

## **Analysing the AD process: creativity, accuracy and experience** **Marina Ramos and Ana Rojo, University of Murcia**

### **ABSTRACT**

The study of audio description (AD) has flourished over the last decade to become a broad research area in its own right. However, experimental research on the processes involved in the creation of AD is still scarce. More specifically, the study of describers' psychological traits has so far been a rather unexplored area in the field. The present study focuses on creativity as one of the main professional competencies required for AD. In order to study the relationship between creativity, accuracy and experience, we recruited 10 professional describers and measured their creativity through a validated creativity test. They were then asked to create AD scripts for four highly poetic scenes. Their performance was analysed in terms of the accuracy and subjectivity of the texts. Our results show that more experienced describers are more creative, less subjective and more accurate when creating their descriptions.

### **KEYWORDS**

Translation, creativity, audio description, process, expertise, accuracy, describers.

## **1. Introduction**

Audio description (AD) is a highly specialised modality within audiovisual translation (AVT), aimed at making images and sounds accessible for blind and partially sighted audiences. This type of intersemiotic translation (Jakobson, 1959/1966) converts the visual code and some relevant sounds into language in order to describe the images of different types of cultural manifestations (theatre plays, dance performances, films, visual arts) for those who cannot see.

Despite the growing body of research that has contributed to our understanding of AD in the last decade, studies of its creation process and the psychological factors involved therein have been rather scarce. The present paper is a first attempt to study the influence of describers' creativity on their work. More specifically, we analyse how their creativity influences their work in terms of the subjectivity and accuracy of their output.

Research on AD has experienced an unprecedented upsurge within the last decade, especially as regards the creation and analysis of guidelines (Rai *et al.*, 2010) and the description of existing scripts (Jiménez *et al.*, 2010). In recent years, some interesting studies have developed more complex methodologies in an attempt to analyse the cognitive processes involved in the reception of AD (Cabeza-Cáceres, 2013; Ramos, 2015, 2016; Ramos and Rojo, 2014). Cabeza-Cáceres (2013) analyses the influence of three different parameters (speed, intonation and explicitation) on the comprehension of AD. In order to do so, he selected a film clip for each of

the three parameters, and each excerpt was then presented in three different versions to a group of 10 participants: high, medium and low speed; emphatic, adapted and uniform intonation; high, medium and low explicitation. He showed that while differences in intonation seem to have no effect on comprehension, a lower narration speed and a higher level of explicitation can improve the participants' comprehension of audio described clips. This work represented one of the first reception studies on AD with a highly controlled and precise methodological design. Another such example is the work by Ramos (2015, 2016) and Ramos and Rojo (2014), who also explore AD reception by means of questionnaires and by measuring the heart rate of visually-impaired and sighted participants. These studies compare the emotional power of audiovisual texts with and without AD, and assess the efficacy of different AD styles: a more descriptive and neutral AD versus a more subjective and narrative AD. Results suggest that different types of scenes require different strategies but, in general, subjectivity is widely accepted both by sighted and visually-impaired audiences.

Experimental methodologies are being increasingly applied to research on AD reception. Yet, very few studies have so far focused on the cognitive processes involved in the creation of an AD script, and most of those have been mainly interested in the information selection stage. Two noteworthy studies focused on the selection of information for the creation of AD are the work by Mazur and Kruger (2012), in which the authors analyse sighted participants' verbal description of scenes, and that by Orero and Vilaró (2012), who used eye-tracking technology to identify where sighted audiences most commonly focus their visual attention. Two other studies conducted by Di Giovanni (2014) and Mazur and Chmiel (2016) investigate the identification of visual priorities of sighted individuals in order to draft the AD for the selected clips, based on the data obtained through the eye-tracking analysis. They then compare blind audiences' reception of traditionally drafted ADs with the results obtained from the eye-tracker experiment. The results of both studies seem to suggest that AD should take into consideration the perception of sighted viewers.

But as enlightening and relevant as these studies might be, there is still an important gap in the research conducted on AD, namely, the role of psychological factors in the creation of an AD script. In this sense, the present study contributes to filling this gap by introducing an experiment that explores the influence of describers' creative intelligence on their performance. But before discussing the experiment, evidence of the role that creativity plays on other types of translation is reviewed in the following section.

## **2. Analysing creativity in translation**

Since the beginning of the 21<sup>st</sup> century, the role of creativity in translation has been a topic of interest to cognitive translation studies (CTS) scholars,

who have used different methods such as think aloud protocols (TAPs) (Hubscher-Davidson, 2006; Kußmaul, 2005, 2007; Cho, 2006) and key-logging (Heiden, 2005) to explore how translators deal with creative tasks that are inherent to translation. The most concerted approach to translation creativity has been carried out by Bayer-Hohenwarter (2009, 2010, 2011), who combines product- and process-based methods to study creativity by analysing translation shifts and key-logged data. However, the scholar has not studied creativity as a translator's personality trait.

More recent work by Rojo and Ramos (2016, 2018) examines the influence of creative intelligence on translation accuracy and creativity. More specifically, they analyse the influence of expertise on emotion regulation and its consequences for translation, by comparing the performance of translation students with that of professional translators and assessing trait variation in the participants' psychological resilience and creative intelligence. Results of the study suggest that personality factors and level of expertise play a decisive role in regulating emotion and guiding translational behaviour and may foster translation performance even in emotionally stirring situations. More recently, work by Hubscher-Davidson (2018) has provided evidence in favour of a correlation between emotional intelligence and years of professional experience as a literary translator.

In written translation, the influence of creative personality has been mainly researched in relation to the accuracy and creativity of translation output. But in AD, descriptions of accuracy and creativity are unavoidably linked to the objectivity principle, a concept which will be addressed in the next section.

### **3. Objectivity in AD**

Around the world, a dozen guidelines have been designed with the intention of unifying the parameters involved in the creation of AD scripts: Germany (Benecke and Dosch, 2004), Spain (AENOR, 2005), France (Morisset and Gonant, 2008), Greece (Georgakopoulou, 2008), USA (American Council of the Blind, 2009). One of the most important and commonly mentioned criteria in those guidelines is the objectivity principle, whereby all forms of subjectivity should be avoided when describing the visual cues of a text (AENOR, 2005: 8). This principle is best illustrated by the motto "what you see is what you say" (Snyder, 2008: 195; American Council of the Blind, 2009), which recommends describing in an objective manner. However, several contradictions arise when analysing and comparing the application of this rule in different guidelines (Ramos, 2015, 2016).

To begin with, the use of adjectives in AD is rather controversial as, by definition, they are qualifying elements. Although some guidelines advocate for the use of neutral adjectives (Benecke and Dosch, 2004), British guidelines encourage describers to use colours or evaluative adjectives such as 'pretty' or 'handsome' (ITC, 2000). Something similar occurs when it

comes to describing the emotional state of characters. Since the interpretation of emotional states is always a subjective process, most guidelines recommend their avoidance and suggest that facial expressions should be described in a neutral manner (Benecke and Dosch, 2004; Morisset and Gonant, 2008). In the German guidelines, the recommendation is that instead of saying that a character is angry, the describer should stick to the physical description of his emotional state as follows: "he has squeezed his eyes shut, his cheeks are flushed, his lips pressed together" (Rai *et al.*, 2010: 39). Yet, this example interferes with an important constraint in AD, namely, time restriction. Due to lack of time, this strategy might not be viable and a shorter reference to the fact that "he is angry" may be necessary.

Another problem arises when analysing the lexicon used in AD. All guidelines suggest using neutral lexicon, but some encourage the use of verb variants, which to some extent have a connotative and more emotional meaning. The British guidelines, for instance, exemplify this by favouring the description "she *scuttles* into the room" over "she *enters* the room" (Rai *et al.*, 2010: 111). In the same fashion, the US guidelines recommend using manner verbs such as *sashay*, *stroll*, *skip*, *stumble* and *saunter* instead of merely stating *walk*. But the selection and use of this type of manner verbs implies a certain degree of subjectivity, thus interfering with the objectivity principle. The use of metaphors and similes is also controversial. Whereas the Spanish guidelines (Chapado Sánchez, 2010) discourage including metaphors, the US guidelines explicitly encourage the use of metaphors for their strong power to linguistically elicit vivid images. However, the examples provided to illustrate this are not always neutral. For instance, the US guidelines include the following metaphor to describe a monument: "as high as fifty elephants stacked one on top of the other" (Rai *et al.*, 2010: 77).

The next contradiction is related to the use of inferences, since it remains unclear whether they are to be avoided. Most guidelines recommend describers eschewing the use of inferences. For instance, the US guidelines discourage the inclusion of subjective or qualitative judgements or comments since they "constitute an interpretation on the part of the describer and are unnecessary and unwanted" (*ibid.*: 76). The German guidelines offer more precise assistance: instead of the inference "his stomach ulcer is hurting again", the describer should merely describe what s/he can objectively see, as in "he presses his hand to his stomach, his face is distorted with pain" (Rai *et al.*, 2010: 36). But once again, this description is at odds with the time constraints typical of AD.

One last problem arises from the upheld perception of AD as a type of literary creation. The US guidelines compare AD to a type of haiku while the French guidelines consider "describers [as] creative writers in every sense of the term" (Rai *et al.*, 2010: 61). But can literary language be considered neutral or objective? This raises the question of whether describers should

actually merely describe the images in order to avoid patronising the audience or instead should be involved in a more creative and literary activity that could offer a visually impaired audience the chance to engage in a cultural product by allowing their feelings to arise. This latter approach has already been advocated by scholars such as Kruger (2010), Finbow (2010) and Ramos (2015, 2016).

So far, much of the existing discussion on AD guidelines has focused on the effect produced on the audience, but up to now no study, to our knowledge, has investigated the influence of describers' personality on their work. To this purpose, the following section introduces a study designed to explore the influence of describers' creative intelligence on their work, in terms of the accuracy and objectivity of the AD produced.

## **4. The study**

### **4.1. Aim and research questions**

The main aim of this study was to analyse the influence of creative intelligence on the creation process of AD scripts. In order to do so, we stated three different research questions:

1. What influence does the describers' creative intelligence exert on their work in terms of the objectivity of the AD script produced?
2. What influence does the describers' creative intelligence exert on their work in terms of the accuracy of the AD script produced?
3. Will describers with more years of professional experience score higher in the creative intelligence test?

### **4.2. Participants**

Ten professional Spanish audio describers took part in the study. Due to the scarcity of professional describers in the country, all of them were recruited online, via professional forums and Facebook groups, and they completed all tasks remotely. Their mean age was 32.2 years ( $SD= 5.9$ ). Eight of them were female and two were male. All of them had been working as professional audio describers for at least 6 months. The most experienced participant had 9 years of experience. Their mean professional experience was 3.3 years ( $SD= 3.51$ ).

### **4.3. Tools and materials**

In order to measure describers' creativity, the Spanish CREA test was used (Corbalán Berná *et al.*, 2003). This psychological test provides a psychometric measure of creative intelligence by presenting participants with an illustration and asking them to formulate in writing as many

questions as possible about the image within a 4-minute period. The CREA test does not intend to offer a general measurement of creativity as a global parameter that may include affective, motivational and contextual ingredients, but rather a more precise, cognitive analysis of the participants' capacity for being creative (Corbalán Berná and Limiñana Gras, 2010). The task involves the formulation of questions regarding a specific stimulus, in this case, a highly intriguing illustration. From a theoretical point of view, the formulation of questions is a widely justified task to analyse creativity, since it is related to classical parameters such as divergent production, flexibility, fluidity and originality (Guilford, 1967; Torrance, 1974, 1998), as well as lateral thinking (De Bono, 1998), motivational and personality dimensions such as curiosity, positive affect and critical thinking (Clapham, 2001), and other cognitive dimensions like versatility in the use of cognitive schemas (Eysenck, 1995; Alonso Monreal and Corbalán Berná, 1999).

The AD task designed to assess the describers' performance involved highly poetic film scenes. Previous studies (Ramos and Rojo, 2014) have shown that poetic film scenes require special AD strategies, since the mere objective description of the visual cues does not manage to account for the aesthetic experience elicited by the original scenes. Four scenes were selected from four different films: *The Tree of Life* (Terrence Malick, 2011), *Melancholia* (Lars von Trier, 2011), *Pina* (Wim Wenders, 2011) and *The Great Beauty* (Paolo Sorrentino, 2013). Although none of the films are Spanish, all four of them are commercial feature films that have been shown in Spanish cinemas. All four scenes selected can be considered poetic because they use highly aesthetic mechanisms to depict humans performing artistic manifestations such as dancing (*Pina*) and painting (*The Great Beauty*), or standing and slowly walking in nature (*Melancholia*, *The Tree of Life*). The clips lasted between 1 and 2 minutes each and they did not contain any linguistic elements.

#### **4.4. Procedure**

Participants were recruited online and were asked to perform a series of tasks at home. They first had to complete and sign an informed consent form agreeing to participate in the experiment. Then, they were also requested to fill in a questionnaire with personal and professional information, such as their name, age, gender, date of birth, academic background, years of experience and field of specialisation within AD. Finally, they were asked to complete the CREA test and perform the AD task. Specific instructions to complete the test included the use of pen and paper to formulate as many questions as possible about the image provided within a 4-minute period. They were warned against exceeding the time allowed. Instructions on the AD task involved describing all four scenes, including the time codes for the descriptions. In a pilot study with three audio describers we determined that 60 minutes was an appropriate time frame for the task. Consequently, participants were given 60 minutes to complete the AD task. They were explicitly asked to follow current Spanish

AD guidelines and to use a video player and a word processor. Describers were advised to carry out the whole experiment in one session and in a quiet and distraction-free environment. Once all sections had been completed, they were asked to send the material via e-mail.

#### 4.5. Design and variables

Levels of overall subjectivity and accuracy needed to be operationalised into a set of measurable parameters in order to analyse our results. To this purpose, a correction sheet was designed to rate the AD scripts for accuracy and creativity. The analysis of subjectivity was performed by two expert reviewers on the basis of five subjectivity parameters: (1) inferences, (2) metaphors, (3) information on the emotional state of the characters, (4) connotative lexicon and (5) evaluations. In order to carry out the analysis, we counted the number of times describers resorted to subjective information related to these five parameters. Inferences are categorised as the instances when a describer explicitly explains or draws a conclusion from an action, basing the output on visual or aural evidence from the scene ('one of the objects is *ten times bigger* than the other'). Metaphors have been considered when figurative language has been used by a describer ('the couple *melts* in a sensual dance'). The third variable accounts for the cases when the describer makes a reference to the emotional state of the characters ('the child is *confused*'). The use of connotative lexicon has also been analysed ('a *serene* tide'). Last, evaluations are any evaluative judgements on the part of the describer ('the couple melts in a *sensual* dance').

Accuracy was measured calculating the total number of errors in all four scenes. For its measurement, we used a correction sheet containing a selection of the categories included in the recommendations of the Spanish guidelines (AENOR, 2005) and inspired by the correction sheet applied to AD by Marzá Ibáñez (2010), based on previous work by Hurtado (1999) and Chaume (2003). Our correction sheet included 14 types of errors that can appear in the AD regarding the following aspects: vocabulary (VOC), stylistic errors (ST), pragmatic function (PRA), suppression of relevant information (SUP), excess in the description (EX), inadequate description (INAD), incorrect timing (TM) or pace (PACE), a description that does not make sense (NMS), incorrect grammar or orthography (GRAMMAR/ORT), incorrect use of a dialect (DIAL) or register (REG), and errors regarding textual (TEX) and semiotic (SEM) characteristics. Appendix 1 includes the full correction sheet used by the reviewers to measure accuracy with a more concrete description of the variables. The AD scripts were first marked individually by each of the reviewers and any differences among them were shared and agreed on.

#### 4.6. Results and discussion

The participants scored between 11 and 23 points in the CREA test (mean= 16.4, SD=3.6), slightly higher than the average score for translators of 14.2 (Rojo, in press). In this regard, our cohort can be considered relatively creative but it also shows high variability: three of the participants obtained a low creativity score ( $\leq 13$ ), whereas the other seven participants proved to be highly creative ( $\geq 17$ ).

General data for the AD test was obtained by combining the total amount of tokens in each of the textual variables (subjectivity, accuracy) in all four clips for each participant. We did not analyse the results for each clip or the difference between the films, since that was not the aim of the present study. Appendix 2 contains the raw data obtained for all variables. The statistical analyses were performed with SPSS 22.0. The Spearman correlation coefficient was used to test correlations between CREA scores, subjectivity variables, accuracy parameters and the level of experience, but it only showed statistically significant results for the variable level of experience (see 4.6.3).

Since effect sizes of traits have been reported to be typically moderate or small (Dörnyei 2005; Hubscher-Davidson 2018), mean creativity scores were then compared for two groups: participants with high (above the median) and low (below the median) values for the variables creativity and accuracy. A Shapiro-Wilk test showed that our data presented a normal distribution and, thus, a t-test was performed to compare groups. In the following sections we describe the results obtained after performing a t-test for the variables subjectivity (4.6.1) and accuracy (4.6.2). Section 4.6.3 focuses on the correlation observed between creativity and the variable level of experience.

#### *4.6.1. Influence of creativity on subjectivity parameters*

The variable subjectivity was obtained by combining the total amount of subjective tokens in all four clips for each participant. As stated previously, we performed a t-test to compare participants' mean creativity scores in relation to the high (above the median) and low (below the median) values for the variable subjectivity. In order to do so, we distributed participants in relation to the median for each category (Table 1, high values= > median; low values= < median):

<b>SUBJECTIVITY PARAMETERS</b>	<b>MEDIAN</b>
Emotional state of characters	2
Evaluations	5.5
Inferences	1
Connotative lexicon	6.5
Metaphors	2

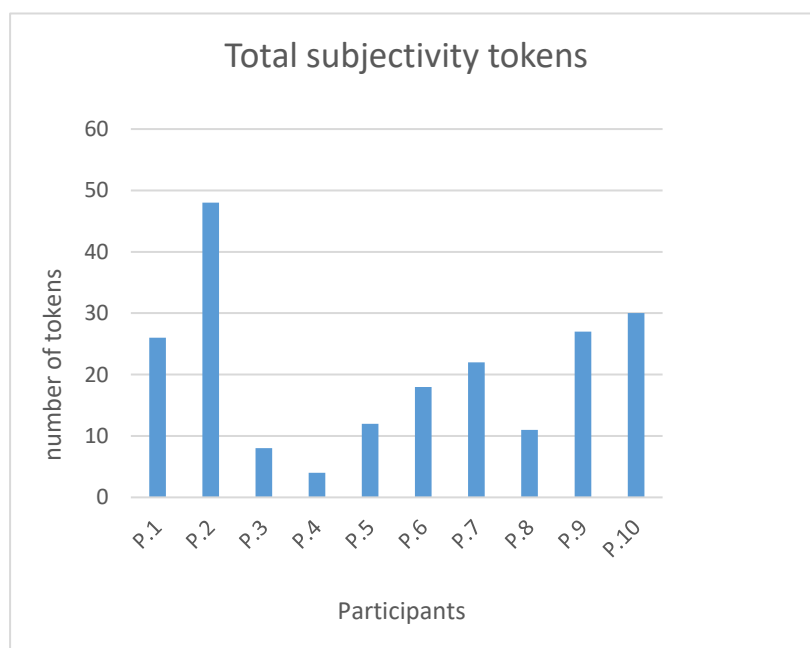
**Table 1. Subjectivity parameters**



No statistically significant results were found to show the influence of describers' creative intelligence on the subjectivity parameters, which may indeed point to the fact that creative intelligence is not a successful predictor of AD subjectivity. But there is also the possibility that creative intelligence might be a better predictor of professional performance, considering that this type of intelligence could also be oriented towards fulfilling the objectivity principle so prominent in the profession. Creative intelligence would then be helping participants to self-regulate their creativity potential to conform to professional standards. Incidentally, there is the possibility that the low statistical power of the sample may have exerted a confounding effect on the results.

To corroborate whether participants were aware of the objectivity principle, we sent them an email asking whether or not they had elaborated their scripts intending to conform to this principle. Interestingly, all of them declared to having conformed to it. However, it could be argued that if this were the case, a negative correlation between creative intelligence and subjectivity would be expected, and that was not the case. Results suggest that, on its own, creative intelligence cannot predict describers' tendency to conform to or depart from the objectivity principle.

High variability was found in our participants' performance regarding what and how to describe. Figure 1 illustrates these data and offers a graphical display of this high variability for all 10 participants (p.1 to p.10). The tokens represent the number of instances where describers resorted to subjectivity when creating the AD for all four scenes:



**Figure 1. Subjectivity tokens for each participant (participants 1-10)**

Our data show that whereas some participants conform rather strictly to the objectivity principle (e.g. p.4), others are more inclined to use subjectivity details in their descriptions (e.g. p.2).

To get a better idea of the kind of variability found, examples from one of the AD scripts, *The Tree of Life*, were qualitatively analysed, although this tendency can be observed in all four clips. Table 2 displays some instances of subjectivity for all the categories analysed:

	Original AD	Our translation in English
INFERENCES	Se detiene <b>ante la montaña lejana</b>	He stops <b>before the distant mountains</b>
	Da pequeños <b>brincos</b> , alza sus brazos hacia ellos <b>como si quisiera alcanzarlos</b>	He <b>frolics around</b> and raises his arms <b>as if reaching out for them</b>
METAPHORS	En el cielo azul con nubes blancas, <b>surcado</b> por bandadas de gaviotas	A blue sky with white clouds <b>ploughed</b> by flocks of gulls
	El mar <b>prosigue su danza</b>	The sea <b>continues its dance</b>
	La marea baja <b>baña la lengua</b> de arena	The low tide <b>washes over the tongue</b> of sand (spit)
	olas, <b>teñidas</b> del color malva	The waves are <b>tinted</b> purple
EMOTIONAL STATE	observa <b>con curiosidad</b>	he observes <b>curiously</b>
	El niño camina <b>contento</b>	The boy walks <b>in joy</b>
	camina <b>desconcertado</b>	walking <b>baffled</b>
	un niño <b>compungido</b>	a <b>gloomy</b> child
	agita los brazos con <b>paz y alegría</b>	waves his arms <b>peacefully and joyfully</b>
CONNOTATIVE LEXICON	Marea <b>serena</b>	A <b>serene</b> tide
	Los pájaros vuelan y el niño los <b>contempla</b> sonriendo	The birds fly and the child <b>admires</b> them while smiling
	El sol <b>despunta</b>	The sun <b>jets out</b>
	<b>Siluetas</b> caminando	<b>Silhouettes</b> walking
EVALUATION	Se deja abrazar <b>inexpresivamente</b>	<b>Emotionless</b> , he allows her to embrace him
	pasean descalzos y <b>sin prisa</b>	they <b>leisurely</b> walk barefoot
	agita sus brazos <b>efusivamente</b>	Waving his arms <b>effusively</b>
	decenas de personas <b>solitarias</b>	dozens of <b>solitary</b> people
	olas <b>de formas imposibles</b>	waves <b>of impossible shapes</b>

Table 2. Subjectivity tokens in *The Tree of Life*

Although all participants declared having conformed to the objectivity principle, the analysis of the AD script for the scene of *The Tree of Life* reveals some examples of subjectivity. We found some inferences: for example, when a character is raising his hands or stopping and the describers explain the reason why he is doing so. There are also several examples of metaphors, such as *a tongue of sand*, *the sea continues its dance*, or *the waves are tinted*. Many describers are also subjective when describing the emotional state of characters such as a *gloomy* child or

walking *baffled*. Instances of connotative lexicon include the use of the adjective *serene* to describe the calm tide or the use of the word *silhouettes* to replace the more neutral term *people*. Examples of evaluation by means of adverbs are also frequent, as in the use of *emotionless*, *leisurely*, *effusively* and *solitary*.

The qualitative analysis of the selected scene points to fact that, even though professional describers are aware of the objectivity principle, the implications of this principle and its limits are not fully clear to them, especially regarding controversial parameters such as the ones analysed here. Furthermore, the ample variability detected among participants suggests that the profession is still in its infancy and points to some gaps in the guidelines regarding what and how to audio describe.

#### 4.6.2. Influence of creativity on accuracy

The variable accuracy was obtained by combining the total amount of errors found in each category and in all four clips for each participant. From all possible 14 categories in accuracy (vocabulary, style, pragmatics, suppression, excess, inadequacy, timing, pace, not making sense, grammar/orthography, dialect, register, textual, semiotics), the reviewers did not find any errors in the descriptions for six of the categories (timing, pace, not making sense, dialect, register, semiotics). Table 3 shows all categories for which data was registered. A t-test was performed to compare participants' mean creativity scores in relation to high and low values for the variable textual accuracy. In order to do so, participants were distributed in relation to the median for each category (Table 3, high values= > median; low values= < median):

ACCURACY PARAMETERS		MEDIAN
VOC	Vocabulary	1.5
ST	Style	0.5
PRA	Pragmatics	1
SUP	Suppression	2
EX	Excess	1
INAD	Inadequacy	3.5
GRAMMAR/ORT	Grammar/orthography	1
TEX	Textual (coherence/cohesion)	0

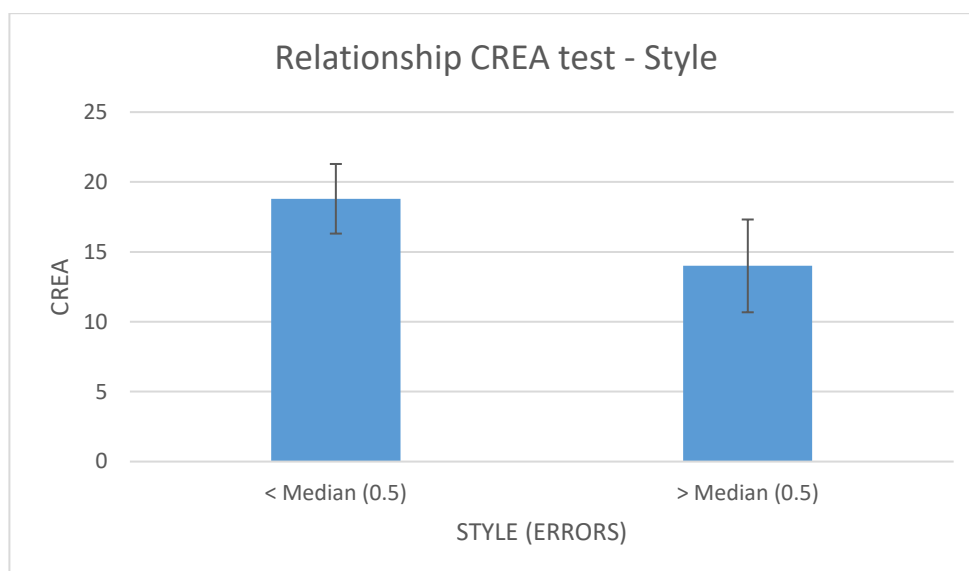
**Table 3. Accuracy parameters**

A statistically significant relationship was only found between the CREA scores and the variable style ( $p=0.032$ ). This category includes everything which deviates from the style of the text to be described and does not comply with AD stylistic guidelines such as cacophonies, pleonasms, unnecessary repetitions and poor style (Appendix 1). Table 4 shows the results obtained from the statistical analysis and Figure 2 illustrates these results:

		CREA test			
		Mean	Standard Deviation	Median	
Style	< Median	18.80	2.49	18	*
	> Median	14.00	3.32	13	

\* p= 0.032

**Table 4. Comparison between less creative and more creative describers**



**Figure 2. Relationship between CREA-test and stylistic errors**

It is important to remember that accuracy was measured in terms of the number of errors encountered in each category. In this case, subjects who scored higher in the CREA test scored below the median in style, which means that they delivered a better AD in terms of fewer stylistic issues. These data agree with evidence from cognitive translation studies that point to a relationship between creativity and style. In this sense, work by Lehr (2014) and Rojo and Ramos (2016) suggest that creative thinking triggered by positive emotions may affect style in translation processes.

#### 4.6.3. Correlation between creativity and level of experience

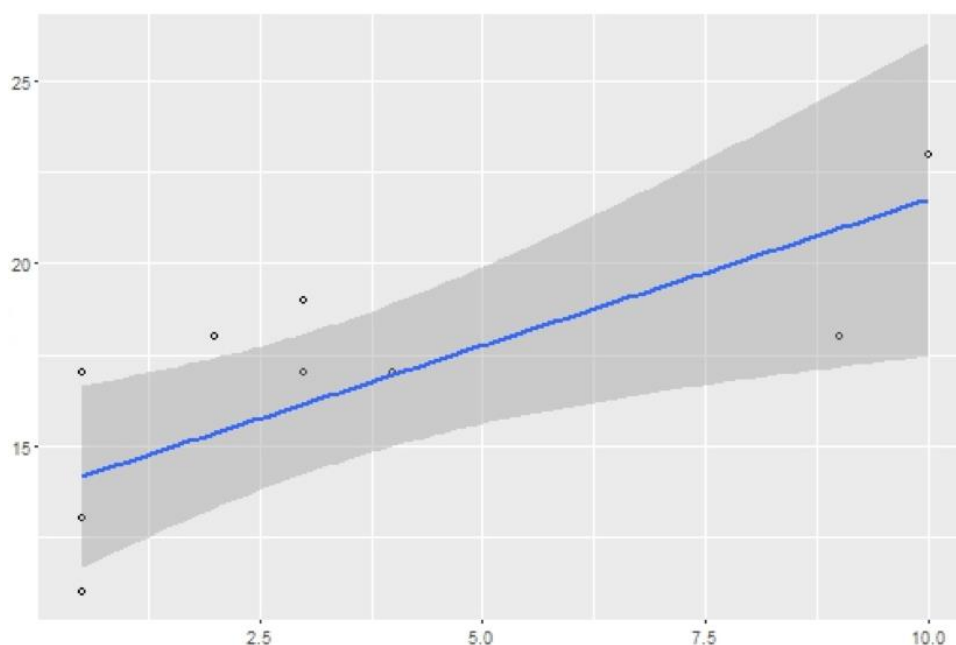
Lastly, we analysed the correlation between describers’ creativity and their level of experience. In this case, we found a high correlation between the CREA test and the number of years in the profession as shown in Table 5:

	CREA test score	Years of experience
<b>P.1</b>	17	4
<b>P.2</b>	23	10
<b>P.3</b>	11	0.5
<b>P.4</b>	19	3
<b>P.5</b>	17	3
<b>P.6</b>	18	9
<b>P.7</b>	13	0.5
<b>P.8</b>	18	2

<b>P.9</b>	11	0.5
<b>P.10</b>	17	0.5

**Table 5. Correlation between CREA test and describers' experience (in years)**

The Pearson correlation coefficient performed showed a high correlation between the CREA test and the years of experience in working as an audio describer. The analysis showed a moderate to high correlation ( $r = .749$ ; coeff. of determination:  $.56$ ;  $p = 0.008$ ), meaning that the more experienced the describers are, the higher they scored in the CREA test. Figure 4 illustrates this tendency:



**Figure 3. Correlation between the CREA test (Y) and years of experience (X)**

In Figure 3 we can see a clear correlation between the describers' creativity trait and their level of experience. As Hubscher-Davidson (2018: 45) outlines, the problem with these correlations is that they do not serve to establish cause-effect relationships. Therefore, there are two possible explanations for this effect. On the one hand, it might be possible that creativity levels increase with the exercise of this particular profession. AD is a highly creative activity which implies the use of linguistic skills to convey visual information, and it exposes describers to a wide range of cultural manifestations. Professional experience would also serve to explain the lack of correlation between the CREA scores and the subjectivity parameters. The greater the participants' experience, the higher their levels of creative intelligence and, thus, their capacity to conform to professional standards. On the other hand, an alternative explanation for this phenomenon could be that those describers with higher creativity levels to start with are the ones with greater inclination to exercise this profession for a longer period, an assumption that remains to be tested in further studies.

We need to acknowledge the limitations of a study which is only preliminary. First, the sample size is too small since only 10 professionals were recruited, resulting in the low statistical power of the sample. It would consequently be relevant and necessary to replicate this study with a greater sample, including participants from different cultural backgrounds. AD guidelines differ from country to country, and it would be interesting to see the effects of creative intelligence on professionals with different traditions.

Secondly, another important drawback arises from the task design, since our stimuli were only four short film clips of a poetic nature. Thus, our results are restricted to this particular type of film. Had we analysed the effects of creativity on more narrative film scenes or even on different cultural products such as the visual arts, our results might have been different. Also the lack of statistically significant results for most variables may derive from the use of a single creativity test. On the one hand, creativity is a complex construct that is very difficult to assess and measure uniformly with just a single test (Vartanian *et al.*, 2007). On the other, the CREA test was designed to measure creative intelligence, but it may not work as a predictor for the type of creativity involved in AD. Most importantly, the notion of creative intelligence arises from Gardner's (1983) theory of multiple types of intelligence, which has recently been called into question by neuroscientific evidence that challenges the view of the brain as a layered or compartmentalised organ (Barret, 2017). The study should be thus replicated by using different tests and maybe analysing other personality traits related to creativity, such as openness to experience (Oleynick *et al.*, 2017).

## 5. Conclusions

The present study is a first attempt to analyse the influence of creative intelligence on audio describers' professional performance. Three main factors have been analysed in relation to creativity, namely, the amount of subjective information included in the scripts, the levels of accuracy of the AD scripts, and the describers' professional experience.

As we have seen, no statistically significant correlation was found between the participants' scores in the CREA test and the inclusion of subjective information. In the light of results suggesting the influential role of professional experience, it can be hypothesised that self-regulation and adaptation to AD principles could have prevented those describers with longer professional experience and higher levels of creative intelligence from including subjective details like metaphors and connotative lexicon in their scripts. In this respect, it is also important to foreground the high variability found among participants and the wide range of subjective information instances found in the descriptions, although all participants claimed to have conformed to the objectivity principle. This phenomenon points to the need to create more detailed guidelines and achieve a consensus on what and how to describe, especially regarding controversial

details such as inferences, metaphors and evaluative language. Regarding the effect of creative intelligence on the accuracy of AD, our results suggest that, indeed, describers' creativity might influence the quality of their work, at least in terms of stylistic issues. Those describers who scored higher in the CREA test delivered AD scripts with fewer stylistic issues such as cacophonies, pleonasms, unnecessary repetitions and poor style. However, the clearest result of our study is the strong relationship between describers' years of professional experience and their levels of creative intelligence, which suggests that AD practice may encourage creativity or that creative intelligence could be a contributing factor in continuing professional practice.

All in all, the present paper is a first attempt to analyse the influence of creativity on the writing of AD scripts. Although more research in this matter is needed, our preliminary results have interesting implications for AD training and recruitment. Highly creative describers seem to produce better descriptions, at least in terms of fewer stylistic problems, and they seem to stay longer in the profession or improve their creativity in the exercise of this particular type of translation. This highlights the need to design exercises to promote creativity in the AD classroom and for the professional development of professional audio describers, and points to the necessity of taking creative skills into account in recruitment processes.

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## Appendix 1. Detailed AD correction sheet

### General items

Not making sense (NMS)	Difficult to understand, unclear phrasing, not making sense at all.
Grammar (GRAMMAR/ORT)	Syntax and morphology errors.
Dialect (DIAL)	Deviates from the original's geographical, temporal or social dialect; inappropriate deviations from standard, failure to convey idiolect.
Register (REG)	Inconsistencies in field, mode or tenor with respect to the original.
Textual (TEX)	Lack of coherence, lack of logic, poor use of conjunctions.
Semiotics (SEM)	Macrosigns: unsolved extralinguistic references or cultural implications. Microsigns: appropriateness to genres and discourses, unsolved intertextual references.
Inadequacy (INAD)	Inadequate description

### Linguistic transfer

Vocabulary (VOC)	Barbarisms, inappropriate lexical choices. AD: Vagueness, use of non-specific vocabulary; inadequacy to the vocabulary of the text to be described <sup>3</sup> .
Style (ST)	Cacophonies, pleonasm, unnecessary repetitions, poor style. Deviates from the style of the text to be described. AD: Not complying with stylistic norms of AD.

### Pragmatic and Intersemiotic transfer

Pragmatics (PRA)	Inability to convey the intentionality, irony, inferences, presuppositions, implications, illocutionary acts of the text to be described. AD: Addition of non-intended pragmatic information.
Suppression (SUP)	Suppression of visual, acoustic or textual information needed to understand the text, especially setting the scene (plot, time and space) and the characters in the scene. Suppression of relevant thematic connections.
Excess (EX)	Obscuring dialogue with AD, diluting the mood of the scene with too much description, covering too much musical information. Describing obvious elements, redundant with the information conveyed by the acoustic channel.

### Time management

Timing (TM)	Description is not synchronized with action. Breaking suspense or spoiling action through premature or delayed description.
Pace (PC)	Too long a description for the given fragment, has to be read too quickly. Too concentrated a description for a long fragment.

## Appendix 2. Raw data for subjectivity and accuracy tests

	CREA	EST	VAL	INFER	LEX CON	MET	TOTAL SUBJE.
<b>P1</b>	17	8	7	4	5	6	30
<b>P2</b>	23	1	1	1	0	1	4
<b>P3</b>	11	2	8	0	12	5	27
<b>P4</b>	19	1	7	1	9	8	26
<b>P5</b>	17	1	7	3	10	1	22
<b>P6</b>	18	3	3	0	4	1	11
<b>P7</b>	13	2	4	1	5	0	12
<b>P8</b>	18	4	2	0	8	4	18
<b>P9</b>	11	1	0	0	4	3	8
<b>P10</b>	17	11	15	4	17	1	48
<b>MEDIAN</b>	17	2	5.5	1	6.5	2	20

**Table A.1. Raw data for the variable subjectivity**

	CREA	VOC	ST	PRA	SUP	EX	INAD	GRAM/ ORT	TEX	TOTAL ACCURACY
<b>P1</b>	17	0	0	2	1	3	4	0	0	10
<b>P2</b>	23	4	0	1	2	1	4	1	0	13
<b>P3</b>	11	1	2	1	2	1	0	0	0	7
<b>P4</b>	19	0	0	0	3	0	4	0	1	8
<b>P5</b>	17	0	0	0	3	5	2	1	0	11
<b>P6</b>	18	0	1	1	1	0	2	1	0	6
<b>P7</b>	13	2	2	8	1	3	1	2	1	20
<b>P8</b>	18	3	0	2	4	0	3	0	0	12
<b>P9</b>	11	2	1	1	6	1	5	1	1	18
<b>P10</b>	17	2	1	2	1	2	4	2	1	15
<b>MEDIAN</b>	17	1.5	0.5	1	2	1	3.5	1	0	11.5

**Table A.2. Raw data for the variable accuracy**

## Bibliography



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