richer experience that leads BPS audiences to engage with, get immersed in, emotionally respond to and ultimately enjoy audio described films (Fresno, 2017). Several researchers have explored immersion in AD, mainly by looking at the users’ sense of presence, that is, the feeling of being in the mediated world. This line of research has shown that presence is experienced differently by sighted and BPS individuals, with the former reaching higher levels when ADs are not provided. For BPS audiences, however, presence is not reduced with AD (Fryer & Freeman, 2014) and it increases when viewers are exposed to either standard or cinematic descriptions (Fryer & Freeman, 2012, 2013). Two aspects seem to influence presence: the description style and its vocal delivery.
Creative ADs, with filmic language and subjectivity, have been found to boost presence over standard ADs (Walczak & Fryer, 2017). Additionally, Walczak and Fryer (2018) found that human-narrated ADs outperformed synthetic voices in dramas, but not in less emotional genres, such as documentary films, where no differences in the sense of presence were reported.

Finally, when it comes to users’ emotional response, Ramos Caro (2016) undertook a reception study in which she exposed her sighted and BPS participants to scenes eliciting disgust, fear and sadness. Her results, obtained through self-reporting questionnaires as well as through heart rate measurements, showed that AD (in conjunction with the film soundtrack and its dialogues) is able to elicit emotional responses as intense as those reported by sighted viewers. Further tests by the same author compared the emotional response elicited by neutral and non-objective ADs for scenes portraying fear and sadness, with results revealing an advantage of the latter.

These studies point to the amount of information provided in the scripts, its fragmentation, the style of the AD and its vocal delivery as having potential effects on the users’ reception of audio described narratives. Further research is needed to expand our understanding of how each of these aspects, as well as the interaction between them, affects the cognitive, immersive and emotional dimension of the filmic experience.

3. Research in non-screen audio description

In addition to film and television, research has also dealt with AD in museums, cultural venues and live events, mainly opera and theatre performances.

3.1 Museums and cultural venues

Although not extensive yet, research in museum AD has increased in the last few years, focusing primarily on two aspects: the characteristics of audio descriptive texts and how BPS (and all) experience museums.

3.1.1 What have we learnt from AD texts?

Communication in museums can be multidisciplinary, multimodal, multilingual and multifunctional (Jiménez Hurtado et al., 2012). In this context, two of the resources that are normally used to communicate with visitors are audio guides (AGs) and audio descriptive guides (ADGs). They both share an informative purpose, but the latter are designed with the BPS in mind and cater to their needs including, among other things, visual descriptions of the artefacts exhibited. As in screen AD, researchers have explored the textual characteristics of ADGs to find out if museum AD features distinctive linguistic and semantic patterns that could account for a specific textual genre.

A number of projects have taken ADGs from art museums as their object of study. In terms of their semantic properties, a corpus-based study that compared English AGs and ADGs of the same paintings showed that both resources featured verbs describing existence, action, perception and movement. However, whereas the AGs included verbs designating additional semantic categories (e.g., sentiment), ADGs featured more lexical items describing the visual composition and spatial position of the elements in the paintings (Jiménez Hurtado and Soler Gallego, 2015). This study, together with a follow-up research focused on the lexical and syntactical structures of the same ADGs (Soler Gallego, 2015), pointed to pictorial AD as having
its own local grammar, different from that found in regular language and also different from that present in screen AD.

Given this particular language identified in art AD, several studies have explored whether the descriptions offered in museums follow the recommendations in guidelines and publications that delineate descriptive methods (RNIB & VocalEyes, 2003; Snyder, 2010). Research looking at the type-token ratio, lexical density, mean word length and mean sentence length of museum ADs has revealed the use of diverse and vivid language with abundant adjectives, as recommended in the guidelines. However, contrary to the indications in these documents, some ADs contain long sentences and technical art terms, possibly as a strategy to provide the necessary information to the user while adjusting to the concision requirements in this context (Perego, 2019). This line of research has also shown that, although guidelines encourage practitioners to describe the exhibition space and to provide route directions, these indications tend to be under-represented in current ADGs (Soler Gallego, 2016; though see Perego and Taylor in this volume). Additionally, ADGs generally comply with the existing recommendations in terms of the visual information described, the level of detail provided and the external point of view adopted by the describers. Nevertheless, semantic analyses have found that art descriptions are not free from subjective and interpretative language (Soler Gallego, 2018). This brings us, once again, to a topic that we covered for screen AD and that is equally relevant for museums and cultural venues: subjectivity.

3.1.2 What have we learnt from practitioners and end-users?

We finished the previous section mentioning subjectivity, which has been addressed in museum AD research through product-oriented linguistic analyses such as those described before. However, the need to embrace a certain degree of interpretation when describing for cultural venues has also been tackled from a user-oriented perspective.

Drawing on literature on Neuroscience and Cognitive Psychology, Eardley et al. (2017) explain that multisensory information aids the acquisition of factual knowledge and contributes to the development of autobiographical memories. Therefore, multisensory environments can contribute to creating informative and memorable museum visits. An example of a multisensory experience could be one in which AD is used to guide the hand movements of BPS individuals over a touchable replica of an artwork in order to optimise their recognition of the haptic model. In these kinds of multisensory environments, the verbal description becomes a prominent element since it helps the BPS integrate the sensory input that they receive (Fryer, 2016). However, for this to take place successfully, audio describers need to carefully analyse the clear and ambiguous signs of an artwork (De Coster & Mühleis, 2007), and craft their descriptions so that they properly build intermodal coherence across three elements: the original artwork, the AD and the tactile model (Soler Gallego, 2018). Although much research is still needed in this area, the first small-scale study exploring the reception of haptic materials by BPS participants found that multisensory environments combining AD and tactile models in 3D led to increased levels of satisfaction and self-reported comprehension, as compared to monosensory experiences with only the description or the replica (Cabezas Gay, 2017) (and see Secchi in this volume).

Cultural venues aim to inform and engage all visitors. However, there is no consensus as to how engagement and enjoyment can be better achieved in accessible museum visits. From a research standpoint, it has been proposed that museum AD would benefit from alternative approaches, more prone to subjectivity and interpretation, to boost immersion and memorability (Eardley et al., 2016, 2017; Hutchinson and Eardley in this volume [see also 2019a];
Neves, 2012, 2016). When it comes to practitioners, however, subjectivity and interpretation become thorny issues. Because museum AD is understood in the United States mainly as a translation of visual elements, audio describers trained in this tradition prefer merely visual descriptions. However, European practitioners seem more inclined to accept narrative museum ADs, which focus on the visual information but also on its narrative meaning (Hutchinson & Eardley, 2019b). Several publications have described how various AD initiatives were designed and implemented in different museums and they have occasionally reported anecdotal evidence suggesting that BPS individuals are satisfied with subjective ADGs (Eardley et al., 2017; Neves, 2012, 2016). However, the same can be said of ADGs created according to the traditional guidelines (Soler Gallego and Chica Nuñez, 2014). Under this light, the only way to find out if narrative ADs promote better museum experiences than standard ADs is by conducting rigorous experimental research that compares the reception of both styles.

Another interesting approach to museum AD was followed in the Open Art project, aimed at creating an app to provide modern art descriptions for BPS and sighted users alike (Szarkowska et al., 2016). Cueing on the notion of Universal Design, several images of an artwork accompanied by an audio narration in several languages were provided to all visitors, regardless of their visual capabilities. In the reception study that was carried out (with 98% sighted participants and 2% BPS), the researchers tested two different descriptions of the same artwork: one followed the traditional approach and the other one was shorter and more interpretative. Participants perceived the latter as more necessary and interesting and it also led to increased levels of self-reported comprehensibility. This research found no differences in terms of enjoyment for sighted and BPS visitors (Jankowska et al., 2017).

### 3.2 Live events

Research in AD for live events has focused mostly on opera and, to a lesser extent, on theatre. Although less explored than screen and museum AD, a number of descriptive publications have explained how AD for opera and theatre is produced (Cabeza Cáceres & Matamala, 2008; Holland, 2009), have covered specific contents or additional services, such as audio introductions (York, 2007) or touch tours (Eardley-Weaver, 2013), and have proposed methods to audio describe specific genres (Roofthoof et al., 2018) (see Remael and Reviers in this volume for an example of current research in theatre AD).

Following the trend in film and museum AD, scholars have also conducted reception studies to gain insights into the effectiveness of AD for live events. One of the very first, undertaken with BPS in Catalonia, revealed that the participants considered AD as an aid to their understanding and enjoyment of opera (Matamala, 2005). Similar conclusions were drawn in the UK by Weaver (2014). However, the author found that those individuals who attended a touch tour in addition to accessing an audio described opera reported better comprehension levels, more enjoyment and more emotional implication. This seems to be in line with the incipient research in museum AD that suggests that multisensory exhibits could elicit more satisfactory experiences. Focusing mainly on enjoyment, researchers in Canada have conducted a number of reception studies to assess the use of alternative AD styles for theatre plays (Udo et al., 2010; Udo & Fels, 2009) and fashion shows (Udo & Fels, 2010). All the ADs created and delivered in these projects moved away from the objective and neutral paradigm to embrace creative approaches, often interpretative and subjective, which the researchers believed contributed to entertaining their audience. According to the authors, BPS who took part in these research projects reacted positively to the non-conventional ADs, which reportedly helped them comprehend and enjoy the events.
To conclude, some recent reception studies in the frame of live events are grounded in the interesting notion of participatory accessibility (di Giovanni, 2018b, 2018a), according to which BPS and sighted viewers work together towards the creation of AD scripts. By actively participating in the production of accessibility services for the BPS, end-users become AD providers, thus proving that accessibility can be not only for all, but also from all.

4. Further directions

Given the nature of AD, research in this discipline offers a vast array of interesting possibilities. Although many more avenues than those described in these lines could be explored, the way forward should include more systematic product-oriented, user-oriented and process-oriented research.

With regard to product-oriented investigation, studies which further our knowledge of the AD text beyond English and Western languages are still needed, both for screen and non-screen contexts. Additionally, it could be worth expanding on the potential contribution of translation technologies to AD. The use of neural machine translation with human post-editing could be tested in more realistic situations and for more language combinations in order to find out if it may help provide a time- and cost-effective alternative. Furthermore, although the challenges posed by 360° videos have been touched upon (Fidyka & Matamala, 2018), the expansion of VR technologies invites a deeper exploration of AD in this context. Also importantly, new research venues could embrace quality in AD. To the best of our knowledge, this has been the topic of only one publication to date (Fryer, 2019), but we have learnt from subtitling for people who are deaf or hard of hearing that defining and assessing quality in Media Accessibility becomes challenging since different participants (users, practitioners, broadcasters and researchers) have different views on this matter. Even if AD is not yet as present as we would like on television, film venues, museums and live events, the quality discussion is one that the AD community must spark to ensure that truly useful AD services are offered to the end-users.

Moving to user-oriented studies, comprehensive research that explores how the BPS community receives and experiences audio described products and live events should also be pursued. Theoretical proposals are critical, but they should be tested with reception studies that validate their hypotheses. Gathering information on AD preferences is important to listen to the users’ voice, but it would be interesting to complement this self-reported information with more objective measurements, such as psychological instruments in the form of questionnaires and biometric technologies (e.g., EEG, heart rate measurements, galvanic skin response). This kind of research, which requires multidisciplinary teams in which AD researchers collaborate with cognitive psychologists, should allow scholars to compare the effectiveness of different AD solutions (e.g., neutral vs. interpretative descriptions). This joint research could also be useful to investigate virtually unexplored cognitive aspects of AD (e.g., inference processing and understanding, cognitive load, or comprehension) and to expand the incipient research on users’ engagement with, immersion in and emotional response to audio described materials.

To date, we have learnt about the characteristics of the audio descriptive texts, about users’ preferences and we are beginning to explore how audiences receive audio described audiovisual materials. However, we barely know how the minds of those creating AD scripts operate. Venturing into this uncharted territory could allow us to approach process-oriented research in AD from a completely new albeit exciting angle (see Holsanova in this volume).
5. Further reading


This publication describes accessibility as a proactive principle and access as a necessary requirement for achieving human rights.


This publication deals with potential applications of audio description to children’s learning.


This publication deals with the use of electrodermal activity in Media Accessibility experimental research.

6. References


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