

Into the language of museum audio descriptions: a corpus-based study

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ABSTRACT

The paper portrays a linguistic and textual analysis of a corpus of 18 museum audio descriptions (ADs) (a fairly neglected area of accessibility and audiovisual translation research) in order to pinpoint the salient features of this text type and relate them to current AD literature and guidelines. Results show that scripted and recorded museum AD texts comply with recommendations only partially. They guarantee vivid, imaginative and diverse language as well as substantial text informativity through the combination of high lexical diversity and the extensive use of descriptive adjectives as well as substantial lexical density. In spite of the use of short words, however, museum ADs seem more lexically and syntactically complex than expected, with their use of opaque technical terms, heavy adjectival phrases and long sentences. More systematic and contrastive research will help to (dis)confirm these results, whereas audience reception research will contribute to determine the real degree of usability of these new text types.

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Introduction

Audio description (AD) is the acoustic verbal description of the visual elements of any cultural (static and dynamic) product for the benefit of people with visual impairment. It is through AD that people with visual impairment can access, better understand and enjoy the visual details of a visual experience. Because AD is offered with different types of arts and media content, this inclusion service fulfills different requirements depending on its context of use (Remael, Reviere, & Vercauteren, 2015, p. 10): describing a film or an advertisement differs largely from describing a dance performance, a concert or an artwork.

A number of specific features of the AD process have already been posited as justification for the labeling of AD as a genre in its own right (Taylor, 2015). Such features have been identified particularly in the AD of films and television programs, where the focus of attention has been on linguistic and pragmatic perspectives, questions of cohesion and coherence, and intertextuality (e.g., Arma, 2011, 2012; Maszerowska, Matamala, & Orero, 2014). Other types of AD, for instance the AD of static art products, remain under investigated, irrespective of their utility, potential impact on end-users, role in

promoting independence and social inclusion. Museum AD is just an example – and the focus of this article.

Museum AD is currently provided to different extents in different countries. It still lacks shared established recommendations even though it is the most practiced and taught form of AD following film and television AD, and preceding theater AD (ADLAB PRO, 2017a, 2017b). General principles of good practice do exist and offer some rules to practitioners (COME-IN!, 2017; Giansante, 2015; Neves, 2015). However, a comprehensive overview of the linguistic and textual patterns characterizing this text type is missing, not to mention the fact that we currently lack systematic reception studies illustrating how museum AD is received and processed by end-users.

This paper aims at partially filling this gap. It will offer a corpus-based overview of some relevant linguistic and textual features of museum AD, thus contributing to delineate a more comprehensive picture of this audiovisual translation (AVT) sub-genre. The paper will also make up for the current lack of consistent reference and training material, which is still unbalanced and unequally distributed in different EU countries especially regarding this specific type of AD (ADLAB PRO, 2017a; Chmiel & Mazur, 2017). Therefore, the results of this analysis are meant to have implications both on museum AD research, practice and ultimately training,¹ and shall offer food for thought to translators interested in taking up the new challenging task of AD translation (Jankowska, 2015).

In what follows, I will define museums and museum AD, and pinpoint the main AD features according to current guidelines. I will describe the study with a focus on the corpus and the measures used for the analysis, and I will discuss results with an eye on future research, which should have an experimental and comparative approach, and take into account the feedback of end-users.

Museum AD

According to the ICOM (International Council of Museums) Statutes, a museum is a

non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment. (ICOM, 2007)

ICOM's concise definition is comprehensive of the major purposes of modern museums. Museums are open and usable institutions, built *for* and *around* their users, with a major social and pedagogical value, functioning as key instruments for the cultural development of their visitors, making cultural products accessible to the general/outsider (vs. expert/insider) public (Falletti & Maggi, 2012; Seglie, 2015 but also Katan, 2004, 2016).

Although the general ideas of usability and accessibility are included in ICOM's definition, direct reference to the needs of the disabled users is missing, and the concept of accessibility seems to be referring only to the efficacy and the understandability of the museum content for learning and enjoyment purposes. As a matter of fact, although museums, art galleries, parks, tourist spaces and cultural heritage destinations *can* be made accessible for people with visual impairment, this is not always the case. There is no assurance, for instance, that in these venues audio tours for people with visual impairment are any different from regular audio tours for sighted audiences (ADP, 2017, Par. 1), even

though, depending on the target user and communicative purpose of the description, major differences should be expected in terms of language and content selection, text structure, length and style.

In museums, two types of AD for people with visual impairment can be provided: stand-alone descriptions of artworks and AD tours (offered by many museums in the form of non-scripted and responsive live tours that include description for people with sight loss). According to literature (Fulgenzi, 2015; Giansante, 2015; Neves, 2015, 2016; Secchi, 2014), both types focus on describing the actual object and emphasizing its visible details (size, shape, color, texture, etc.) rather than only addressing what cannot be seen, for instance their history or background information. Their narrative style should encompass a high descriptive load and vivid language choices that enable the description to provide access to visitors with sight loss, to make iconic or non-iconic representations explicit, and to compensate for missing visual information while interacting with the surrounding space – the museum space (Fryer 2016, pp. 205–206; see also Eardley et al., 2017; Eardley, Mineiro, Neves, & Ride, 2016; Hutchinson & Eardley, 2018). Ideally, museum ADs, especially when embedded in structured itineraries such as descriptive tours, should be short yet informative, to the point and factual yet evocative, highly pertinent and intriguing, focused on content, avoiding complex sentence structure as well as ‘flowery’ prose and ‘exuberant’ vocabulary (Giansante, 2015, p. 9). Listeners should forget about the presence of the audio describer, and only remember the image that the description re-created (Giansante, 2015, p. 9), or on a broader level, being given the means to engage with, and immerse in, the exhibit (Neves, 2016, p. 139). As rightly pointed out by Hutchinson and Eardley (2018), the ultimate scope of museum AD should not only be the assimilation of visual information, but also the stimulation and the enhancement of the social, cognitive and emotional elements of museum visits (see also Black, 2005).

AD tours, on the other hand, have a value added: they describe objects but they also assist for people with visual impairment to move from exhibit to exhibit, helping them to orient throughout the museum space (ADP, 2017; Giansante, 2015; Neves, 2015). These descriptions include precise orientation instructions, as in the following excerpt taken from the description of St. Paul’s Cathedral in London,² guiding the visitor from the church’s Great West Doors to the Nave:

If you are facing the West doors, behind you, beyond the font are many rows of wooden chairs with no arms, facing the East end and altar. To reach them, follow your steps back towards the multimedia guide desk [...]. About 3 metres to the left of the desk is the central pathway.

Irrespective of their type (stand-alone vs. tours), museum ADs for people with visual impairment should adapt language choices taking into account the heterogeneous nature and needs of (a necessarily heterogeneous set of) end-users – perhaps the strongest challenge. It is known that these texts are addressed to a mixed-audience both in terms of blindness (total vs. partial) and educational background, but also in terms of familiarity with the world and – in particular – with the special language and contents of the arts: visitors are not necessarily art experts. Furthermore, museum ADs for people with visual impairment are intended to be listened to, which should guide describers in selecting carefully the type and quantity of information to convey, and to keep the description short (Giansante, 2015, p. 2).³ Although blind users seem to be particularly efficient in

listening skills and can easily comprehend speech that is sped up far beyond the maximum rate that sighted people can understand (Dietrich, Hertrich, & Ackermann, 2013), a short description could be preferred. It would enable their attention and involvement to be maintained more efficiently throughout a whole museum tour (Eardley et al., 2016, 2017; Giansante, 2015; Neves, 2015), but also to retain more long-term information while encouraging the whole museum experience, and stimulating the visitor motivation and curiosity (Black, 2005; Hutchinson & Eardley, 2018, p. 7).

The study

Whether the requirements exposed in literature are respected in existing museum ADs has not been demonstrated empirically. Literature has not clearly and systematically exemplified what linguistic and textual features can guarantee a high descriptive load and a vivid, highly informative language. The following analysis, based on a corpus of scripted recorded ADs, is a first attempt to verify *whether* and *how* these requirements are satisfied, and to pinpoint specific features of the language of museum ADs. In particular, our text analysis shall primarily address the question of the vividness and descriptive load of the museum ADs under investigation with specific reference to the use of adjectives, and it shall determine the level of informativity and linguistic complexity of these texts.

To accomplish these aims, we resorted to a corpus of English museum AD texts and we selected a representative range of measures that we think could unveil their main lexical and textual features. The corpus, the measures and the method of analysis are illustrated in the following paragraphs.

The corpus

Our corpus includes a selection of 18 stand-alone ADs of works of art exposed at the British Museum in London, housing a vast collection of world art and artifacts revolving around human history and culture. The museum is free to all visitors and provides a comprehensive range of accessibility services, including museum ADs.⁴

The corpus was collected with the collaboration of Matthew Cock, Chief Executive at VocalEyes, and Selene Burn, Access and Equality Manager at The British Museum. The ADs analyzed were prepared by VocalEyes (<http://vocaleyeyes.co.uk/>), a British AD charity and AD provider based in London and operating nationwide with a range of partner organizations.⁵

The VocalEyes scripts are created collaboratively by describers and curators, with the input of visually impaired testers, following established best practices (Neves, 2016, p. 143). The audio described pieces used for the analysis tackle different genres ranging from modern art installations to artifacts of cultural or historical interest, but they do not include painting. Table 1 illustrates exact details. The overall number of running words in the corpus is 8163, with each AD counting approximately 500 words (Table 2 for details).

The measures

For this study, we selected four formal parameters (Type-Token Ratio (TTR), Lexical Density, Mean Word Length and Mean Sentence Length) to describe the style of a text

Table 1. Main features of the British Museum corpus.

	Title of artwork	Type	Date created	Author
1	The Atomic Apocalypse	Installation	1980s	Linares Family, Mexico city
2	Burnished Pots	Artifact	nineteenth century	Toro and Ganda peoples
3	Copper alloy container	Artifact	third century BCE	Unknown
4	Copper Tribute Blades	Artifact	1850/1899	Vassal peoples
5	Cradle to Grave	Installation	2003	Pharmacopoeia
6	Hoa Hakananai'a Ethno	Ethnic statue	1869	Easter Island peoples
7	Hohao	Sculpture	nineteenth or twentieth century	Elema peoples
8	Ichthyosaur	Arch. find	~180 million years ago	(Skull and lower jaw of ichthyosaur)
9	Iris	Sculpture	438–432 BC	Pheidias
10	Kozo	Sculpture	nineteenth to twentieth century	Bakongo (?)
11	Laocoon	Sculpture	seventeenth century (late)	Unknown
12	Maori hand club	Artifact	1772	Workshop of: Mrs Eleanor Gyles
13	Ramesses	Sculpture	Around 1213 AC	Egyptian peoples
14	Rosetta Stone	Stela	196 BC	Unknown/King Ptolemy V
15	Scarab beetle	Sculpture	from 305 to 30 BC (?)	Egyptian peoples
16	Sekhmet	Sculpture	around 1350 BC	Egyptian peoples
17	Selene horse	Sculpture	438 BC–432 BC	Designed by Pheidias
18	Wooden stool	Artifact	1400 BC–1350 BC	Edo

and to infer some complexity and informativity judgments, and we performed a qualitative micro-textual analysis on adjectives, i.e., a word class that we assume could play a major role in museum AD.

Table 2. Statistical data of the corpus.

Text	Tokens	Types	Mean word				Number of sentences	Mean (words)	SD	Lexical density (%)
			TTR (%)	TTR	length (char.)	SD				
1 The Atomic Apocalypse	658	305	46.35	2.16	4.38	2.14	36	18.28	8.73	55.69
2 Burnished Pots	396	214	54.04	1.85	4.43	2.26	23	17.22	6.76	52.69
3 Copper alloy container	385	196	50.91	1.96	4.52	2.27	20	19.25	6.73	52.56
4 Copper Tribute Blades	398	190	47.74	2.09	4.42	2.20	19	20.95	8.29	53.00
5 Cradle to Grave	588	295	50.17	1.99	4.62	2.65	25	23.52	9.16	56.10
6 Hoa Hakananai'a Ethno	569	281	49.38	2.02	4.52	2.38	31	18.35	6.66	53.95
7 Hohao	523	246	47.04	2.13	4.36	2.16	28	18.68	5.83	52.95
8 Ichthyosaur	356	191	53.65	1.86	4.23	2.26	19	18.74	7.20	49.72
9 Iris	455	214	47.03	2.13	4.50	2.21	23	19.78	6.73	49.78
10 Kozo	311	179	57.56	1.74	4.32	2.21	19	16.37	6.84	54.37
11 Laocoon	514	260	50.58	1.98	4.35	2.12	24	21.42	8.90	52.73
12 Maori hand club	438	232	52.97	1.89	4.21	2.17	19	23.05	12.98	52.00
13 Ramesses	481	251	52.18	1.92	4.36	2.30	23	20.91	7.37	50.94
14 Rosetta Stone	421	222	52.73	1.90	4.55	2.61	20	21.05	9.28	50.93
15 Scarab beetle	395	189	47.85	2.09	4.31	2.29	23	17.17	5.95	51.03
16 Sekhmet	431	215	49.88	2.00	4.25	2.23	27	15.96	6.61	51.53
17 Selene horse	533	245	45.97	2.18	4.27	2.09	28	19.04	8.07	49.81
18 Wooden stool	311	197	63.34	1.58	4.51	2.29	17	18.29	9.37	54.40

Measuring the complexity of a text and its level of comprehensibility is a particularly challenging task. There are many variables affecting the degree to which someone will comprehend input. These include the listener's language proficiency, their listening and literacy skills, their cultural background, their familiarity with the words, the lexical difficulty of the words *per se*, but also the density, the syntactic structure, and the speed of the input. It is difficult to control all these variables, some being user- rather than text-dependent.

For the analysis of the formal parameters, we used the lexical analysis software *Word-Smith Tools* (Scott, 2012) and the online lexical density calculator *Analyze My Writing* (<http://www.analyzemywriting.com/index.html>). For the qualitative analysis of adjectives, we conducted a manual counting and we tagged the adjectives based on Biber, Johansson, Leech, Conrad, & Finegan's (1999, pp. 508–509) model of adjective semantic grouping.

TTR. TTR is an established indicator of lexical variation, also called lexical diversity (Halliday, 1985; Johansson, 2008; McCarthy & Jarvis, 2010; Scott, 2012). Lexical variation refers to 'the range of different words used in a text, with a greater range indicating a higher diversity' (McCarthy & Jarvis, 2010, p. 381). TTR is the ratio obtained by dividing the total number of different words occurring in a text (its types) by the total number of running words (its tokens).⁶ A high TTR indicates a high degree of lexical variation. Usually, the longer a text, the lower its TTR. Lexical variation, among other text characteristics, stands as a crucial variable to language comprehension (Rupp, Garcia, & Jamieson, 2001): a lexically varied text is more challenging than one where the TTR is low. For this reason, to enable people with visual impairment to easily access their museum tours, retain and recall information, and savor the impact of this experience irrespective of their language competence, background preparation, and individual attention patterns (Hutchinson & Eardley, 2018, pp. 8–9) we expect museum ADs to avoid excessive lexical variation.

Lexical Density. Lexical Density is defined as the number of lexical (or content) words divided by the total number of words in a text (Didau, 2013; Johansson, 2008; to and Lee 2013; Ure, 1971). Lexical words give a text its meaning and provide information regarding what the text is about, whereas grammatical (or function) words give little or no information about what a text is about. Lexical density is the percentage of words in a text which gives us information about what is being communicated, and it is a reliable measure of how informative a text is. We expect museum ADs to be particularly informative, given their role in dealing with a source text that is only visual and needs to be 'painted in words'.

Mean Word Length. Mean Word Length, calculated in characters, is a predictor of semantic and textual complexity. Word length can give us information on the nature of the words used in a text and, as a consequence, on their impact on the overall text complexity and perceived difficulty on the part of the user. English is a lexically mixed language, rich in foreign loans, but the most commonly used items in writing and speaking are native English words, most of which are monosyllabic (Gramley & Pätzold, 1992). Loan words, longer and more peripheral, are used with different frequency depending on the text type, style and topic, and they increase in formal and specialized texts dealing with subject matters that are remote from everyday experience (Gramley & Pätzold, 1992, p. 18). Average word length in plain English is 5.1 letters (Hearle, 2011; Wolfram Alpha, 2011). We expect museum ADs to feature a longer Mean Word Length than plain English does because of the complex and sometimes abstract concepts it has to deal with, requiring a specialized lexicon and lexical choices carrying a high descriptive load.

Mean Sentence Length. Mean Sentence Length is calculated according to the average number of words and it can be a reliable indicator of the difficulty of the text from the perspective of readability measurements. Even though ADs are texts for listeners rather than for readers, their efficacy on (at least some of the) end-users might depend on this indicator. In English, the average mean sentence length is approximately 14 words (Nirmaldasan, 2008; Maci, 2010; Watson, 2008). Readability tables show that 8 words or less are considered very easy to read, 11 words easy, 14 words fairly easy, 17 words standard, 21 words fairly difficult, 25 words difficult and 29 words or more very difficult. Based on museum AD recommendations (Giansante, 2015, p. 9), we expect a standard average sentence length assuring simple syntax and a linear prose. Overall, a simple text could facilitate the active task of listening to ADs while standing in front of an artwork or moving around making decisions and having to find one's way around in the museum environment (Neves, 2015, p. 69).

Adjectives. Adjectives are an open lexical class with several semantic sub-groups, including color, size or value terms. Adjectives are extremely common in most registers – especially written – and attribute static or dynamic qualities or properties to a noun, thus contributing to add color to the text in general (Biber et al., 1999, p. 504; Gramley & Pätzold, 1992, p. 132). Adjectives are used to modify nouns ‘thus adding to the informational density of expository registers’ (Biber et al., 1999, p. 504). They can show the writer's attitude and shape the readers' response to the text, and are responsible for the way ideas are represented. For our analysis of adjectives in museum ADs, we referred to the adjective semantic grouping model of Biber et al. (1999, pp. 508–509), which divides adjectives into two broad groups: descriptors and classifiers. Descriptors provide information, characterize or denote features of the referent of a nominal expression. Classifiers delimit or restrict the noun's referent.⁷ Our qualitative analysis of adjectives was performed on a sub-corpus of six museum ADs (texts 1–6 in Table 1). Adjectives were counted and labeled manually in order to get an overview of their distribution in museum ADs. We expect adjectives to be employed extensively as effective descriptive means and information carriers.

Results and discussion

For the quantitative analysis, we resorted to the full museum AD corpus made of 18 equal-sized texts, and used four formal parameters to describe the AD style and infer some complexity and informativity judgments. TTR was used to measure lexical variation, Lexical Density was used to measure how informative the text is, Mean Word Length was used to measure lexical complexity, and Mean Sentence Length was used to measure text complexity. The results of the analysis are illustrated in Table 2.

The average TTR of the analyzed texts equals 1.97 (51.07%), with some texts exceeding this mean value. The figure tells us that each word form is repeated on average 1.97 times. Another way of presenting the type/token ratio is a percentage of types for tokens. In this case, this figure means that types constitute 51.07% of the total text. These data show that museum ADs are lexically diverse, but their lexical variety is not too high. We can assume that the choice of using a restricted (yet not poor) variety of vocabulary is linked to the desire not to overload the listener, thus leading to an average text difficulty.⁸ Most ADs however might even owe their fairly low type / token ratio to the didactic manner AD texts might have to adopt.

Lexical density is high in all texts, with a mean value of 52.53% – a value approximating the lexical density of written language, in particular fiction, typically scoring between 49%

and 51%, or general prose, which tends to have slightly lower lexical densities near 48% and 50% (Biber et al., 1999; Johansson, 2008). The average Mean Word Length in characters is 4.39 (SD = 2.26), indicating the preference for words that are easier to grasp, whereas the Mean Sentence Length in words is 19.32 (SD = 7.87), slightly above average, but with sentences that can exceed 25 words, featuring complex morpho-syntactic structures.

Overall, these data show that museum ADs, which are texts written to be read and listened to, resemble written expository texts, containing more information-bearing lexical words (cf. lexical density), which tend to vary across the text (cf. vocabulary variation) (Biber et al., 1999). As expected, museum ADs are particularly precise (as demonstrated by their lexical variety), descriptive and informative (as demonstrated by their lexical density), and they assure explicit and clear text meaning: linguistic vagueness is avoided in texts that are supposed to substitute images. These data offer a strong back up to academic and professional literature on AD calling for a rich (Morisset & Gonant, 2008, p. 4), descriptive (BCI, 2005, p. 3), and varied (Busarello & Sordo, 2011, p. 26; Ofcom, 2010, p. 14; Rемаel & Vercauteren, 2011, p. 5) vocabulary, and they show concretely what these labels mean.

Besides being granted by lexical variety and lexical density, the precision and the accuracy of museum AD texts is assured by the nature of the words used. Short simple words, easy to grasp and generally informal, co-exist with polysyllabic words, monoreferential and precise, typical of specialized texts (Gotti, 2003). The polysyllabic words of the corpus range from seven to 16 letters and they generally include abstract nouns (*commemoration, adolescence, representations, anniversary, Christianity*), abstract verbs in the third person (*symbolizes, incorporates*), participial verbs (*representing, accompanying, commissioned, surmounted*), derived adjectives (*uncompromising, unsuccessful, ceremonial, contraceptive*) and derived adverbs (e.g., *approximately, particularly*), but also technical art terms (*installation, hieroglyphs, scarification, ichthyosaur*).

The syntax of museum ADs, measured via Mean Sentence Length, is more complex than expected and advised in the literature (e.g., Dosch & Benecke, 2004; Giansante, 2015) (e.g.: ‘The beast’s long mane and tail are the red and yellow of flames, flying out behind it as it gallops through the sky, its legs stretched, black hooves poised to thunder down onto the ground’ – *The Atomic Apocalypse*). We know that sentences exceeding 14 words in English might impair the readability of a text and its full comprehension. We also know that ADs are meant to be listened to, and blind users are particularly efficient in listening skills (Dietrich et al., 2013). Given the different processing abilities of different people with visual impairment, the delivery rate and the ability of the voice talent can play a major role in making very long sentences accessible for as a wide audience as possible. Voicing AD appropriately, mastering prosody and making meaning with the voice are crucial for understanding (Fryer, 2016, pp. 87–101; Snyder, 2007, p. 47). Voice talents should, therefore, take advantage of these skills especially when confronted with complex syntactic structures that could tax or simply distract the listener.

As demonstrated by the above, AD in general is a particular text type, blending the communicative functions of both literary and factual genres, and merging the features of narrative, descriptive and informative texts. The aim of AD is to entertain, amuse and instruct users through the description of the most relevant characteristics of things or phenomena. The need to describe vividly requires the use of adjectives, which are necessary to produce semantically rich noun groups (*the great black bird’s wings; its pink, mottled, un-feathered neck and*

head) and contribute to the visual intensity and meticulousness of the description (Perego, 2014, pp. 28–30).

Before focusing specifically on the results of the adjective analysis, Table 3 shows an example of adjectives organized semantically according to the model of Biber et al., 1999. The table includes all adjectives used in the AD of *Hoa Hakananai'a Ethno*, an ethnic statue made of basalt tracing back to 1869 and housed in the Africa Department at the British Museum (details can be retrieved from the online museum page http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=512302&partId=1). All adjective types have been used in this description, and a quick glance can give us a reliable idea of the general adjective distribution in the corpus.

Our analysis of adjectives was performed on six ADs randomly selected out of the overall corpus and revealed that adjectives in the sub-corpus equal approximately one-fifth of the overall AD word number, and that their variability is high, suggesting that repetition of adjectives is deliberately avoided in favor of a varied repertoire granting informativity and precision. This is shown, for instance, in the short excerpt below, taken from the AD of the ethnic statue *Hoa Hakananai'a Ethno*.

Example 1. Ethnic statue *Hoa Hakananai'a* ('lost or stolen friend') Moai (ancestor figure) with AD excerpt.



'It has a prominent eyebrow ridge shadowing the empty sockets of its eyes. Originally, these would have been filled by coral and stone eyeballs. The nose is long and straight, ending in large oval nostrils. Beneath the nose, the thin lips are set into downward curve, giving the face a stern, uncompromising expression.'

In terms of distribution and frequency, Table 4 shows that descriptors are the most represented category of adjectives used in museum ADs, with a particularly high proportion of miscellaneous descriptors.

Table 3. Adjectives in the AD of *Hoa Hakananai'a Ethno*, (1869). Adjectives are ordered alphabetically.

		Types/ tokens
Descriptors		
Color	reddish brown	1/1
Size/quantity/extent	1.25, 2.42, four (2), high (2) large, long (2), low (2), lower, massive, one, small (2), some, thin, tiny, two	15/20
Time	later	1/1
Evaluative/emotive	difficult, important	2/2
Miscellaneous descriptors	carved (5), ceremonial (2), covered with, curved (2), dense, distant, downward, faint, famous, female, fine-grained, flanked, fledgling, hat-shaped, human (2), incised, inverted, monumental, open, oval, paler, pendulous, pitted, prominent, proportional, protruding, remaining, right, rough, rudimentary, scoring, standing, stern, straight, tilted, toppled, typical, uncompromising, unforgiving, upright, vertical, volcanic, well defined	43/50
Classifiers		
Relational/classificational/ restrictive	another, close, either, empty, its (2), left, most, one third, second, seventeenth, similar, these, this (2), total, two thirds, upper	16/18
Affiliative	Easter (3)	1/1
Topical/other (noun modifiers)	birdman, coral, creator, dance, eyebrow, high status, oil, stone (3)	8/10
TOTAL		87/103

This is not surprising given the function of descriptors and given their key role in descriptive text types: descriptors describe, they delimit the referent, and offer very precise characterizing nuances that make it vivid and visualizable to the listener. In the corpus, miscellaneous descriptors occur in Adjective + Noun constructions (a *ragged* edge), they modify Noun + Noun sequences (*fine* bronze chain) or color adjectives (a *brilliant* green patina), or they simply occur in a row (made from an *ancient, battered* bronze bowl; a *kneeling, naked* woman). Similarly, noun modifiers used with adjectival function (*stone* statues), belonging to the topical/other category, are quite frequent and contribute to the accuracy (Ofcom, 2010, p. 14) and precision (AENOR, 2005, p. 7; Morisset & Gonant, 2008, p. 4) of descriptive texts. They in fact function as identifying labels unambiguously specifying the referent and making it unique, and they can have an evocative power stimulating the imagination of the listener.

Miscellaneous descriptors and noun modifiers, therefore, play a major role in conveying the visual intensity that is typical (and desirable) of ADs, and they are very frequent. On the other hand, as expected, and as recommended in most AD literature (e.g., Snyder, 2007) including existing general guidelines (Busarello & Sordo, 2011; Rai, Greening, & Petré, 2010; Remael et al., 2015), evaluative/emotive adjectives are generally used in

Table 4. Adjective distribution in the British Museum sub-corpus. Numbers preceding slashes are types, numbers following slashes are tokens.

Text	Descriptors					Classifiers		
	Color	Size /quantity/ extent	Time	Evaluative/ emotive	Misc. descriptors	Relational/ classificational/ restrictive	Affiliative	Topical/ other
1	13/44	8/15	0	7/7	36/47	10/35	0	11/12
2	2/2	13/15	1/1	2/2	18/24	11/12	3/3	10/10
3	2/2	9/13	1/1	1/1	23/26	7/8	2/2	6/8
4	0	12/16	2/2	5/5	19/24	12/14	4/4	8/10
5	4/4	13/16	6/6	0	33/35	11/22	0	15/18
6	1/1	16/20	1/1	2/2	43/50	16/18	1/1	8/10
TOT	22/53	71/95	11/11	17/17	172/206	67/109	10/10	58/68

moderation in order to limit appraisal, to avoid conveying an explicit or implicit degree of judgment or bias, or positive or negative connotation, which would restrict the interpretative freedom of the people with visual impairment. In the corpus, only a few evaluative/emotive adjectives are used, with the largest number belonging to the description of the elaborate, colorful papier-mâché installation *The Atomic Apocalypse: War* (i.e., *deadly, demonic, ghastly, grisly, ironic, savage, vicious*) (Ex. 2 for a detail of the installation with an excerpt of its description), a sensational assemblage of 132 figures and objects referring to actual events and areas of political conflict and in need of adjectives provoking an emotional reaction. Not surprisingly, this is also the piece including the highest number of color adjectives, used in moderation in the rest of the sub-corpus, in spite of the ability of people who are blind or visually impaired to recall colors or associate them with specific cultural values (Giansante, 2015, p. 8). It must be stated however, that the small amount of color adjectives in our corpus could be easily related to the fact that many of the artifacts described are made of stone, metal or bone, i.e., materials with little color variation. Whether the outcome would be different in other contexts (e.g., art exhibitions) with other source text type should be further investigated empirically.

The language choices of this AD suggest that in spite of the given recommendations and trends, deviations from the guidelines may occur based on the nature, the connotation, the cultural markedness and the implied meaning of the source text, i.e., the object to describe. *The Atomic Apocalypse* seems to require the describer to resort to marked and complex language choices to produce a ‘communicative translation’ (Newmark, 1981; cf. also Nida’s dynamic equivalence), one attempting to produce on its end-users an effect as close as possible to that obtained on the users of the original.

Example 2. Detail of *The Atomic Apocalypse* by the Linares family, with AD excerpt.



The fourth skeleton represents War. Like its Biblical counterpart, this creature rides a redhorse, but this horse is a demonic fusion, with the head of a dragon. Its skin is blood redand the surface is painted with lighter redswirls so that it seems to seethe and churn like an atomic blaze. The eyes are yellowwith blackpupils. A spark of white makes them glitter cruelly as they stare down at the visitor. The jaws are open, showing sharp whitefangs, and a long pointed tongue flickers out, like a serpent.

In spite of their role, adjectives occur in combination and sometimes in complex syntactic constructions (a skeleton, its white bones outlined in black, its jaws gaping; the creature is green, with the segmented spiracles of its underbelly picked out in yellow) and this contributes to convey elaborated pieces of information which for some users might result as particularly taxing to process, remember and enjoy.

The production of a visually intense text is difficult, especially when there are time or space constraints that limit the quantity of the words of a description. The analysis of our corpus however enabled us to observe that audio describers of static visual art can rely on several recurrent textual properties to produce creative, informative, vivid and precise descriptions, condensed in short texts. The needed level of informativity of such texts can sometimes struggle with the need to produce clear and linear texts, or texts whose language is really ‘for all’. However, according to some scholars, oversimplification in art description would end up trivializing art itself, with the negative consequence of losing linguistic and artistic nuances – which would be unacceptable, and would prevent users from the opportunity to learn and develop their own art jargon and artistic sensitivity (Secchi, personal communication, 1 July 2017). In this respect, museum ADs are important access services with the desirable side effect of simultaneously functioning as challenging yet powerful didactic means, potentially enlarging the range of art-related terms and concepts for both listeners who are blind and visitors who are sighted.

Conclusions

The limited amount of empirical, linguistic and textual works conducted so far on the AD of art and the three-dimensional world of museums prevents us from characterizing these texts based on objective linguistic parameters. Our study is a first attempt to verify how museum AD texts work as well as whether and how they construct imaginative, precise, meticulous and visually intense texts through language.

Based on our corpus of 18 texts (produced by service provider VocalEyes for the British Museum) we performed both a quantitative and a qualitative analysis. We selected TTR to measure lexical variation, Lexical Density to measure how informative a text is, Mean Word Length to measure lexical complexity, and Mean Sentence Length to measure text complexity. We selected six random texts from the corpus to perform a qualitative analysis of the adjectives following the semantic model of Biber et al. (1999).

The results of the analysis seem to confirm that museum AD texts meet most of the linguistic requirements exposed in literature, in the existing general AD guidelines, and in the few specific museum AD guidelines (COME-IN!, 2017; Giansante, 2015; Neves, 2015). Vivid and diverse language (Neves, 2015, p. 71) is secured by a high degree of lexical diversity as well as by the large amount of descriptive adjectives used both in isolation and in complex constructions – which also serves to properly highlight relevant details (Neves, 2015, p. 80; Snyder, 2007, p. 44). However, the need to be informative and the limited space allowed seem to contribute to descriptions that are not always as lexically and as syntactically simple as advocated in literature (Neves, 2015, p. 71; Rai et al., 2010): long sentences and opaque technical terms belonging to the art jargon seem to be the elements that put AD simplicity in jeopardy. The use of short words might partially make up for the syntactic complexity along with a skilled speaker delivering the text. Last but not least, some language choices are not clear, such as, for instance, the limited use of color terms although people who are blind

and had vision earlier in life do recall colors, and even people who are congenitally blind normally know the cultural associations with them (Giansante, 2015, p. 8).

In offering a corpus-based overview of some relevant linguistic and textual features of museum AD, this paper has contributed to delineate a more comprehensive and systematic picture of this AVT sub-genre based on the analysis of best practices. At the same time, it indirectly offers indications to audio describers dealing with the creation of new texts, or translators grappling with museum ADs. A heightened awareness of how a text work is the privileged starting point for both producing and translating effective texts. Knowing the communicative function, text type and related macro- and micro-textual features of a genre can point to the best linguistic and stylistic choices and contribute the cultivation of a passive competence, whereby a text is first understood and then created or translated (Diadori, 2012).

In spite of the interesting results that have emerged from the analysis, the way to go is still long: more qualitative and quantitative text analyses are necessary to generalize our results and to refine the definition and the features of museum AD as a genre. Contrastive analyses in different languages could expand the research horizons and enable us to identify both language-specific and general features of museum AD texts. Nevertheless, a particularly important step to take is reception research: are the texts analyzed really effective when it comes to their use in a real context? Are the features enucleated from best practices the best choice for end-users? The high level of informativity of the descriptions under investigation and the extent of their lexical variation, as well as the complexity and the length of some sentences, can make us wonder whether museum ADs are accessible or too complex. These are reasonable doubts that can easily arise and persist until audience reception research comes into play to resolve them.

If a clearer picture is nowadays emerging regarding the way of processing certain types of AVT (especially subtitles), studies based on the feedback of museum AD end-users are still lacking. We cannot claim, based on our analysis, whether the features of the corpus under investigation contribute to overtax end-users, disrupt their attention, or spoil the enjoyment of a visit to the museum. Furthermore, would end-user need more time to digest the description? Would they prefer longer/shorter descriptions? Are the descriptions delivered at a proper pace? No empirically grounded answer to these questions exists. However, these are all elements that contribute to the effectiveness of the processing of the translation. Reception research is a vital step towards the definition of good practices, and museum AD would certainly benefit from it at this stage. Future reception research in this specific area is therefore crucial, and it will enable us to verify whether what we consider best practice on paper is effective in practice, too.

Notes

1. A module of the EU project ADLAB PRO course curriculum (www.adlabpro.eu), aimed at creating free-access, flexible, didactic materials for the training of audio describers, will be devoted to the AD of static art and environment.
2. Provided by VocalEyes.
3. Brevity is known to be an asset in different contexts, e.g., it has been demonstrated that podcasts lasting no more than 10–15 minutes are more effective for learning whereas long podcasts may decrease attention and reduce comprehension (Pitt & Edwards, 2003; Deibel, 2008).

4. The audio descriptive guides at the British Museum are available free of charge for blind or partially sighted visitors, and others who find AD helpful. They contain detailed description of objects and some include curators' commentaries, too. Audio descriptive guides are available on a touchpad device, and AD is provided for some special exhibitions as well.
5. The mission of VocalEyes is to work with blind and partially sighted people to enhance engagement with the arts through AD. It was established in 1998 to help theatre venues and producers meet the needs of blind and partially sighted audiences. It then expanded its work into other areas such as museums, galleries and heritage, architecture, contemporary dance, and AD for young people. All the work of VocalEyes is founded on solid research and consultation with experts in the field as well as with VIPs. Currently, VocalEyes is the largest organisation offering comprehensive description services nationwide, working to ensure the highest standards of delivery and promoting increased access provision.
6. Conventionally, there are two ways of calculating TTR. If the running words (tokens) are divided by the different words in the text (types), a decimal number is obtained. Another way of presenting the type / token ratio is a percentage of types for tokens. In this case we can calculate TTR as follows: (number of types/number of tokens) * 100.
7. Descriptors include colour, size/quantity/extent, time, evaluative/emotive and miscellaneous adjectives. Classifiers include relational/classificational/restrictive adjectives delimiting the referent of a noun in relation to other referents; affiliative adjectives, designating the national or religious group to which a referent belongs; topical or other types of adjectives giving the subject area or showing a relationship with a noun, e.g. peripheral adjectives including other word classes that can be used as adjectives.
8. As a frame of reference: an adult second language learner writing (and in general spoken language) would have a variety approximating around 40–70%, while a native speaker adult academic writing would typically have a measure of around 80–105% (Durán et al., 2004). The TTR found in a study on film AD was 3.85 (Arma, 2012).

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