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Rendering Tone and Mood in Creactive Subtitles for Deaf and Hard-of-hearing

A Proposal

1. Introduction

Now, when stay-at-home guidelines have been established to battle the COVID-19 pandemic, audiovisual and digital communication have become key for schools, institutions, and businesses. The economy has been propped up partly by means of the Internet and digital communication, also aimed at ensuring the continuation of our social relations. However, digital inequality has disadvantaged some communities, not only due to their sociodemographic background or Internet skills, but also because of sensory impairment that has prevented them from fully accessing digital contents.

Audiovisual and digital communication are more than just the sum of audio and visual cues. As Zabalbeascoa states, "an audiovisual text is a communication act involving sounds and images" [Zabalbeascoa 2008: 21]. Therefore, what makes audiovisual communication special is

that images are accompanied by spoken words and sounds. They become part of the communication to build the message and cannot be interpreted except in relation to the images they complement. Therefore, it seems necessary that all digital communication should account for all the information and nuances they transmit, especially for people who do not have access to the auditory channel as a result of their hearing loss.

Deaf and hard-of-hearing people can access audiovisual communication by means of subtitling for the deaf and the hard-of-hearing ("SDH" onwards). Further to only conveying oral speech, SDH subtitles provide all information contained in audiovisual programs to provide SDH viewers a full audiovisual experience. Prosodic features – such as tone, mood, or word stress – and sound effects and music are crucial ingredients towards fully understanding audiovisual texts. SDH provides linguistic renderings of the dialogues, the sound effects, and linguistic descriptions of certain relevant paralinguistic features that accompany speech, by means of adding complementary writing**.**

Reading from a page or screen has always posed a great challenge, particularly for deaf children, as it involves oral-language decoding strategies. In the process of learning to read, children must learn the relations between oral speech and writing conventions. In other words, they must associate sounds with words. Depending on their degree of deafness, hearing-impaired children may have limited access to phonology and phonological systems; lip reading cannot fully overcome their problems in accessing all phonological information. Nonetheless, they supplement their limited hearing with visual codes that potentially play a similar role as the phonological-auditory codes in their hearing peers [Leybaert and Alegría 1990: 4].

The decoding process of understanding writing (onscreen or otherwise) also becomes an obstacle for deaf children to read, as it not only comprises the literal comprehension of the written composition, but also the understanding of the inferential meanings that are not always obvious. Thus, the "lack of clear relations between printed text, which is a representation of spoken language, and either low-fidelity spoken language or SL" [Marschark and Spencer 2010: 138] make it difficult for deaf children to draw inferences from either verbal or non-verbal textual information, as well as understanding abstract concepts or figurative senses when recodifying written messages. Undoubtedly, their interpreting skills are much better

when faced with words with only one meaning, or when they are presented in a context that facilitates its comprehension [Marschark 1997: 143-144].

I took advantage of this visual capacity of deaf children to produce *creactive* subtitles, designed to reduce the amount of onscreen writing to be read when enjoying subtitled audiovisual programs. They establish a visual code based on the visual language of comics to convey features not belonging to speech, that is, sound effects (SEs), paralinguistic features (PFs), and music.

2. Comics, a Visual Media

Comics have been commonly defined as magazines, which contain "a set of stories told in pictures with a small amount of writing" [Cambridge University Press 2016]. However, comic authors understand them as a social object, which is the result of two human skills: writing and drawing [Cohn 2013: 1]. Despite this, comic authors claim to *write* and not *draw* stories, and they identify comics not as a genre, but "a developing language" [*ibid.*], i.e., a form of text and a medium of expression – as movies or prose – to communicate ideas and emotions that can embrace different genres [McCloud 1993: 4-6]. What seems unarguable is the *relay* existing in comics, as their textuality combines verbal (writing) and non-verbal/visual language (images) seamlessly.

2.1. Comics' Visual Language

Comics are not simply images structured in a certain way to express the author's feelings. Comics are a verbal-visual blending in which both text and image are at play, and this interaction of verbal and visual components "creates a type of *language* that is more than the simple sum of the two codes" [Saraceni 2000: 5]. Actually, Cohn [2013: 2] states that "comics are written in *visual languages* the same way novels are written in English." Thus, comic authors and their *viewers* undoubtedly share a code, whose properties can be understood as a "visual vocabulary" [Cohn 2012: 92], which, in turn, becomes sequential. Comics become a communication tool, with specific languages and dialects. Comics generally adhere to some common rules or conventions, depending on culture, genre, or style, although there may be differences in presenting the information. Moreover, within the visual narrative used to convey information in comics, a distinction should be made between *visual language* and *visual signs*.

Comics convey verbal components – texts – within text boxes, as part of the landscape to indicate diegetic sounds, or – and most distinctively – in speech and thought balloons, which are the most recognisable visual signs of the visual language of comics [Harvey 2001: 75-76]. The latter form an important part of the visual design, they act as a "container" for written language, and they provide the way in which "text and image can interface with each other" [Cohn 2013: 35]. Speech balloons depict speech through a bubble that then extends back with a line towards the speaker's mouth [*ibid.*: 36]. They typically appear "as a block of text within a white oval with a protrusion to denote the speaker" [Wong 2014]. Although speech balloons emerging from non-speaking objects may seem awkward, any object can plausibly "speak" in comics, as language is not related to real physical properties [*ibid.*].

This study focuses on the strategies and visual signs that are used in comics to convey non-verbal features, which may or may not accompany the speech. These non-verbal features are mainly paralinguistic features (PFs) and sound effects (SEs), although the paper in hand will only focus its attention on the former. Comic symbols and conventions commonly used to render PFs, and which may be helpful in tailoring *creactive* subtitles are presented in the subsections below.

2.1.1 PFs in Comics

PFs include all kinetic or vocal features that sometimes accompany oral messages and transmit additional information to what the uttered words communicate [Díaz Cintas 2001: 128]. Kinetic features can be appreciated from gestures or facial expressions. Vocal features, however, cannot be inferred from images. PFs are likely to be language bound and dependent, since they convey emotions or implied meanings that can only be interpreted in relation to the language they accompany [Neves 2005: 166]. The same sentence can adopt a totally different attitude depending on the intonation, the tone and pitch of voice or the volume.

Two main categories are to be distinguished within PFs: *tone* and *mood*. These suprasegmental elements "lie somewhere between the verbal and non-verbal modes of delivery" and they "may belong to speech proper or carry a propositional content" [Tsaousi 2013: 237]. While tone is inherent in speech – includes the volume, the intonation or the emotion of the words uttered – mood does not necessarily need to relate to the dialogue, although both are "necessarily communicated acoustically" [*ibid.*].

In comics, *tone* is usually conveyed through speech balloons, which adopt a wide range of forms, depending on the purpose of the speech. Thought bubbles contain unspoken speech, that is, inner thoughts, which are presented in the shape of nimbus. Burst or jagged balloons are used to express shouted or screamed dialogues. Balloon contours with squiggly lines denote the speaker is disoriented or off-kilter, sometimes can also be used to render dialogues of monsters. Mechanized or electronically filtered voices or speech which is transmitted through a radio, TV, or telephone are evoked by rigid lines and a speaking protrusion stylized like a lightning bolt. Wavy balloons convey physical distress, while dashed-stroke balloons show whispered statements. Whispering or softer tones of voice can also be indicated by words shrunk to illegibility. Hanging icicles in balloons suggest an especially cold tone of voice [Wong 2014; Piekos 2015].

However, not only the shape but also the size, the placement of the balloon and/or its non-linguistic content suggest a particular pitch, volume, intonation, stress, rhythm, speed, pausing or emphasis, among others, that accompany the character's utterance. Even the choice of the font can determine the impact of the bubble content. This flexibility comes from the subtlety of speech balloons. They are there in the picture for a purpose, although they go unnoticed as they are understood as whole together with the speech they contain.

In fact, this versatility of speech bubbles extends to the contents inside the balloon. Colors may establish a visual signature for the characters that is reflective of their personality; or speech balloons can also convey non-verbal information by using question or exclamation marks to express a sense of emotion, without verbalizing it. Moreover, just a simple variation in lettering "like enlarging or bolding certain words or phrases, signals changes in the speaker's volume or emphasis" [Wong 2014].

On the other hand, *mood* features also appear in comics and are uttered by the characters, like laughing, crying, groaning, whistling, or swallowing. They are usually conveyed by means of onomatopoeia or symbols that are easily identified. Their function is to resemble real speech, while maintaining meaning. According to Cruse, the defining characteristic of *paralinguistic signs* is "an extreme dependence on the accompanying language. Either they cannot be produced except during speech (because they are carried on the voice), or they cannot be interpreted except in conjunction with accompanying the language" [Cruse 2000: 9]. PFs become so powerful in meaning that they may even replace a gesture, although the

different codes in interaction, such as gesture and linguistic and paralinguistic signs, often reinforce each other [Revermann 2006: 42].

3. *Creactive* Subtitles

Comics inspired me for the design of *creactive* subtitles as comics present information coming from both auditory and visual channels visually. *Creactive* subtitles are a new subtitling code based on comics' visual language, in which subtitles are more visual and integrated within the image. They could be defined as follows:

> [i]nterlingual or intralingual pre-prepared creative moving inserts used in audiovisual programmes to render non-verbal features, such as the emotion and/or intention with which dialogues are uttered, and sound effects that play a pivotal role in the animated story. *Creactive* subtitles are carefully designed to obey the style of the audiovisual context into which they will be inserted, at the same time they completely communicate the message contained in the source text. They use pioneering techniques that merge different disciplines, such as graphic design, animation, video editing, subtitling and transcreation, in order to provide a visual equivalence to what is heard in the original [Sala Robert 2016].

The visual integration of subtitles into the pictorial context is an alternative strategy to render non-verbal features, such as paralinguistic features (PFs) and sound effects (SEs), in audiovisual programs targeted at children. *Creactive* subtitles are aimed at engaging their audience imaginatively to hear both sounds and dialogues with their eyes, while enjoying the contents. Viewers are encouraged to perceive the subtitles, the images and the inserts as forming a coherent sequence, and, according to 82% of the participants of the *creactive* subtitles pilot study conducted in 2016 in an inclusive mainstream school located in Blanes (Spain) *creactive* subtitles are easy to understand and comfortable to read [*ibid*.: 250].

Creactive subtitling is not only aimed at providing full access to the meaning of the original text with all its nuances, but also to the enjoyment of the program. Their audience may not be able to hear, but they can **feel and perceive**. Therefore, Nida's *dynamic equivalence* principle has been respected in the design of *creactive* subtitles to ensure that "the relationship between the receptor and the message should be substantially the same as that which existed between the original receptors and the original message"

[Nida 1964: 159]. A great effort has been made to establish equivalence between the source text (ST) and the target text (TT), so "the way in which the original receptor understood and appreciated the text" is equivalent to "the way in which receptors of the translated – subtitled – text understand and appreciate the translated – subtitled – text" [Nida 1993: 116].

The main objective of *creactive* subtitles is to help d/Deaf viewers to grasp visually the message that is originally conveyed by aural means. They are aimed at creating the **same effect** their hearing peers perceive, so d/Deaf spectators receive the message in its entirety. Therefore, owing to visual cues, the strategies tailored for this new subtitling code produce the same effect that the auditory information produced in the hearing audience, and the method gained the favor of 68% of the audience participating in the study, who ensured they will choose *creactive* subtitles [Sala Robert 2016: 258].

It can be argued that the visual cues used to produce the aural message in *creactive* subtitles may be understood as a form of simplification. There is controversy among experts on whether or not to simplify subtitles targeted at deaf children. As Zárate [2014] states, *simplification* can be considered an additional impediment for deaf children to access oral language and learn it. However, the subtitles in hand do not tackle linguistic issues, thus, *creactive* subtitles are not the result of selecting items on a level which is lower than current subtitling practice.

Despite this, it is true that *creactive* subtitles reduce the amount of text to be read and, consequently, the amount of (oral) vocabulary included in subtitles. Instead, they "spread semantic load over wider stretches of text" [Baker 1996: 180]. *Creactive* subtitles' visual *explicitation* of PFs, which establishes more communicative clues, is fundamental to "compensate for the aural elements that go missing" [Neves 2005: 148] in order to allow more time for the enjoyment of the action on screen.

In the process of subtitling for the d/Deaf and the hard-of-hearing, SDH subtitlers need to identify, analyze, and determine which aural elements, which may even go unnoticed among hearing spectators, require further visual specification to render the message and its context faithfully so that it fulfils their target audience's needs. This means that, besides transcribing and editing dialogues, some important semantic elements that might be implicit in the ST may require further explicitation in the TT. Subtitlers have to identify the specific relevance of non-verbal elements of the source video for the correct understanding of the audiovisual story. This step is

key "in order to minimise ambiguity in the reception of meaning and/or to avoid any loss of possible nuances and thus maximise accessibility to the original product" [Tsaousi 2013: 235].

Once interpreted, they need to convey them within SDH subtitles in order to elicit substantially the same response between the source video, the subtitled video and their respective natural viewers. All strategies should be valid as far as they elicit similar response between source video viewers and subtitles users. However, up until now, subtitlers have not been free from the binding of the technical constraints of SDH. Even though subtitling software allows some flexibility in terms of position within the screen or font color and size, it is far from what has been achieved by *creactive* subtitles.

3.1. PFs: Conventional SDH vs. Creactive *Subtitles*

In the communication process of subtitling, the linguistic message appears in relation to other messages, which are transmitted by means of non-linguistic systems. They are of the utmost importance and need to be included in accessible subtitles, since "such paralinguistic signs actually alter the meaning of words; and more often than not, punctuation cannot translate their full reach" [Neves 2005: 148].

While kinetic features can be inferred from images, vocal features are invisible to our eyes, as they refer to the emotions or implied meanings conveyed within the message they accompany [*ibid*.: 166]. Digital communication is human, emotional. It is necessary to show there is a person sending a message to another person in order to maintain the effectiveness of communication. That is why the conveyance of this part of the message is of key importance.

Paralinguistic features are the ones that become more challenging when subtitling. The two main categories to be distinguished within PFs were discussed earlier in this paper: *tone* and *mood*. It tends to be more subjective and difficult to interpret, as it can contribute towards a change in the meaning of or be contradictory to the words uttered. Conventional SDH subtitles mainly render them if they cannot be deduced from the actor's performance.

PFs are conveyed by means of *labels*, which are a linguistic explanation, commonly presented in capital letters, in the same color allocated for the character, and in brackets immediately before or after the utterance affected by the emotion. Labels contain crucial information to transmit the

message. However, they increase the amount of text to be read, allocating less time to read the subtitles' contents and enjoy the image. Consequently, the time invested in enjoying the whole audiovisual program is hindered by the cognitive effort made to read and understand subtitles. Moreover, labels are not always as precise as they should, as a result of the lack of analysis of the function of the nuance heard in the source video, due to time and space constraints or by virtue of the difficulty to find the proper word to express emotions.

In order to avoid words, Tamayo [2015: 106, 148] suggests the introduction of emoticons and drawings to render "sounds uttered by characters and sound effects," respectively. It seems a possible **visual** solution to convey information that is provided through the auditory channel. In fact, Neves [2005: 226-231] had already suggested the introduction of emoticons "to convey some of the most meaningful paralinguistic or emotional features that were not easily perceived through visible signs." Emoticons have the advantage of being "economical in nature and… profusely used by most deaf people" [*ibid*.: 226]. Arnáiz-Uzquiza [2015] indicates that deaf people process emoticons with difficulty. They also take more time to identify them on screen, probably due to the fact that emoticons are a foreign element inserted onto the screen and they are not conceived as part of the visuals of the programs. For this reason, emoticons should be kept to a stable and consistent list that can be easily identified by the audience. Nonetheless, both Neves [2005] and Tamayo [2015] proved that emoticons were not disruptive, and their presence was welcome by many of the deaf participants.

However, emoticons seem to be a limited resource, as they are not able to provide a solution for every emotion. In these instances, where it is not possible to use predetermined emoticons, Tamayo [2015: 108, 112] recommends that subtitlers follow the guidelines provided in *Norma UNE*. If emoticons are not able to cover all the instances found in an audiovisual program, they might not be the most appropriate strategy to use. Consistency is key for the proper understanding of subtitles, and it should be maintained throughout the program. Viewers could interpret this code change as either subtitling inconsistency or a surrender of subtitlers to the first difficulty experienced.

Consequently, *creactive* subtitles make an effort to consistently render volume and emotional information without words. They avoid the use of labels and use speech bubbles instead. This feature has been borrowed

from comics because of the flexibility it allows for each instance of PF, as speech bubbles can simultaneously convey the volume and the emotion or intentionality of the subtitled utterances.

The *shape* of the bubbles is a determinant of the volume of the utterance. Four different types of bubbles have been adopted: round (speech) bubbles, burst or jagged balloons, thought bubbles, and dashed-stroke balloons, to convey dialogues uttered at a normal volume, shouted, or screamed utterances, thought or memories from the past, and whispered statements, respectively. Even though the aforementioned bubbles are the standard and may seem enough to cover subtitlers' needs, real practice demonstrates that other types of bubbles are necessary. *Creactive* subtitles provide subtitlers with the necessary freedom to create new inserts when required.

When in need to emphasize the volume of the utterance, bubbles alone are not enough. In very noticeable shouted or screamed utterances bubbles with spiky borders can be combined with bigger sizes of the fonts. Additionally, capital letters can help to contribute to highlight the volume of the speech.

A wide range of possibilities is available with the proposal of *creactive* subtitles, because subtitlers do not depend on limited options. Depending on their needs, they **create** one type of bubble or another. The fact that they are not predetermined images, but designed to serve a purpose, provides flexibility to adjust the size of the balloon to the amount of text to be conveyed within it, as well as its position to avoid screen invasion.

Regarding image obstruction, use of background within bubbles has been declined to prevent image invasion, since *creactive* bubbles have been accurately placed within the action. One of the major complaints about conventional subtitles is that the spectators' attention is only focused on the bottom part of the screen, where subtitles are placed. Consequently, spectators that need to rely on subtitles to follow the program or film may miss an important part of the action of the story. The aim of *creactive* subtitles is to become part of the action, without being an obstacle to follow it. Therefore, there are a very few instances in which subtitles are found in their "usual" position. Instead, it is preferred to place utterances closer to the speakers, locating *creactive* subtitles where the main action takes place. As a result, the eye does not need to move around the screen to receive the entire information package (image and dialogues), which maintains the viewers' attention where action happens. Likewise, subtitles

positioning also attempts to mirror the film's rhythm and the performance of the characters. Therefore, dynamism can be found in some instances, where subtitles move along with the character.

Bubble shapes are not the only feature that provides extra information to viewers. Speech bubbles have been assigned different **colors**, depending on the emotion they need to convey. Colors are a basic element of plastic and visual language, and they help to build an appropriate strategy to render the emotional nuances of the statements. In order to be coherent throughout the film, it is necessary to create a color code where each color represents an emotion. However, we must bear in mind that human emotions are complex and present derivations. Consequently, all feelings belonging to the same "family of emotions" will be assigned the same color. For instance, if yellow is allocated for *happiness*, it will also render *content*, *satisfaction*, *pleasure,* or *pride*.

In addition, human emotions do not occur in isolation. At the end of the day, our emotional experiences may be complex. This complexity is also represented in *creactive* subtitles. By combining two different colors within the same speech bubble, a new emotion is transmitted. *Disappointment*, for instance, accepts the reality of unfulfilled hopes and expectations. In disappointment, there is usually an aspect of *sadness* for the recognition that you will never achieve what you wished and an aspect of protest with *anger*. Therefore, this emotion will be rendered by means of the two colors assigned to these two emotions. However, anger and sadness are not always equally balanced in disappointment. For this reason, a strategy has been adopted to emphasize whether the words are uttered more sadly or more angrily. *Creactive* bubbles are designed in double lines, which allow the use of two different colors. Thus, it is possible to decide which of the colors, or emotions, prevails.

In the confluence of emotions, "humans can deliberately fabricate a facsimile of an emotional expression… to mislead or to refer to an emotion that is not currently experienced," according to Ekman [1999: 48]. Irony is an emotion, whose complexity is already implied in its definition: "the use of words that are the opposite of what you mean" or "a situation in which something which was intended to have a particular result has the opposite or a very different result" [Cambridge University Press 2016]. *Creactive* subtitles render irony by using the colors of the emotions at play.

However, characters may fail in their attempt to pretend an emotional expression. In those cases, it is suggested presenting the bubble in the color

of the pretended attitude, together with the one that refers to the real emotion the character feels. Again, the double line of the bubble allows to show which emotion predominates in the utterance, despite the initial intention.

Regarding PFs and emotion conveyance, it is also valuable to analyze what can be done with the other major element: *mood*. It includes all non-linguistic elements articulated by the character, such as a groan or laugh, and that may or may not surround utterances. *Mood* is more objective than *tone*, as it accounts for a non-linguistic sound, which, at the same time, may have a meaning, depending on every particular situation.

Conventional SDH also renders mood by means of labels, although there is a new trend to convey mood within dialogues by means of onomatopoeia. In *creactive* subtitles, *mood* is also mostly rendered by means of onomatopoeia. Experts and broadcasters are increasingly establishing onomatopoeia as the new trend of subtitling, however, onomatopoeia on its own may not be understood by deaf children, as they would have never heard the sound before to associate it with the linguistic description. As Zárate [2014: 96-97] claims:

> [w]hile onomatopoeias [*sic*] may be more amusing and creative, it is arguable whether deaf children are naturally able to associate onomatopoeias [*sic*] to sounds and understand them immediately… The consistent introduction and repetition of onomatopoeias [*sic*] in many programmes would benefit the recognition or even acquisition of this figure of speech by deaf children… Children might have gained familiarity with onomatopoeias [*sic*] while engaging in other forms of reading, namely comics, or playing video games, where onomatopoeias [*sic*] could have been assimilated at least by sight (if not by sound)… Looking into whether children recognise onomatopoeias [*sic*] and eventually associate them to the meaning (of the verb and the noun) could be revealing for subtitlers.

For this reason, onomatopoeia and interjections are framed with speech bubbles that provide additional information, such as the emotion, the volume, or the pitch of the onomatopoeic spelling. In cases where deaf children do not know the meaning of the onomatopoeia, this extra information will provide them, at least, the intention of the character and will help them to develop strategies to infer the meaning hidden behind the representation of sound.

Creactive subtitles make all efforts to mirror sounds visually, despite the challenge it supposes, since "even the most accurate representation of

a sound is not likely to be as evocative as the sound itself" [de Linde and Kay 1999: 14]. In addition, language is not always used literally, it may be used figuratively. As stated previously, deaf children show difficulties in drawing inferences from either verbal or non-verbal contextual information, as well as understanding figurative senses when recodifying written messages. Therefore, it seems that bubbles have a clarifying effect that is beneficial to the appropriate understanding of the subtitle with all its connotations.

Creactive subtitles, however, step beyond mere conveyance through onomatopoeia or interjection. The reason is simple: there are instances in which no onomatopoeia or interjection exist to render the sound heard. *Creactive* subtitling entails tailoring subtitles and adjusting them for the purpose of the film in question. Thus, when no onomatopoeia is established for a sound, creativity starts working to provide access by means of different innovative strategies, such as purposely created inserts or off-screen "copied-pasted" inserts. The latter is used in cases where a sound is repeated exactly in the same way both off and on screen for the hearing audience. *Creactive* subtitles repeat the image where the sound takes place exactly in the same way: both off and on screen to create the same effect on the d/Deaf audience. It is, undoubtedly, the most innovative proposal of *creactive* subtitles, as they are able to make a sound visually accessible for d/Deaf audiences, mirroring sound by visual means.

Creactive subtitles were not only a theoretical PhD proposal. They were conceived to become a reality. They are currently being used in corporate advertisements, both static and dynamic, although the aim is to make them a creative subtitling convention to be used in any audiovisual material.

4. Conclusions

"The human drive for language is so strong that when deafness makes speech inaccessible, it finds another channel, creating language in sign" [Perlmutter s.d.]. *Creactive* subtitles have also found "another channel" to convey the information that is originally transmitted by the auditory channel. From the need to imply sounds through images, *creactive* subtitles provide a new subtitling code in which the verbal dimension is supplemented by elements in other media. The *creactive* code is based on shapes and colors, which are a universal language; and it is influenced by a language that is able to embrace all senses in one media: comics' visual language.

In comics, all the information needed to understand the story is presented on the same page. Comics are the only medium where the audience regularly sees sound instead of hearing it. This peculiarity forces comic book artists "to utilise, innovate and invent all sorts of methods to depict sound" [Wong 2014]. In addition, comic style provides versatility when capturing nuances. Shapes and colors, for instance, highlight all sorts of auditory effects.

Moving from written to visual language offers new ways to represent non-verbal components. Symbols serve as visual equivalents to sound and may capture its essence in a more evocative manner than verbalization is capable of [*ibid*.]. However, depicting sound visually is not as easy as it may appear. There should be implications, a shared code, between the visual element and the viewers, as it will be necessary to infer all the characteristics of a sound from the way in which it is visualized. Moreover, comic artists choose words that evoke sounds and that, at the same time, create a rhythm when read on the page.

Creactive subtitles are, undoubtedly, the fruit of conceiving subtitling as a creative component, whose main objective is to benefit accessibility. They aspire to be a piece of art in action that serves the needs of deaf children. However, subtitling is also a constrained mechanical process. Therefore, to create a new code that provides the necessary flexibility to render acoustic information by visual means and be able to translate from sound into image, *creactive* subtitles have to break all the established norms in some specific cases, particularly those regarding subtitles' static position or font and background color. They revolutionize the manner subtitles have been commonly conceived.

We are living in the times of an authentic technology revolution that may help us to tailor subtitles according to the needs of the audience. One of the main concerns when creating *creactive* subtitles was presenting a universal design to benefit people of all ability kinds, without disturbing those who do not need to rely on subtitles to follow the audiovisual program. *Creactive* subtitles ease access to auditory information by means of a variety of methods to present information, such as bubble shapes, colors, and inserts. I designed these flexible strategies considering accessibility, eliminating unnecessary and inconvenient obstacles for both disabled and non-disabled people.

PFs conveyance by means of bubble shapes and colors avoid the use of labels. Labels are a linguistic explanation, commonly presented in capital

letters and in brackets immediately before or after the utterance affected by the emotion or volume. Bubble shapes and colors contribute to a significant reduction of the number of labels. Therefore, it is also possible to moderate the amount of printed text to be read throughout the program, which is not a visual language, but a visual-written representation of spoken language. This minimization of printed text seems particularly advantageous to severe profoundly deaf children, whose hindered access to orality impedes their reading/writing acquisition process and the mental representation of speech.

Creactive subtitles facilitate the experience of reading subtitles, both for deaf and hearing children. It implies a lower cognitive effort, compared to conventional subtitling, and it results in a more relaxed and fluent viewing experience. Viewers do not feel overwhelmed by the great deal of information contained in subtitles and have more time to read them. Therefore, they do not fear that they would miss part of the subtitles' contents if they do not hurry to read. As a result, a greater enjoyment of the image ensues. The time that is not needed to read and understand overloaded subtitles is invested in enjoying the whole audiovisual program, which leads to a greater final satisfaction and contentment.

Now that *creactive* subtitles are a reality, as stated before, the new goal is to spread *creactivity* among accessibility providers. *Creactivity* was born as a new way of providing subtitles for deaf children, although the concept has evolved. It currently defines the attitude or ability to create creative accessible solutions in certain instances, especially when the guidelines do not offer a recommendation. To do this, it is of an utmost importance that accessibility providers have deep knowledge of their target's needs and abilities, in order to suggest new solutions that ensure legibility (making subtitles visible and recognizable) and readability (subtitles' comprehension) by means of respecting the maximum of characters permitted per subtitle, as well as their minimum and maximum screen time exposure. Reading speed is untouchable. However, we have room for *creactivity* in the way we present the content of the subtitles. Faced with a difficulty, we have two options: do nothing or use *creactivity* to guarantee greater accessibility.

REFERENCES

Arnáiz Uzquiza, V. (2015), "Eyetracking Tests in Spain", [in:] Pablo Romero-Fresco, ed. *The Reception of Subtitles for the Deaf and Hard of Hearing in Europe*, Peter Lang, Bern.

Baker, M. (1996), "Corpus-based Translation Studies: The Challenges That Lie Ahead", [in:] Harold Somers, ed. *Terminology, LSP and Translation: Studies in Language Engineering in Honour of Juan C. Sager*, Benjamins, Amsterdam–Philadelphia, https://doi.org/10.1075/btl.18.17bak.

Cambridge University Press (2016), *Cambridge Dictionary*, [online] http://dictionary.cambridge.org/.

Cioffi, F. (2001), "Disturbing Comics: The Disjunction of Word and Image in the Comics of Andrzej Mleczko, Ben Katchor, R. Crumb, and Art Spiegelman", [in:] Robin Varnum, Christina T. Gibbons, eds. *The Language of Comics: Word and Image*, University Press of Mississippi, Jackson, Miss.

Cohn, N. (2005), "Un-defining 'Comics'", *International Journal of Comic Art*. 7(2), [online] http://visuallanguagelab.com/P/NC_Undefining_Comics.pdf.

Cohn, N. (2012), "Comics, Linguistics, and Visual Language: The Past and Future of a Field", [in:] Frank Bramlett, ed. *Linguistics and the Study of Comics*, Palgrave MacMillan, New York, [online] http://www.visuallanguagelab.com/P/NC_Comics&Linguistics.pdf.

Cohn, N. (2013), *The Visual Language of Comics: Introduction to the Structure and Cognition of Sequential Images*, Bloomsbury, London, http://dx.doi.org/10.5040/9781472542175.

Cruse, A. (2000), *Meaning in Language: An Introduction to Semantics and Pragmatics*, Oxford University Press, Oxford.

Díaz Cintas, J. (2001), *La traducción audiovisual: El subtitulado*, Ediciones Almar, Salamanca.

Dirks, T. (2016), "Animated Films", *AMC Filmsite*, [online] http://www.filmsite.org/animatedfilms.html.

Ekman, P. (1999), "Basic Emotions", [in:] Tim Dalgleish, Mick J. Power, eds. *Handbook of Cognition and Emotion*, John Wiley and Sons Ltd., New York, [online] https://www.paulekman.com/wp-content/uploads/2013/07/Basic-Emotions.pdf.

Faust, W.M. (1971), "Comics and How to Read Them", *The Journal of Popular Culture*. 5(1): 195-202, https://doi.org/10.1111/j.0022-3840.1971.0501_195.x.

Harvey, R.C. (2001), "Comedy at the Juncture of Word and Image", [in:] Robin Varnum, Christina T. Gibbons, eds. *The Language of Comics: Word and Image*, University Press of Mississippi, Jackson, Miss.

Leybaert, J., Alegría, J. (1990), "Cued Speech and the Acquisition of Reading by Deaf Children", *Cued Speech Journal*. 4: 24-38, [online] https://dipot.ulb.ac.be/dspace/bitstream/2013/76641/3/leybaert1990a.pdf.

Linde de, Z., Kay, N. (1999), *The Semiotics of Subtitling*, Routledge, London, https://doi.org/10.4324/9781315538686.

Marschark, M. (1997), *Raising and Educating a Deaf Child*, Oxford University Press, New York.

Marschark, M., Spencer, P. (2010), *The Oxford Handbook of Deaf Studies, Language, and Education*, Oxford University Press, New York, https://doi.org/10.1093/oxfordhb/9780199750986.001.0001.

McCloud, S. (1993), *Understanding Comics: The Invisible Art*, Kitchen Sink Press, Princeton, Wisconsin.

McCloud, S. (2005), *The Visual Magic of Comics*, TED Conference, [online] https://www.ted.com/talks/scott_mccloud_on_comics.

Neves, J. (2005), *Audiovisual Translation: Subtitling for the Deaf and Hard-of-Hearing*. Doctoral dissertation, Roehampton University, London, [online] https://www.academia.edu/1589609/Audiovisual_translation_Subtitling_for_the_deaf_and_hard_of_hearing.

Nida, E.A. (1964), *Toward a Science of Translating: With Special Reference to Principles and Procedures Involved in Bible Translating*, E.J. Brill, Leiden.

Nida, E.A. (1993). *Language, Culture, and Translating*. Shanghai Foreign Language Education Press, Shanghai.

Peirce, S. (1977), *Semiotics and Significs: The Correspondence between Charles S. Peirce and Victoria Lady Welby*, Charles Hardwick, ed. Indiana University Press, Bloomington.

Perlmutter, D. (s.d.), *What is Sign Language?*, Linguistic Society of America, Washington, DC, [online] http://www.linguisticsociety.org/sites/default/files/Sign_Language.pdf.

Piekos, N. (2015), "Comic Book Grammar and Tradition", *Blambot*, [online] http://www.blambot.com/articles_grammar.shtml.

Revermann, M. (2006), *Comic Business: Theatricality, Dramatic Technique, and Performance Contexts of Aristophanic Comedy*, Oxford University Press, Oxford.

Sala Robert, È. (2016), *Creactive Subtitles: Subtitling for ALL.* Doctoral dissertation, Universitat Pompeu Fabra, Barcelona.

Saraceni, M. (2000), *Language Beyond Language: Comics as Verbo-Visual Texts*. Doctoral dissertation, University of Nottingham, Nottingham, [online] http://eprints.nottingham.ac.uk/35647/.

Tamayo Masero, A. (2015), *Estudio descriptivo y experimental de la subtitulación en TV para niños sordos: Una propuesta alternativa*. Doctoral dissertation, Universitat Jaume I, Castellón de la Plana, [online] http://www.tdx.cat/handle/10803/353962.

Tsaousi, A. (2013), "Making Sound Accessing: The Labelling of Sound-effects in Subtitling for the Deaf and Hard-of-hearing", *Hermēneus, TI*. 17: 233-252, [online] http://www5.uva.es/hermeneus/hermeneus/17/arti08_17.pdf.

Wong, E. (2014), "Breaking the Silence: How Comics Visualize Sound", *Sequart Organization*, [online] http://sequart.org/magazine/53486/how-comics-visualize-sound/.

Zabalbeascoa, P. (2008), "The Nature of the Audiovisual Text and Its Parameters", [in:] Jorge Díaz-Cintas, ed. *The Didactics of Audiovisual Translation*, John Benjamins, Amsterdam, https://doi.org/10.1075/btl.77.05zab.

Zárate, S. (2014), *Subtitling for Deaf Children: Granting Accessibility to Audiovisual Programmes in an Educational Way*. Doctoral dissertation, Centre for Translation Studies, University College London, [online] http://discovery.ucl.ac.uk/1455707/1/Thesis_Soledad_Zarate.pdf.

Abstract

This article introduces the concept of *creactivity* – the process of making creative solutions to provide emotional accessibility, especially in subtitling for the d/Deaf and the hard-of-hearing. It is based on the findings of the PhD thesis *Creactive Subtitles: Subtitling for All*, defended by the author in 2016. To understand the need for a new way of providing accessibility, a review of digital communication is presented. It illustrates the pivotal role of digitization at present, after the pandemic has increased digital inequality for those who lack digital skills or access due to their sociodemographic background or sensory impairment.

The impact of deafness is discussed, particularly, how early hearing loss influences the cognitive, communicative, linguistic, and social development of children and affects not only their language choice, but also the way they communicate, understand, and perceive the world we live in.

Thus, to transmit what is perceived by means of hearing to make the audiovisual message complete for everyone, Sala [2016] designed the

creactive subtitles. Targeted at younger (deaf) audiences, they are visual tailor-made subtitles designed *ad hoc* to be adapted to the unique features of each audiovisual product and its audiences' abilities. Now that *creactive* subtitles are a reality, *creactivity* becomes the new goal: to spread the attitude to create new solutions in favor of accessibility.

Keywords: accessibility, comics, *creactivity*, deafness, emotions, subtitles, visual language