Creative freedom versus conventional norms in SDH: The case of *Stranger Things*

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Abstract: This study focuses on creative practices in media accessibility. It examines the differences between the conventional approach to subtitling for the D/deaf and hard-of-hearing (SDH) and an emergent creative approach experimented with by Netflix, with a special focus on the descriptive quality of SDH tags. It explores the extent to which SDH subtitlers steer away from standard norms and practices when granted creative freedom by the client and the extent to which their authorial input is visible. A secondary aim is to observe whether there is also an element of authorial intent suggesting the possibility of some kind of agenda. To this end, this study engages in an in-depth comparative analysis of two episodes of the Netflix TV series *Stranger Things*, one belonging to the first season, following the conventional approach, and the other to the fourth season, in which subtitlers were given free rein. The SDH tags in each episode were singled out, quantified, and categorized according to Chaume's (2004) taxonomy of filmic signifying codes (linguistic, paralinguistic, musical, special effects, sound arrangement, photography, mobility, planning). The analysis also reveals which categories are impacted the most by the creative input. The main findings reveal how subtitlers adopting this freer approach tend to stress the communicative meaning of the SDH tags, enhancing the hearing-impaired users' experience. To achieve this, they use a vaster number and variety of adjectives (compared to conventional practices) while trying to create terms that resonate on a sensory level with the specific genre and plot.

Keywords: creative SDH, authorial input, authorial intent, creative media practices, creative freedom

1. Creative practices in Media Accessibility

Up until recently, the meaning of the term Media Accessibility (MA) was narrowed down to the provision of access to media products, initially intended mainly for persons with sensory disabilities who could therefore enjoy a production through a specific set of services and modalities such as subtitling for the d/Deaf and hard-of-hearing (SDH) and audio description (AD) (Greco, 2019a, 2019b). This was followed by a shift that incorporated linguistic access into this package of services, and more recently a further shift towards a universalist approach that does not limit access to any specific group, product, or service. The latter favors wider interdisciplinarity and inclusive design practices based on user-centered rather than maker-centered approaches (Greco, 2019a, 2019b). Apart from these evolving shifts in the field, recent scholarly

discussions have also revolved around the notion of creativity in media access, intended mainly as a practice that goes beyond standard access norms and conventions. This practice is referred to as 'creative media accessibility' (CMA) (Romero-Fresco, 2021a). Romero-Fresco and Chaume (2022, p. 84) have defined creative media accessibility as "those practices that not only attempt to provide access for the users of a film or a play but also seek to become an artistic contribution in their own right and to enhance user experience creatively or imaginatively".

Considering CMA from a technical perspective, Romero-Fresco (2021b) discusses the degree of creativity within the scope of established guidelines. As far as captioning is concerned, creativity can imply various levels and layers, including aesthetics (font, colors, bidimensional interaction of layers, etc.), positioning, graphic representation of sound duration or intensity, or volume, and pace and rhythm (Romero-Fresco, 2019). The verbal level can also be considered, that is, the actual choice of words for the SDH tags (labels describing sounds, voice qualities, music, songs and speaker ID), and whether they are intended to trigger an emotion, express a vibe, or otherwise adopt a descriptive approach. Romero-Fresco advocates for a more individual-focused approach as well as a collaborative one in line with Accessible Filmmaking practices, whereby users who generally require sensory access can be creative collaborators in the process (Romero-Fresco, 2019, 2021a). Indeed, from more of a user perspective, d/Deaf artists Sylvestre (2018 cited in Romero-Fresco & Chaume, 2022) and Sun Kim (2020 cited in Romero-Fresco & Chaume, 2022) test new ways in which to present SDH. In both their works they create closed captions based on the emotions of the d/Deaf and hard-of-hearing users when experiencing the visuals, thus raising awareness of their disability. Such CMA experimental practices imply a deviation from standard norms while placing focus on user experience with the intent of enhancing the engagement of hearing-impaired users, in line with one of the goals of CMA (Romero-Fresco & Chaume, 2022). These practices are not yet mainstream though there are a few random exceptions, the latter providing the sample data for this study, as explained further on.

Mainstream platforms provide guidelines and specifications for their vendors and consequently, for translators and subtitlers, and these may vary according to the territory and language. As Pedersen (2018: 87) states, "Netflix's guidelines exert a great deal of pressure on the subtitlers' behavior and are thus expressions of strong norms". Netflix's stylistic guidelines for English SDH (Netflix, 2022) recommend the use of detailed and descriptive tags, therefore adopting adverbs where appropriate when describing sound effects and music, describing voices, speed of speech, and volume of sound. Moreover, the guidelines recommend the use of transcription or labels such as *hesitates* or *spluttering* to represent hesitation or nervousness, rather than labels such as *stutters* or *stammers*. The guidelines encourage the use of objective descriptions that describe genre, or mood identifiers for atmospheric music (e.g., *menacing electronic music plays*). A generic SDH tag is preferred to indicate and describe ambient music, (e.g., *rock music playing over stereo*) (Netflix, 2022). The norms seem to prioritize plot comprehension, hence the need for specificity. The need for objectivity is also highlighted as a norm as well as being generic in the case of ambience music, so as not to provide overly technical detail. Netflix distributes but also produces original content and is therefore involved in the creative process. This has led to a significant boost in inclusion efforts to enhance user experience, as prompted on their website (Netflix, 2024). For d/Deaf and hard-of-hearing viewers, this implies increasing availability of interlingual Closed Captions, predominantly in English for the

time being, over and above the intralingual Closed Captions stream belonging to the original language.

Trying to determine what constitutes a creative translation in the field of Audiovisual Translation (AVT) and Accessibility can be a subject for debate due to the intrinsic creative nature of this professional practice. That said, in this study, creative practices will refer to those decisions in the subtitling process that deliberately steer away from standard norms and conventions. Two possible approaches to creativity in AVT and MA will be considered: 1) creativity as a *means*, namely to provide a service in line with client demands, in other words, the intrinsic creative process necessary to provide this service; and 2) creativity as an *end*, where creativity acts as an intention, as the main driving force and outcome of the product (Spiteri Miggiani, forthcoming). This in turn prompts a further distinction between 'authorial *input*', the creative input of translators, in this case, the subtitlers, as an intrinsic part of the process (creativity as a means) as opposed to 'authorial *intent*' implying a conscious effort and intention to ensure visibility, possibly with an agenda in mind (creativity as an end) (Spiteri Miggiani, forthcoming).

With these definitions acting as a premise, this research sets out to investigate the application of CMA practices by analyzing the SDH tags in a case study drawn from Netflix with a focus on the choices adopted for the description of sounds (sound effects, vocal sounds and music) in the Closed Captions stream. The subtitlers of the fourth season of the show *Stranger Things* (Duffer & Duffer, 2016) were given free rein by the streaming platform in terms of creativity, which allowed them to steer away from standardized captions and conventional norms. Consequently, it can be hypothesized that this has led to a considerable degree of 'authorial input' in the captions, which prompts the two main research questions of this study. First, given the creative freedom granted to the subtitlers, to what extent have they steered away from standardized norms, conventions, and stock solutions making their authorial input noticeable? Second, how does this creative approach impact the qualities of the sound tags on the level of descriptive detail? To this end, the emergent creative approach adopted in the fourth season is compared to the conventional approach in the first season, by analyzing the sound tags provided in one episode drawn from each season. A secondary aim of the study is to holistically observe whether there is also an element of authorial intent suggesting the possibility of some kind of agenda. Could there be an underlying reason for Netflix to experiment with this approach? Could it be a statement of purpose to showcase the range of possibilities when using closed captions as a filmic tool and not *just* an accessibility tool?

2. The case study

2.1 Data sample
Stranger Things is a science fiction/horror TV show centered around a group of teenagers that find a portal to a different and terrifying dimension, the Upside Down. The show contains supernatural elements, wild creatures, evil characters, and numerous hidden mysteries. The genre calls for a wide range of sound effects, thus allowing experimentation with creative SDH practices. This production therefore offers an ideal data sample to be analyzed. Season 1 Episode 6 (S1E6) *The monster* and Season 4 Episode 8 (S4E8) *Papa* were selected following two main criteria: subtitling approach and similarity in storylines. The first criterion refers to the fact that they provide good samples of conventional versus creative captioning, whereas the second one considers

the type of scenes appearing in the episode. There is, however, a noticeable difference in the duration of both episodes: S1E6 lasts 47 minutes while S4E8 lasts 87 minutes. This difference was considered during the analysis.

In terms of labels, the sounds produced by the fictitious monstrous creatures, the supernatural elements, and the accompanying ambient music provide a rich palette that lends itself to outlandish captions. The representation of the drama and horror of many scenes can be conveyed through these captions, though what matters is also the subtitlers' perception. An interview given by the professionals entrusted with the SDH mode of *Stranger Things* Season 4, Jeff T. and Karli Webster, was published shortly after its release (Bitran, 2022). The subtitlers explain their intention to enhance viewer experience by verbally representing sensory inputs associated with science-fiction and horror in the SDH captions. To illustrate the extent of their creative freedom, they draw inspiration from diverse sources, ranging from leitmotifs to board games like *Dungeons & Dragons* to select the terms and expressions used in the tags. This unconventional approach steers away from the standard stylistic guidelines and allows for their authorial input to visibly emerge in the tags. Media access guidelines generally do not vary according to the genre, therefore, this production marks an exception. Jeff T. considers the language used in their captions to be "genre-appropriate" and suited to evoke feelings specific to the theme. The authors state that their choice of descriptors seeks to cater to every potential user in the spectrum of hearing impairments, as "*we strive for evocative. We strive for precise. And we also strive for concise*" (Bitran, 2022). The author's objectives seem to align with those of CMA practices, thus prioritizing user experience, while the authorial input present in the captions can be considered an artistic contribution in its own right.

2.2 Methodology
This study engages in a comparative analysis of two episodes drawn from different seasons, adopting two opposing approaches: conventional versus creative. The aim is to investigate the extent to which the SDH tags steer away from standardized captions given the creative freedom granted to the subtitlers. The study also aims to analyze the impact of these creative strategies on the tag output in terms of descriptive detail. Firstly, a quantitative analysis was carried out to single out, identify and categorize the various SDH tags, including song titles or descriptions, in both audiovisual samples. To lay the groundwork for the comparison, all tags present in S1E6 and S4E8 were therefore transcribed and subsequently categorized according to Chaume's (2004) taxonomy of filmic codes, and its application was tailored to suit the purposes of this study. Chaume's taxonomy is composed of five codes belonging to the acoustic channel (linguistic code, paralinguistic code, musical code, special effects code, sound arrangement code) and six belonging to the visual channel (planning code, photographic code, mobility code, iconographic code, graphic code, syntactic code). The last three codes were not considered in the analysis as they were not deemed pertinent to this study. Moreover, it is important to note that this taxonomy was not developed specifically for SDH. Therefore, this study adapts its application by labeling and classifying the SDH tags according to codes that were originally intended to encompass other elements within film production. The data collected was organized in table format (see Appendix 1 and Appendix 2). The visual codes were examined first and the acoustic codes second.

Additionally, since not all SDH tags have the same function, it is important to distinguish between the different types of tags included in the study. There are six types of SDH tags that were categorized according to Chaume's filmic

codes. These include sound effects, utterances, speaker identification, music, lyrics and songs. The first type encompasses noises and sounds, both diegetic or extradiegetic; the second type refers to tags depicting the characters' mouth-uttered non-verbal sounds and their qualities; the third type includes tags solely indicating the speaker identification; the fourth type refers to ambient music and tunes, both diegetic or extradiegetic; the fifth type comprises tags transcribing the lyrics of a song playing in the background; and the sixth type contains tags solely indicating the title of a song.

This scrutiny aims to observe the extent to which creative freedom seems to affect the choices made by subtitlers, and how they differ from the choices made by those who follow the stylistic guidelines recommended by Netflix. The public availability of these guidelines together with the interview released by the subtitlers of the fourth season allows for further insights into the choices made from a subtitler or translation process perspective rather than basing the analysis solely on assumptions. That said, this research engages in an in-depth empirical analysis that tries to establish the relevance of the chosen SDH tags, whether they are essential and the extent to which they are generic or specific, while highlighting their descriptive qualities.

3. Analysis and findings

The comparative analysis carried out in this study considers every single SDH tag featured in Season 1 Episode 6 (S1E6) and Season 4 Episode 8 (S4E8) of *Stranger Things*. The total number of SDH tags in S1E6 is 244 and in S4E8 is 482. However, as previously stated, it is important to highlight the notable difference in duration between both episodes. S1E6 lasts 47 minutes, whereas S4E8 lasts 87 minutes. The latter is almost double the duration and consequently features almost double the number of tags. Notwithstanding, both episodes have a similar tag rate per minute (tpm[1]) (5.2 tpm in S1E6 versus 5.5 tpm in S4E8). This means that the creative approach does not necessarily trigger an increase in the number of captions, as one would perhaps assume. Instead, as revealed in the analysis, that the impact of this approach would primarily be reflected in the frequency of specific descriptive elements or details, or certain attributive characteristics of the SDH tags.

Table 1 provides a quantification of the sample data collected referring to the six types of SDH tag outlined earlier.

Table 1: Quantitative analysis of SDH tags in S1E6 and S4E8

Sample	Total no. of tags	Sound effect tags	Utterance tags	Speaker ID tags	Music tags	Lyric tags	Song tags
S1E6	**244**	35	150	52	7	0	0
S4E8	**482**	150	156	58	86	28	4

Though every type of SDH tag has its own function in the audiovisual product, three of them were not analyzed in the study because they did not fall within the scope of this research. Speaker identification tags, lyric tags, and song tags were not deemed relevant as they do not provide descriptive details

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[1] The abbreviation 'tpm' in lower case letters will be adopted in this article for space efficiency and will refer to 'tags per minute'.

and cannot be influenced by creative authorial input. Still, it is interesting to note that there are no song titles, lyric-related tags, or song transcriptions in S1E6. This is not due to a lack of songs in the episode. For instance, there is a scene in which two of the characters are shopping and the title of the diegetic song playing on the radio is not captioned, nor are the lyrics (timestamp: 28:22). As for the sets of tags that met the criteria to be analyzed, the discrepancy in numbers when looking at music and sound effects should be highlighted. The inclusion of ambient music is a filmmaking choice, but whether it is captioned or not depends on the subtitlers. In the conventional approach, the relevance of a tag is measured in terms of plot comprehension, so there were instances throughout S1E6 where the subtitlers chose not to represent linguistically what was happening audibly, leaving the target user thinking that the scene was characterized by complete silence (time stamps: 8:15, 12:51, or 23:45). Similarly, many sound effects were not transcribed, the entire first minute of the episode serving as an example. Many of the music tags captioned in S4E8 describe changes in volume, intensity, pauses or tempo (*music intensifies, halts)* (*music stops abruptly*), emotions (*threatening music playing*), and genre (*menacing industrial synth music playing*), a descriptive style that differs remarkably from the one used in S1E6. In the data sample drawn from the latter, only the tempo seems to be regarded as necessary (*upbeat music playing on PA*). This will be discussed further when we turn to the qualitative analysis. The following section presents the most relevant findings to Chaume's acoustic channel codes (linguistic code, paralinguistic code, musical code, special effects code, sound arrangement code) and visual channel codes (planning code, photographic code, mobility code).

3.1 Acoustic channel codes

The acoustic channel codes refer to those codes that convey verbal or non-verbal information through aural transmission. These include linguistic and paralinguistic features, music, special effects, and sound arrangement. In this study, the analysis focuses on sound elements conveyed through the acoustic channel and provided as written text in the form of SDH tags through the visual channel. The linguistics features observed in these tags are essential to understand the impact the creative approach has on SDH. For this study, dialogue was excluded since the focus is on SDH tags. As highlighted in Section 2.2, the application of Chaume's (2004) filmic codes taxonomy was tailored to this research, and therefore, in this context, the analysis of the linguistic code refers to the parts of speech (verbs, nouns, adjectives, and adverbs) contained in every tag of the data sample. Table 2 provides further additional quantitative data pertaining to this specific code.

Table 2: Quantitative data of SDH tags in S1E6 and S4E8. Parts of speech

Sample	Total no. of tags	TPM	Tags analyzed	Verbs (%)	Adjectives (%)	Nouns (%)	Adverbs (%)
S1E6	244	5.2 tpm	192	91.1%	3.1%	31.8%	12.5%
S4E8	482	5.5 tpm	392	81.4%	33.1%	68.6%	8.4%

It is important to note that the total number of tags column also includes the three types not pertinent to the study, as previously explained. Hence, it is crucial to keep in mind that the total the percentages refer to is the total of tags

analysed, 192 in S1E6 and 392 in S4E8. Verbs constitute the most prominent part of speech in both episodes, and numbers are comparable. Out of the 192 tags analyzed for the S1E6 sample, 175 include at least one verb, accounting for 91.1% of the total number of tags. Proportionally, out of the 392 tags analyzed for the S4E8 sample, 319 contain at least one verb, accounting for 81.4% of the total number of captions. However, the shared high proportion of occurrences does not imply a corresponding descriptive quality to the verbal components. While the conventional approach in the first season exploits this part of speech mostly to express human utterances and animalistic sounds with a limited and repetitive range of vocabulary (*grunt* 16 times, *gasp* 9 times, *pant* 12 times), the creative approach goes beyond and adopts a wider variety of terms to denote these actions. Various strategies are adopted in the latter approach. Among these, attributing an action of human nature to an inanimate object (*gate writhing wetly)* or captioning noises using terms that do not feature in standard English dictionaries, such as the Cambridge Dictionary, for example *chitter* to refer to the sound of a tentacle.

This enhanced descriptive quality of creative tags is best observed in the category of adjectives. The fact that S1E6 features 6 adjectives only, as opposed to 130 adjectives in S4E8, is quite significant. In percentages, this means only 3.1% of the SDH tags analysed in the former contained an adjective, whereas in the latter this percentage rose to 33.1%. Adjectives are intrinsically tied to subjectivity or a degree of interpretation, as descriptions depend on perspective, which poses a challenge to conventional norms. One of the small number of adjectives featured in S1E6 is related to plot comprehension since it provides a clarification (*loud bang* to justify the reaction of the characters in the scene). The only other instances in which the sound is further qualified are in the case of background noise (*indistinct* 4 times) and the tempo of a song (*upbeat*)— both very straightforward. On the contrary, in the S4E8 sample, the range and quantity of attributes expressed by means of adjectives are considerably broader. The percentage of tags containing at least one adjective in the S4E8 sample is significantly higher than in the former. As for variety in terminology, the creative approach is not exempt from repetition, as 28 adjectives are repeated at least twice throughout the sample. However, 39 adjectives feature only once throughout the episode's captions. Most of these instances occur when ambient music, sound effects, or tone of voice are captured. In this case, since the creative approach allows a certain degree of subjectivity, the function of several adjectives is to convey the emotions evoked by the tunes and sounds. For example, captions to describe the quality of a sound such as *panicked*, *determined*, *unsettling*, *resolute,* or *discomforting* are most likely used to further engage the d/Deaf and hard-of-hearing viewers. This can be classified as 'authorial input' (Spiteri Miggiani, forthcoming). Furthermore, the choice of adjectives to enhance the experience for the intended target viewers is not only based on variety in terminology but also genre-appropriate choices made by the subtitlers, as stated in the interview with Jeff T and Karli Webster (Bitran, 2022). The use of terms like *eldritch* or *jarring* is a conscious effort on their part to tailor the captions to the specific audiovisual product. The disparity in both quantity and nature of these adjectives between the two episodes highlights the different objectives between the conventional and the creative approach. The former is more concerned with the objective representation of sounds relevant to plot comprehension, thus putting the focus on the actions producing these acoustic elements. On the other hand, the latter shifts towards an intricate description of the quality of sound. Here, the focus is not strictly on what happens, but on viewer perception, that is, how the viewer experiences what happens. By no means does this shift signify that the action itself is not given

due importance —and the high percentage of verbs is proof enough— but it demonstrates its creative intent by considering the finely detailed descriptive aspect as a relevant feature in the creation of each tag.

The next linguistic category analyzed is that of nouns, with S4E8 having twice the percentage (68.6%) when compared to S1E6 (31.8%). Both adjectives and nouns are the parts of speech with a higher percentage in the sample taken from Season 4, whereas verbs and adverbs are reduced. In the case of nouns, the reason for this rise in tag appearances is related to the number of sound effects captioned. The inclusion of sound effects in the audiovisual content depends on the filmmaking process and decision-making; however, it is important to highlight the fact that in S4E8 the subtitlers chose to caption several sound effects that are not relevant to plot comprehension. In the sample adopting the conventional approach, the function performed by nouns is generally to either indicate an unequivocal background noise, such as *people clamoring* or to identify an object producing the sound, such as *engine starting*. This function is also present in S4E8 since it is an essential aspect of SDH, but it goes beyond plot comprehension to include unconventional nouns that describe sounds that provide additional detail to the mood and setting, such as *dull whoosh*, *eerie crackling,* or *garbled static*. Indeed, in their interview, the subtitlers state that capturing every little sound effect was one of their main goals to enhance viewer experience and increase engagement with the content (Bitran, 2022). As an added detail, there are instances in both samples where an SDH tag regarding sound arrangement includes more than one noun, such as *audience applauding on TV* (S1E6) and *guard speaking over radio* (S4E8).

As for the category of adverbs, their number is directly proportional to the number of verbs since they are verb modifiers. Therefore, the percentage of SDH tags containing adverbs is higher in the S1E6 sample (12,5%) since it features more verbs than the one taken from the fourth season. Nonetheless, the percentages of adverbs and verbs in the S4E8 sample have a smaller gap between them than those in S1E6. This means that in the episode following the creative approach there are fewer captions featuring a verb alone, but there is an increase in captions featuring verbs accompanied by modifiers. Similarly to the case of adjectives, the variety of adverbs is also broader in this sample compared to S1E6. Out of the 24 adverbs contained in the tags for S1E6, 12 are *heavily* and the others are *softly* (x5), *indistinctly* (x3), *faintly* (x2) and *deeply* (x2). There are no cases of an adverb appearing only once throughout the episode, which shows a lack of uniqueness in the captions. The more generic the meaning of an adverb, the more frequently it is used. On the other hand, out of the 33 adverbs in S4E8, the one with the highest number of repetitions is *shakily*, used five times. The others either appear once or twice, at most. More importantly, there are several instances in which these adverbs are emotionally charged, such as *frantically* or *tenderly*. The same cannot be said for the adverbs appearing in the captions of Season 1. The inherent subjectivity in the verbal representation of emotion reveals a degree of authorial input that is not present in the conventional approach. After examining these data, it could be argued that the creative approach also impacts the syntactical aspects of tag creation, highlighting specific parts of speech that were not as relevant before, or at least not to the same extent. Not only are more sounds captioned, but the subtitler also favors longer captions, adding details with adjectives and adverbs. Rather than advocating for the conventional invisibility typically expected from SDH tags, the creative approach is committed to being a noticeable and integral feature of the audiovisual content.

The next code analyzed is paralanguage, which Chaume (2004) uses as an umbrella term to include both supra-segmental features (such as tone of voice,

volume, and so on) as well as extra-linguistic elements (such as laughter, breathing, and so on). Such features appearing in the SDH tags of the data sample were identified and analyzed separately. In the linguistic code, it was established that the function of adverbs and adjectives as modifiers is to add layers of meaning to verbs and nouns. In the paralinguistic code, these layers are analyzed, attempting to understand their Communicative Meaning (CM). That is, how their presence may affect readers' perception of the occurrences described in the SDH tags, for example, a character's feelings towards an event or the pace of a scene. Considering these parameters was vital when selecting the episodes for data collection. The similarities in the storyline of the chosen episodes enabled a comparison between paralinguistic elements. For example, the same character is imprisoned in a lab by the 'villains', leading to scenes of suspense, fear, and anger in both episodes. These feelings are represented in several S1E6 tags, such as *breathing heavily* or *monster growling*, in what can be considered an objective manner. The verbalization of these sounds is an accurate description; however, it lacks any layer of additional meaning or creativity. Conversely, the descriptors used in S4E8 not only precisely depict sounds but also subjectively convey the associated emotions through varied use of terms such as *haltingly*, showing the hesitation and nervousness of a character in a romantic scene, or *shrieks,* infusing the reader with fear at the unnatural sound let out by the monster chasing a character. The communicative meaning of these feelings would not have been conveyed as explicitly with a generic rendition of the sounds, which is the standard, conventional approach.

Table 3: Comparison of SDH tags for monster utterances included in S1E6 and S4E8

S1E6		S4E8	
00:57/06:23/41:48	growling	05:48	snarling
01:05/01:17	growling continues	07:45	Demogorgon chittering
01:43/06:16/41:27	monster growling	08:18	shrieks
06:35	monster growls	08:28	roaring
42:06	roars	08:39	shrill trilling
		09:10	chittering
		58:43	eerie snarling
		59:36	insidious hissing

More noticeably, both episodes have scenes where monsters or supernatural creatures appear, and the representation of the animalistic utterances in the audiovisual product is quite different, as illustrated in Table 3. The first season sample merely uses the terms *growl* or *roar* to refer to these sounds, whereas the fourth season presents a wide range of terms to describe them, such as *snarling*, *chittering*, *shrill trilling,* or *shrieks*. Although these animalistic utterances *per se* may be similar, representing them with different terms evokes unique emotions in the viewers and helps them feel invested in the audiovisual production, as they associate each instance with a feeling that enhances their engagement with the scene. These lexical choices emphasize how fearsome the monster is or whether they are suffering in the fight. Opting for such a level of detail is a manifestation of creative freedom enforced by the subtitlers and is a clear example of authorial input. Had Netflix's standard norms been followed, only the "voices, speed of speech, volume of sound"

would have been represented in the tags captioning utterances, and no emotions would have been hinted at.

Table 4: Comparison of SDH tags for characters' utterances included in S1E6 and S4E8

S1E6		S4E8	
04:58	Inhales deeply	0:07:04	exhales
04:00	chuckling	0:07:16	chuckles
03:49	scoffs	0:15:54	Mike scoffs
08:07	softly	0:17:15	haltingly
12:05	sighs	0:17:19	sighs
10:14	Grunting softly	0:22:20	Nancy, hoarsely
34:06	Breath trembling	0:23:32	Breathes shakily
35:25	sniffs	0:30:26	cackles
27:00	stammers	0:31:07	Yule yelps, muffled
		0:31:25	Coughs, splutters

A similar occurrence can be seen in more serious or romantic scenes where these supra-segmental features are very prominent. In this case, even the standard guidelines were amended to provide a different recommendation, that is, to avoid certain vocabulary such as *stammers/stutters*. The latter however appear in the sample since it draws on an episode subtitled eight years before this study. As can be seen in Table 4, apart from this change, the tags captioned in scenes of this nature are similar in both samples. In general, the recurring solutions in these scenes are either one-word tags expressing pitch, tone, and intensity or tags depicting any character's mouth-uttered sounds. The verbs used to depict these sounds are often the same in traditional and creative SDH subtitling. It could be argued, perhaps, that the adverbs chosen in the former are used repetitively, *softly* and *deeply*, while the ones chosen in the latter try to be more specific to the scene at hand, like *hoarsely* or *haltingly*. These last ones can better convey specific feelings, such as roughness or nervousness, respectively. The contrast in both approaches emerges predominantly in the extra layer of associated feelings expressed in the music tags, which will be briefly discussed. Therefore, the findings on the paralinguistic elements demonstrate a tendency towards objective descriptors, in the conventional approach, which prioritizes a general understanding of the utterance and only delves a little more deeply into the emotional layer when describing the tone of voice or forms of verbalization. Contrastingly, the creative approach guides the viewer by associating feelings with the utterances, thus creating a more engaging experience for the total or partially deaf users.

The musical code is analyzed next. It encompasses any music or song, both diegetic and extradiegetic. Following what was previously stated, it is in the musical code where differences emerge and become more noticeable. To highlight them, Table 5 below has been compiled with all music tags appearing in S1E6 and some appearing in S4E8 that correspond to a similar communicative meaning.

In this category, Netflix recommends a "generic ID" and "mood identifiers" for atmospheric music. This description should be done in as objective a manner as possible, prioritizing the genre of the song or tune that the caption refers to. In sample S1E6, the subtitlers followed these guidelines, although the genre was not always specified. They opted for generic descriptive tags and decided not to include any interpretative adjectives accompanying the

term *music*. In terms of pace or recurrence, there is one continuation to a previously captioned music tag stating that the *music continues*, but there is no indication of when it stops or whether the intensity varies, as opposed to the examples drawn from S4E8. It is pertinent to point out that the Netflix guidelines on the standard approach have been updated since the broadcast of S1E6 (Netflix, 2024), and instances where sudden silence is plot-pertinent, indicated for example by the abrupt end of a tune, would now be captioned.

Table 5: Comparison of SDH tags for music tags included in S1E6 and S4E8

	S1E6		S4E8	
	Time code	Tag	Time code	Tag
Genre	02:28/44:24	Theme music playing	04:43	Theme music playing
	03:31	Pop song playing on car stereo	30:00	grandiose Russian opera playing
	26:43	Lullaby plays from mobile	05:52	menacing industrial synth music playing
Pace / Intensity/ Volume	16:25	Music playing faintly	14:17	Music swells, fades
	16:32	Music continues	1:22:03	Music builds to dramatic climax
	19:07	Upbeat music playing on PA	24:27	music pulses ominously
Feelings associated	-	-	06:50	tender, emotional music playing
	-	-	09:58	delicate, distressing music playing
	-	-	21:39	introspective music playing

Though there are still music tags that mirror those often included in the traditional approach, these examples demonstrate the unapologetic tendency of the creative approach to infuse almost every caption with meticulous detail. Describing the emotions, intensity, pace, and genre necessarily contributes to a further enriched shared experience with the hearing-impaired viewer. This underlines the refusal to comply with the unwritten policy of invisibility associated with SDH writers.

The musical code is not the only one that reveals such findings, as they emerge also when isolating and analyzing the tags that describe the sound effects. The sound effect code comprises all diegetic and extradiegetic sounds added to the soundtrack during production, sounds that are not produced by the characters. They are often plot-pertinent, generated by an object, be it on- or off-screen, and account for the vast majority of S1E6 sound-effect tags. Netflix guidelines currently state: "*Be detailed and descriptive, use adverbs where*

appropriate when describing sounds and music, describe voices, speed of speech, volume of sound". Last edit to this norm was in 2018, *Stranger Things'* first season was released in 2016. However, it can still be seen that the communicative meaning of the SDH tags regarding emotions is not factored into the norm. They also state: "*Sound effects should be plot-pertinent*". The tags in this sample mainly fulfill two functions: relevance to the plot and additional information about the setting. The first function refers to tags that justify the reactions of the characters on screen, which in S1E6 happens after the sound of a door closing off-screen or when an object starts beeping. As for the second function, any background sound that contributes to the setting of a scene such as *water running* or *birds chirping* is included in the captions, but always from an objective perspective. These two functions are essential in the SDH mode and, therefore, they also emerge in the captions for S4E8. Tags related to sounds triggered by characters interacting with doors or machine noises are also represented. However, while the standard approach gives a very succinct rendering of the sounds, the creative approach resorts to an original and wordy verbal representation. The only instance in which this subjective approach is hinted at in the first season sample is when the caption *squelching* is used while a character is walking through a forest. This could have been rendered simply as *footsteps*, but the subtitlers chose to add a layer of meaning by focusing on the quality of the sound. Capturing the wetness of the floor may convey a feeling of disgust that matches the setting of the scene. This practice is not merely a sporadic occurrence; rather, it is frequently employed in the sample taken from the fourth season. The difference lies in the terms used; however, it is not the only relevant aspect of the sound effect code revealed in the analysis. While the conventional approach employed in Season 1 prioritizes descriptors for diegetic sounds, the creative approach in Season 4 also captures every minor extradiegetic sound in the production. Moreover, the subtitlers allow themselves the freedom to 'play around' with these captions. A case in point is a tag describing the sound of a *stinger*, that is, the part of an insect that holds a sting. Firstly, the noun itself is used as an acoustic element and is repeated nine times throughout the episode. Secondly, it is almost always combined with a different adjective, such as *jarring*, *ominous*, *threatening*, *dramatic*, *distressing*, *startling,* or *intense*, even though every time it appears the sound is very similar. Therefore, in addition to the sharp dangerous element rendered by the noun itself, an extra layer of communicative meaning is added depending on the scene. Table 6 below provides contrasting examples to illustrate the two approaches to the description of sound effects.

Several tags might appear to be very similar, but minor details such as the use of an extra word qualifying the sound can subtly change the viewers' perception of the tag. Additionally, two trends can be identified in these S4E8 examples. First, the use of personification for sounds made by objects, such as *gate writhing wetly*, and second, the use of alliteration for sounds adds information to the setting, such as *guttural gurgling*. These minor creative tweaks may seem insignificant, however, they serve to enhance the target viewer experience and keep them immersed in the audiovisual production. There are a few tags included in S4E8 pertaining to this code that are also worth mentioning because of their originality or emotional charge, such as *eldritch thrumming*, *dull whoosh*, *metal groaning*, *can crunches*, *ominous audio distortion*, *eerie snarling*, *flesh bursts* or *resolute drum line plays*. According to the subtitlers, they intended to choose terms associated with classic monster movie horror (Bitran, 2022), and this selection demonstrates that they succeeded in their goal. The communicative meaning of the terms used evokes feelings of suspense, fear, or eeriness, which are emotions that predominate in

this genre. The main priority of this approach is to elicit the same emotions in the d/Deaf and hard-of-hearing users as those experienced by hearing viewers.

Table 6: Comparison of SDH sound effect tags included in S1E6 and S4E8

S1E6		S4E8	
14:45	Door opens	0:00:30	Door creaks open
12:19	Doorknob rattles	0:00:16	Gate writhing wetly
37:06	Beeping intensifies	0:11:39	Monitor beeping faintly
19:15	Indistinct chatter	0:48:22	Patrons chattering indistinctly
15:22	Bird chirping	1:18:26/ 0:04:10	Wind whistling / guttural gurgling
21:33	Glass shattering	0:09:36	Liquid gurgling
10:20	Pages rustling	0:12:58	Tank groaning, creaking
01:11	Squelching	0:03:23	Tentacles chittering
42:14	Loud bang	10:08:33	Loud banging, trashing
41:18	Water trickling	0:11:28/ 0:21:49	Electricity whines/ water gushes
29:59	Car horn honking	0:30:14	Horn honking frantically
28:30	Clattering	0:28:41	Faint clattering
41:09	Ticking	0:04:17	Clock chimes

Lastly, the findings that emerged through the analysis of the sound arrangement code are also worth mentioning. In this section, a comparative table was not deemed necessary, as the differences do not emerge in the tags themselves but in their function, that is, whether they are used to caption a sound. In both approaches, the origin of the captioned sound can often be attributed to the characters, either on-screen or off-screen. This is a reasonable observation, as verbally depicting these sounds is essential for the SDH mode. Yet, differences across seasons have emerged when observing one specific aspect: the sounds originating from objects. In the S1E6 sample, there is a higher proportion of captioned sounds generated by off-screen objects, more specifically 16 for off-screen objects and 11 on-screen ones. Conversely, in the S4E8 sample the proportion is higher for sounds generated by on-screen objects, more specifically 26 for off-screen objects and 62 for on-screen ones. A possible explanation can be tied to the subtitlers' broader criteria in the creative approach that also incorporates sounds that are not plot-pertinent. The standard approach adopted in Season 1 does not leave room for the captioning of sounds that can be inferred from the visuals alone. Netflix guidelines state: "*Only use speaker IDs or sound effects when they cannot be visually identified*". It could be argued that these slight variations are hardly noticeable, but it is still important to highlight how the creative freedom given to the subtitlers impacts the extent of authorial input and the decision-making process even in what may be seemingly obvious, that is, which sounds to caption in the first place.

3.2 Visual channel codes
The visual channel codes refer to those codes that convey information or meaning through visual transmission. In Chaume's (2004) taxonomy these include the planning code, photographic code, mobility code, iconographic code, graphic code, and syntactic code. As with the acoustic codes, the application of this categorization was customized for the purposes of this study.

The last three codes were excluded since they were not considered pertinent, while the other codes were applied according to their relevance to SDH.

The photographic code refers to lighting, use of color and perspective. The analysis revealed no significant difference between the two approaches at hand. In terms of lighting, both episodes have a higher proportion of scenes shot in bright settings, but this bears little relevance to the creation of SDH tags. Regarding camera position, S1E6 favors moving shots over stationary ones, as opposed to S4E8 which favors the latter. This depends on filmmaking decisions that bear little to no relevance to the creation of SDH tags. Nevertheless, the analysis revealed that SDH tags depicting the softly spoken quality of utterances are usually associated with stationary shots since that is the 'format' that prevails for serious and calm conversations (see also Appendix 1 and Appendix 2). Associating a tag such as *tender* with a fast-paced scene with chaotic moving shots would clash with its communicative meaning. That said, this practice is observed in both the conventional and creative approaches, so the shift in subtitling approach does not seem to affect this code.

As for the mobility code, which refers to the characters' body language, movement and physical behavior (Chaume, 2004), the characters' physical reactions to on-screen or off-screen sounds do influence the creation of SDH tags to a certain extent. For example, in S1E6 several close-up shots of a walkie-talkie subtitled *beeping, beeping continues* and *beeping intensifies* are followed by the character reacting to the sounds, which makes the tags crucial for coherence (time stamps: 36:47, 36:51, and 37:06, respectively). Similar instances can be found in S4E8. Once again, there is no disparity between the two approaches, since both are tied to the same parameters. Lastly, the planning code refers to the different types of shots (close-ups, long shots, and so on) (Chaume, 2004). Similarly to the other visual codes, no significant differences emerge between the creative and standard SDH tags across the different types of shots. In brief, it can be observed that the creativity present in the new experimental approach has a major impact on the codes belonging to the acoustic channel, where authorial input is more prominent. In the visual channel codes, on the other hand, the differences are mostly due to external factors that are not related to SDH.

4. Conclusions

This article sought to understand the extent to which creativity influences the creation of SDH tags and how these variations on standard norms are represented. The findings confirm that plot comprehension is a priority in both the conventional and creative approaches. However, it is certainly not the only parameter prioritized in the creative approach. In S4E8, a deviation from the norms can be observed in terms of length and descriptive content. While the tags in S1E6 are usually short and straightforward, the ones included in S4E8 are longer and give more weight to the attributive aspect of the caption. This shift seeks to enhance the audiovisual product and engage with the d/Deaf and hard-of-hearing users more than what the conventional approach does. Not only does this shift allow for a more immersive experience in line with Romero-Fresco and Chaume's (2022) definition of Creative Media Accessibility, but it also transforms SDH tags into filmic language tools in their own right. Interpretation and subjectivity become essential since they enable a deeper connection between the product and the viewers.

The results of the analysis also provide an answer to the two questions outlined in the introduction. Firstly, to what extent does the creative approach

steer away from standardized norms, conventions, and stock solutions making the subtitlers' authorial input noticeable? The findings demonstrate that the conventional approach favors simple, short tags to represent actions producing plot-pertinent sounds, thus ensuring that d/Deaf and hard-of-hearing users are aware of how these affect the storyline. However, these tags do not give as much importance to the way those sounds should make them *feel*. On the other hand, not only does the creative approach prioritize plot comprehension, but it also underscores the notion of communicative meaning. This is evident in the SDH tags with more complex structures, where the imagination and subjectivity of the subtitlers are clearly displayed. Secondly, how does the creative approach impact the qualities of the sound tags on a level of descriptive detail? Using Chaume's (2004) taxonomy as a basis for the analytical framework, the findings indicate that the codes pertaining to the acoustic channel are more impacted than those belonging to the visual channel. This influence is not visible in every code, although all of them are somewhat affected. The highest impact can be observed in four codes: the linguistic, paralinguistic, musical, and sound effects code. While observing the linguistic code, a noticeable change in the descriptive aspect is the increase in the number of nouns and adjectives in S4E8, which supports the creative approach's aim to prioritize descriptive detail. As for the paralinguistic code, the results highlight the shift towards a wider variety of terms and the use of modifiers to clue in the user on which emotions are trying to be conveyed. Regarding the visible impact on the musical code, the findings support the idea that the allowance of creative freedom results in captions that steer away from generic terms and IDs. More importantly, the subjective terms used reflect the emotions conveyed by the music, deviating from the notion of objectivity as a top priority. As for the special effects tags, the main variation can also be observed in the choice of words based on interpretation. On the other hand, none of the remaining codes were found to have undergone any major changes due to creativity.

All these changes demonstrate that tailoring the tags to enhance viewer experience is feasible. Hopefully, future research can investigate how the creative approach affects viewer reception and perception and how subtitlers can tackle new projects with such findings in mind. Moreover, this relates to the concept of 'authorial input' (Spiteri Miggiani, forthcoming) defined in the introduction and discussed throughout the analysis. It can be said that creativity is used to increase engagement. This results in the increased visibility of subtitlers due to the degree of subjectivity that this approach requires. This contrasts with the objectivity observed in the conventional approach. Instead of regarding this subjectivity as negative, it can be considered as a tool to enhance the SDH modality.

As for 'authorial intent', referred to earlier, it could possibly be argued that Netflix experimented with this approach to raise further awareness of accessibility tools and inclusivity approaches, demonstrating that sound tags need not be merely an aid, but may have the power to *add* and contribute to the product. Therefore, in this case, it can be said that creativity is also an *end* because the intention may well be to showcase the approach itself, almost like making a statement.

It is imperative to also point out the limitations of this study. The research and the findings would benefit from having a more extensive sample in order to achieve a more in-depth comparison. Additionally, this study is not based on user perception, but rather on the creative intent of the subtitlers as revealed through interviews (Bitran, 2022) and the empirical analysis of the tags. Nonetheless, based on the analysis and findings, the approach seems to be quite promising, and this hypothesis could pave the way for future experimental

research. This could include reception studies engaging users with a form of impairment. For instance, the efficacy of the creative approach could be tested by a) having them review the two episodes analysed in this article from an end user perspective or b) having them review a conventional and creative subtitled version of the same audiovisual sample. It would also be interesting to test the cognitive load of the creative approach to rule out the possibility of it being too taxing for the target audience or to further study how creativity in tags can be used to evoke emotions on viewers who otherwise may miss the chance to fully enjoy the audiovisual product.

Further research would help achieve a greater understanding of creativity both as a means and as an end. Hopefully, it can help enhance the end user experience, paving the way for a more inclusive access modality.

Authors' contribution

Conceptualization: ALS & GSM; research design, methodology and structure: ALS & GSM; data collection, data curation and analysis: ALS; first original draft: ALS; rewriting, editing, and additional content: GSM
Due to the extensive length of the data set, this is not included in the body text of the article but made available online as Appendix 1 and Appendix 2.

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