To the Verbal and Beyond: A Reception Study on the Limits of Subtitling and the Possibilities of Innovative Subtitling

🆔 **Sara Ramos Pinto** ✉
University of Leeds, UK

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Abstract

The appeal of audiovisual products comes from the combination of visual and auditory elements, but professional subtitling remains focused on words, reducing other elements to a contextualising role. This assumes that nonverbal elements such as images or sounds are universal codes easily interpreted by viewers without further mediation and potentially leaves some viewers with glaring losses of meaning (Cavaliere, 2008). In this article, I contend that all elements co-occurring with speech are signs in their own right that might present different challenges to (different) viewers and, as a result, might need to be translated. The article reports on an exploratory experimental study focused on comparing the impact on viewers' meaning-making of a) current subtitling practice focused on verbal signs, and b) innovative subtitling practice aiming at translating meaning expressed by nonverbal elements identified as cultural-specific. The results point towards the need for a fundamental shift in our understanding of nonverbal elements and the need to translate them.

Key words: subtitling, reception, eye-tracking, questionnaire, innovative subtitling, multimodality, cultural specific elements.

✉ s.ramospinto@leeds.ac.uk, https://orcid.org/0000-0003-4552-0037

Introduction

Films are unquestionably multimodal products. One could argue that speech has a central role, but the meaning it produces is erected within an intricate network of visual and auditory elements, from setting to clothes and music (Bordwell et al., 2020). Subtitling, however, in a blatant contradiction with films' multimodal nature, remains focused solely on verbally expressed meaning (see, for example, the definition in Diaz Cintas & Remael, 2021, p. 9).

Speech is arguably the mode that presents the most visible challenges to an audience with no knowledge of the source language; however, elements like objects, gestures or sounds can present equally serious challenges to a new audience who might not be able to recognise them or interpret their meaning. Historically, there is evidence of the challenges presented by visual elements to audiences (Caffrey, 2009; Dwyer, 2012; McClarty, 2012). Yet professional subtitling practice remains focused on verbal information, limiting most visual and auditory elements to the role of providing "context" for verbally expressed meaning.

This article aims to challenge this logocentric approach to subtitling and discuss the possible challenges that both visual and auditory elements might pose to different viewers. It presents the results of an exploratory reception study examining the impact of professional subtitling on the meaning-making process and the possibilities presented by innovative practices such as the use of "extratitles" with additional information (see report for definitions).

1. Multimodal Audiovisual Translation

Following Bezemer and Kress, modes are conceived here as "a socially and culturally shaped set of elements for making meaning" (2008, p. 4). These have different affordances due to their different materialities and the ways in which different social groups have historically developed them to fulfil specific communicative needs. This means that all elements signify elements that create meaning on their own and in relation to each other and that such meaning is space-time specific. For translation, this means accepting that all modes need to be considered equally in translation but also that each mode presents "different challenges to (different) viewers and might need to be translated" (Adami & Ramos Pinto, 2019, p. 73). Considering films in particular, some fundamental questions come to the fore: if films are a complex multimodal product in which meaning is achieved through different elements and intermodal relations, can we consider that such meaning is being translated when only one mode is the focus? Can subtitling strive towards preserving the film's narrative integrity and semiotic cohesion if focusing only on verbal signs? How accessible are films to an audience with limited or no knowledge of the source language and other meaning-making practices?

To accept that current professional practice focused on verbal information is sufficient means accepting that: (a) nonverbal elements are universal codes easily interpreted by any viewer; and (b) the introduction of subtitles (new mode) in a different language does not alter or introduce new

meanings and intermodal relations with the unchanged signs. This article aims to challenge subtitling's focus on linguistic resources and assumes that, as socio-culturally shaped, any element might present different types of challenges to viewers. Drawing on Adami and Ramos Pinto (2019) a distinction will be made between recognition and interpretation.

a) **Recognition.** This refers to what is being represented and the challenges viewers might have recognising visual or auditory signs. Much has been written on verbal culture-specific elements in translation, but not enough attention has been given to the specificity of visual and auditory signs. The challenges brought by visual signs, for example, are evident in the frequent online discussions around the use of objects such as tape recorders or roll film cameras in the series Stranger Things (2016–2022) which many viewers at the time could not recognise.

b) **Interpretation.** This refers to the socio-semiotic meaning associated with a given resource and the challenges viewers might have interpreting it due to a lack of semiotic knowledge. This is evident in the Luso-franco film *A Gaiola Dourada / La Cage Dorée* (2013), in which many of the gestures used by the Portuguese characters are challenging to those who do not share that knowledge. For example, when seeing one of the characters pinching their earlobe without saying anything, most Italian viewers would recognise the hand gesture, but they would also most likely misunderstand the situation given that for them, this gesture does not mean "very good" (as it does for the Portuguese character) and has, in fact, an offensive sexual connotation.

For translation, the challenge comes from the need to ensure that the audience can recognise all elements in the source text (ST) and interpret their socio-semiotic meaning. Sometimes, viewers might face challenges accessing the socio-semiotic meaning of a particular object, for example. At other times, the challenges might start earlier, at the recognition level. As discussed by Adami & Ramos Pinto (2019), and building on Pérez-González (2013), it becomes important to think of the audience more in terms of (non-)shared semiotic knowledge (and less in terms of national borders) and consider that the audience might have different levels of (non-)sharedness in relation to different signs of the ST. By this I mean that instead of thinking of target audience as a stable and homogeneous group of people (often coinciding with national borders, i.e., the French, the Spanish), it is more useful to consider groups according to expected shared semiotic knowledge (which might coincide with the online community they belong to, age, or cross-sectionally with more than one category).

In this context, this article aims to bridge the gap between audiovisual translation, multimodality and film studies and join Greco (2016) in their broadened understanding of media accessibility concerned with providing "access to media products, services and environments for all persons who cannot, or cannot completely, access them in their original form" (Greco, 2016, p. 23). This article argues for: the need to expand the notion of media accessibility to all viewers as well as to auditory and visual modal elements, the challenges these might pose to such viewers, and the need to translate them alongside verbal elements.

2. Empirical Reception Study

2.1. Context and Research Questions

This article builds on several areas of academic enquiry. Firstly, it builds on authors such as (Appiah, 1993; Kaindl, 2013; Nornes, 1999; Pérez-González, 2014; Tuominen et al., 2018), who have argued for greater acknowledgement of multimodal meaning-making and the need to consider the challenges nonverbal elements might bring to viewers as the socially-shaped and embedded elements they are.

Secondly, the article builds on authors such as Pedersen (2011), who focus on the challenges brought by culture-specific elements, propose typologies and offer in-depth analysis of the subtitling strategies typically employed. It also builds on Alfaify and Ramos Pinto (2022) who distinguish between visual and auditory cultural references, and built references across one or more than one mode.

Thirdly, the article builds on the already substantial translation reception research available. It is particularly relevant to mention the studies confirming that viewers: (a) find it more challenging than previously assumed to access meaning expressed in the ST speech mode (Chiaro et al., 2008) and visual mode (Caffrey, 2009); (b) are able to process more information than assumed (Caffrey, 2009; Künzli & Ehrensberger-Dow, 2011), and (c) that alternative practices can impact engagement (Leveridge et al., 2024). More or less (in)directly, these studies have questioned the validity of some professional norms and opened the door to the need to test more innovative approaches to subtitling. The term "innovative" used in this article follows Künzli and Ehrensberger-Dow (2011) as the subtitles tested did not take the visual composition of the image into account.

Fourthly, the article builds on fansubbing practices and the work by Dwyer (2012), McClarty (2014) and Pérez-González (2007), who report on different subtitling practices and show how unsatisfied viewers have developed new practices online. These studies show how viewers' experience and expectations towards subtitling are changing, but also the impact that fansubbing can have on enhancing understanding of a ST and, possibly, on its distribution and success.

This article reports on: an exploratory study collecting empirical data on the reception of two films, the challenges brought by both verbal and nonverbal elements in these films, and the impact of both professional and innovative subtitling on viewers' interpretation and enjoyment of the source films. As it is exploratory in nature, this study has not designed specific hypotheses and, instead, has allowed the data to be the primary driver of the analysis whilst taking certain research questions into consideration. The questions are thus more general than usual and aim at collecting initial data that, in the future, will hopefully support more nuanced questions with different groups of participants:

- Are participants able to recognise and interpret the sociocultural meaning of key visual and auditory culture-specific elements when professional subtitling norms are employed?

- Will the verbal translation of meaning expressed visually and auditorily aid participants' recognition and interpretation of such meaning?
- Will the employment of extratitles distract participants from watching the film?
- Will the employment of extratitles affect the participants' enjoyment of the film?
- What is the participants' opinion regarding the use of extratitles?

2.2. Participants, Experimental Procedure, Material and Apparatus

The study included 100 student participants with a high level of English. All the participants watched the clips and answered a questionnaire. Eye-tracking data was collected in only 32 cases. In contrast to the previous discussion on audience, this study included only Portuguese participants. This limitation should be addressed in future studies, but it wasn't possible to do so in this study.

The clips included in the experiment were extracted from *Forrest Gump* (1994, henceforth FG) and *Kautokeino-opprøret* [The Kautokeino Rebellion] (2008, henceforth KO) on the basis of the following criteria: source language (familiar & non-familiar); frequency of culture-specific elements, and type and nature of culture-specific elements (audio-verbal and visual-nonverbal). The experiment included two conditions: Condition 1 followed the professional subtitling practice in Portugal (henceforth C1-Prof); Condition 2 added titles (henceforth "extratitles") with additional information on the elements identified as potentially challenging (henceforth C2-ProfExtra). This involved: (a) presenting the extratitle at the top of the screen at the same time as the subtitle, or (b) presenting the extratitle on its own at the top of the screen and without a subtitle. See report for clips' characteristics with examples, research design and analytical steps.

3. Results and Findings

The discussion of the results will initially focus on the questionnaire data, looking separately at each film and condition. This will be followed by a discussion of the eye-tracking data.

3.1. Questionnaire Data, Condition 1 – Professional Subtitling

The questionnaire collected data on participants' understanding and showed that after watching Clip A (see report for description/examples), 100% of the participants felt they were able to follow the clip and understand its content without difficulty. When we look at the more specific data regarding the different culture-specific elements (Table 1), we see, however, that participants' understanding of the clip was not as straightforward.

Table 1

Frequency Data From the Questionnaire's Questions on the Understanding of the Culture-Specific Elements in Clip A

Clip A, FG – Professional subtitling				
Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	Expected answer	Did not know	Guessed the expected answer	Unexpected answer
1 **White House building in the background**				
Recognition of the building	100% [50]	0% [0]	0% [0]	0% [0]
Placing the action in Washington	100% [50]	0% [0]	0% [0]	0% [0]
2 **Characters dressed in hippie clothes**				
Recognition of the type of clothes	100% [50]	0% [0]	0% [0]	0% [0]
Placing the action in the 1960's	100% [50]	0% [0]	0% [0]	0% [0]
3 **Star in the sidewalk with the name "Jean Harlow"**				
Recognition of the actress Jean Harlow	0% [0]	100% [50]	0% [0]	0% [0]
Interpretation of Jean Harlow as famous	90% [45]	0% [0]	10% [5]	0% [0]
Recognition of the Hollywood Walk of Fame	18% [9]	82% [41]	0% [0]	0% [0]
Placing the action in Hollywood	90% [45]	10% [5]	0% [0]	0% [0]
5 **"It's this war and the lying son of a bitch, Johnson."**				
Recognition of President Johnson	6% [3]	66% [33]	16% [8]	12% [6]
6 **Portrait of Mao Tse Tung in the background**				
Recognition of Mao Tse Tung	46% [23]	54% [27]	0% [0]	0% [0]
Interpretation of his social role	0% [0]	10% [5]	90% [45]]	0% [0]
Placing the action in China	82% [41]	18% [9]	0% [0]	0% [0]
7 **Appearance of John Lennon and Dick Cavett**				
Recognition of John Lennon	72% [36]	0 % [0]	6% [3]	22% [11]
Recognition of Dick Cavett	0% [0]	86% [43]	0% [0]	14% [7]
Recognition of The Dick Cavett Show	0% [0]	96% [48]	0% [0]	4% [2]
Interpretation of the show as a popular show	0% [0]	64% [32]	36% [18]	0% [0]
8 **"More famous than Captain Kangaroo"**				
Recognition of Captain Kangaroo	0% [0]	34% [17]	0% [0]	12% [6]
Interpretation of Captain Kangaroo as a famous cartoon	0% [0]	42% [21]	58% [29]	0% [0]
9 **"They gave you the Congressional Medal of Honour!"**				
Recognition of the medal	0% [0]	100% [50]	0% [0]	0% [0]
Interpretation of its sociocultural value	0% [0]	0% [0]	100% [50]	0% [0]
10 **"It's all they talk about at the VA"**				
Recognition of VA as Veterans Affairs	0% [0]	100% [50]	0% [0]	0% [0]
Interpretation of their social role and significance	22% [11]	78% [39]	0% [0]	0% [0]
11 **"Go get me a Ripple"**				
Recognition of Ripple as a fortified wine	0% [0]	6% [3]	0% [0]	94% [47]
Interpretation of Ripple as a popular drink in the 1960s	0% [0]	0% [0]	100% [50]	0% [0]
12 **"What is there in Bayou La Batre?"**				
Recognition of Bayou La Batre as a city	0% [0]	0% [0]	100% [50]	0% [0]
Interpretation of Bayou La Batre as a city in Alabama famous for seafood fishing	0% [0]	100% [50]	0% [0]	0% [0]

Participants identified visual signs like the White House (100%) or the stars on the Hollywood Walk of Fame (90%) and placed the action in Washington and Hollywood, respectively. Most participants (82%) understood the characters moved to China at some point, but only because the dialogue made that clear after some time (few participants identified Mao Tse Tung (46%)). Visual signs played an important role in *The Dick Cavett Show* scene; however, while the majority of the participants

identified John Lennon (72%), most did not identify Dick Cavett (86%), the show (96%) or that it was a famous television show (64%).

There were other unexpected misinterpretations. "Johnson" was often not identified as President Johnson but as another character in the film and "Captain Kangaroo" was often identified as one of Forrest's military superiors and not as a famous children's series. Misinterpreting "Ripple" as beer instead of fortified wine had fewer implications; however, it confirmed how visual signs can go unrecognised and be interpreted differently – Ripple was most likely interpreted as beer because brown glass is used for beer and not wine in Portugal.

With regard to Clip C, the data shows that most participants (73%) were left aware of the difficulties following the film or that they had not understood the film (74%). When we look at the more specific data (Table 2), we start to understand why.

Table 2

Frequency Data From the Questionnaire's Questions on the Understanding of the Culture-Specific Elements in Clip C

Clip C, KO – Professional subtitling

Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	Expected answer	Did not know	Guessed the expected answer	Unexpected answer
1 Characters speaking in Sami				
* Recognition of the language	0% [0]	100% [50]	0% [0]	0% [0]
* Interpretation of the characters as Sam	0% [0]	100% [0]	0% [0]	0% [0]
2 Clothes worn by the Sami characters				
* Interpretation of the clothes as typical Sami attire	0% [0]	14% [7]	0% [0]	86% [43]
* Recognition of the characters as Sami	0% [0]	14% [7]	0% [0]	86% [43]
3 "KAUTOKEINO"				
* Placing the scene in Kautokeino	0% [0]	40% [20]	0% [0]	60% [30]
* Recognition of Kautokeino as a town in Northern Norway	0% [0]	100% [50]	0% [0]	0% [0]
4 Characters speaking in Norwegian				
* Recognition of the language as Norwegian	0% [0]	100% [50]	0% [0]	0% [0]
* Recognition of Norwegian as a different language from Sami	6% [3]	0% [0]	0% [0]	0% [0]
* Interpretation of the characters as Norwegian	0% [0]	100% [50]	0% [0]	0% [0]
5 Clothes worn by the Norwegian characters				
* Recognition of the characters as Norwegian	0% [0]	86% [43]	0% [0]	14% [7]
* Placing the action in the 19th Century	8% [4]	26% [13]	22% [11]	44% [22]
6 [Let's go back to the siida]				
* Recognition of siida as a Sami teepee	0% [0]	62% [31]	30% [15]	8% [4]
7 [Why not buy our supplies there and sell directly to the Siida?]				
* Recognition of Siida as nomad Sami	0% [0]	66% [33]	34% [17]	0% [0]
8 "KARESUANDO"				
* Placing the action in Karesuando	0% [14]	72% [36]	28% [0]	0% [0]
* Recognition of Karesuando as a town in Northern Finland	0% [0]	100% [50]	0% [0]	0% [0]

Clip C, KO – Professional subtitling

Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	Expected answer	Did not know	Guessed the expected answer	Unexpected answer
9 **[Come to the church. Laestadius is speaking.]**				
* Recognition of Laestadious as a historical figure	0% [0]	100% [0]	0% [0]	0% [0]
* Interpretation of Laestadius as a religious figure	0% [0]	4% [2]	28% [14]	68% [34]
* Interpretation of Laestadius as a Lutheran pastor	0% [0]	100% [50]	0% [0]	0% [0]
10 **Close shot of the main character hanging dry meat**				
* Recognition of the visual elements as dry meat	12% [6]	40% [20]	30% [15]	18% [9]
11 **Clothes of the State Lutheran pastor**				
* Interpretation of the religious figure as a State Lutheran pastor	0% [0]	14% [7]	0% [0]	87% [43]

In contrast with the data collected for Clip A, few participants watching Clip C (see report for description/examples) were able to place the scenes in Kautokeino (0%) and Karesuando (28%) despite the common filmic convention of having the towns' names written at the centre of the screen. This confusion led 60% to rely on visual elements (e.g. the overwhelming presence of snow) and assume the action was taking place in a variety of places, from Russia to the North Pole. None of the participants identified the clothes and characters as Sami, and 86% misidentified them as "Esquimós" [Eskimos]. The clothes worn by the Norwegian characters were more familiar to the participants but not specific enough to support recognition. The ladies' white cap led 14% to misidentify them as Mormons. Around one-third of the participants were able to conclude that the action was taking place in the 19th century through the clothes of the Norwegian characters, but 26% said they "did not know", and 46% interpreted the clothes as either much older (e.g. 15th century) or more recent (20th century) which accounts for the majority of the participants being left confused.

The languages spoken are another important element to recognise the characters as either Sami or Norwegian, but 0% of the participants recognised them as such and only 6% understood that two different languages were being used. In this clip, while Sami characters keep switching between Sami and Norwegian and are able to communicate in both languages, the Norwegian characters mostly speak Norwegian and often don't understand Sami. This helps viewers to understand the existing social hierarchies and the sociocultural status of the different characters, but this feature failed to fulfil this function when participants didn't notice two languages were being spoken.

In the scene with the character Laestadius, 0% identified him as a historical figure. A total of 28% of the participants were able to infer from the situation and visual signs (i.e., the fact that the character was speaking to an audience in a church) that Laestadius was a religious figure, but 68% interpreted the same elements very differently and took him to be the mayor because he was "not dressed as a priest". The divergence between Lutheran and Catholic teachings, central in this film, was lost for these participants.

Finally, historical realism was built through elements such as references to "siida". The dialogue allowed 30% to interpret "siida" as "home", but 62% got confused, and 8% interpreted it as "another place" (e.g. playground).

With regard to participants' opinions, 100% of the participants said the subtitling was "easy" to follow and "as expected" for both clips. However, when asked about their experience, 21% and 34% (respectively) of the participants were "surprised" not to have understood much and said that "perhaps the subtitling was not very good". The final question asked participants if they would like to see the rest of the film. All of those watching Clip A said "yes", but 98% of those watching Clip C said they "did not like the film" and responded "no". This group also described Clip C as "not interesting", "boring", or "strange".

3.2. Questionnaire Data, Condition 2 – Innovative Subtitling

With regard to Clip D (see report for description/examples), the data shows that 100% of the participants felt they had understood its content without difficulty, indicating that extratitles did not compromise understanding or levels of enjoyment. Table 3 confirms that all participants placed the action in Washington and Hollywood, but the same was now also true for China – most participants identified Mao Tse Tung (82%) or were able to identify him as "chairman" or the "square in Beijing".

Table 3

Frequency Data From the Questionnaire's Questions on the Understanding of the Culture-Specific Elements in Clip D

Clip D, FG – Innovative subtitling

Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	Expected answer	Did not know	Guessed the expected answer	Unexpected answer
1 **White House building in the background**				
° Recognition of the building	100% [50]	0% [0]	0% [0]	0% [0]
° Placing the action in Washington	100% [50]	0% [0]	0% [0]	0% [0]
2 **Characters dressed in hippie clothes**				
° Recognition of the type of clothes	100% [50]	0% [0]	0% [0]	0% [0]
° Placing the action in the 1960's	100% [50]	0% [0]	0% [0]	0% [0]
3 **Star in the sidewalk with the name "Jean Harlow"**				
* Recognition of the actress Jean Harlow	100% [50]	0% [0]	0% [0]	0% [0]
* Interpretation of Jean Harlow as famous	100% [50]	0% [0]	0% [0]	0% [0]
* Recognition of the Hollywood Walk of Fame	100% [50]	0% [0]	0% [0]	0% [0]
* Placing the action in Hollywood	100% [50]	0% [0]	0% [0]	0% [0]
5 **"It's this war and the lying son of a bitch, Johnson."**				
* Recognition of President Johnson	74% [37]	26% [13]	0% [0]	0% [0]
6 **Portrait of Mao Tse Tung in the background**				
* Recognition of Mao Tse Tung	82% [41]	0% [0]	18% [9]	0% [0]
* Interpretation of his social role	100% [50]	0% [0]	0% [0]	0% [0]
* Placing the action in China	100% [50]	0% [0]	0% [0]	0% [0]

Clip D, FG – Innovative subtitling

Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	Expected answer	Did not know	Guessed the expected answer	Unexpected answer
7 **Appearance of John Lennon and Dick Cavett**				
* Recognition of John Lennon	100% [0]	0% [0]	0% [0]	0% [0]
* Recognition of Dick Cavett	0% [0]	8% [4]	92% [46]	0% [0]
* Recognition of The Dick Cavett Show	92% [46]	8% [4]	0% [0]	0% [0]
* Interpretation of the show as a popular show	0% [0]	0% [0]	100% [50]	0% [0]
8 **"More famous than Captain Kangaroo"**				
* Recognition of Captain Kangaroo	84% [42]	16% [8]	0% [0]	0% [0]
* Interpretation of Captain Kangaroo as a famous cartoon	0% [0]	0% [0]	100% [0]	0% [0]
9 **"They gave you the Congressional Medal of Honour!"**				
* Recognition of the medal	76% [38]	24% [12]	0% [0]	0% [0]
* Interpretation of its sociocultural value	0% [0]	0% [0]	100% [50]	0% [0]
10 **"It's all they talk about at the VA"**				
* Recognition of VA as Veterans Affairs	92% [46]	8% [4]	0% [0]	0% [0]
* Interpretation of their social role and significance	0% [0]	0% [0]	100% [50]	0% [0]
11 **"Go get me a Ripple"**				
* Recognition of Ripple as a fortified wine	100% [0]	0% [0]	0% [0]	0% [0]
* Interpretation of Ripple as a popular drink in the 1960s	0% [0]	100% [50]	0% [0]	0% [0]
12 **"What is there in Bayou La Batre?"**				
* Recognition of Bayou La Batre as a city	100% [50]	0% [0]	0% [0]	0% [0]
* Recognition of Bayou La Batre as a city in Alabama famous for seafood fishing	0% [0]	100% [50]	0% [0]	0% [0]

With regard to *The Dick Cavett Show* scene, all participants identified John Lennon and 92% identified *The Dick Cavett Show*. Identifying the show allowed the participants to infer who Dick Cavett was and the show as being very popular. The same seems to be true regarding the references to Captain Kangaroo, the Congressional Medal of Honour and the VA (Veterans Affairs)– a higher number of participants were able to identify these elements (84%, 76% and 92%, respectively), and such identification allowed the participants to infer their sociocultural meaning. No unexpected interpretations were made, and overall, the level of confusion was reduced. In the case of the references to Ripple and Bayou La Batre, participants did not go beyond identification, but unexpected interpretations were avoided. This shows that providing information is not always sufficient and that what participants are able to infer from it also depends on the dialogue between characters or visual elements.

With regard to Clip B (see report for a detailed description and illustrative stills), the data shows that most participants felt they had followed the action without any major difficulties (73%) and understood everything (70%). Table 4 shows that contrary to Clip C data, most participants identified Kautokeino and Karesuando as towns and placed the action in these towns, even if they did not remember the exact names (12% and 18% respectively started their answer by "can't remember the name exactly, but…"). A minority answered, "I don't know," but mentioned "North of Norway and Finland". This, together with 0% of unexpected answers (i.e. divergent interpretation), points to a much-reduced level of confusion.

Table 4

Frequency Data From the Questionnaire's Questions on the Understanding of the Culture-Specific Elements in Clip B

Clip B, KO – Innovative subtitling				
Were viewers able to *identify* the culture-specific element and *interpret* its sociocultural and diegetic meaning?	**Expected answer**	**Did not know**	**Guessed the expected answer**	**Unexpected answer**
1 Characters speaking in Sami				
• Recognition of the language	100% [50]	0% [0]	0% [0]	0% [0]
• Interpretation of the characters as Sami	100% [50]	0% [0]	0% [0]	0% [0]
2 Clothes of the Sami characters				
• Recognition of the clothes as typical Sami attire	0% [0]	0% [0]	100% [0]	0% [0]
• Interpretation of the characters as Sami	0% [0]	0% [0]	100% [0]	0% [0]
3 "KAUTOKEINO"				
• Placing the scene in Kautokeino	80% [40]	20% [10]	0% [0]	0% [0]
• Recognition of Kautokeino as a town in Northern Norway	100% [50]	0% [0]	0% [0]	0% [0]
4 Characters speaking in Norwegian				
• Recognition of the language as Norwegian	100% [50]	0% [0]	0% [0]	0% [0]
• Recognition of Norwegian as a different language from Sami	100% [50]	0% [0]	0% [0]	0% [0]
• Interpretation of the characters as Norwegian	0% [0]	0% [0]	100% [50]	0% [0]
5 Clothes of the Norwegian characters				
• Recognition of the characters as Norwegian	0% [0]	0% [0]	100% [50]	0% [0]
• Placing the action in the 19th Century	70% [35]	4% [2]	26% [13]	0% [0]
6 [Let's go back to the siida]				
• Recognition of siida as a Sami teepee	74% [37]	22% [11]	4% [2]	0% [0]
7 [Why not buy our supplies there and sell directly to the Siida?]				
• Recognition of Siida as nomad Sami	84% [42]	0% [0]	16% [8]	0% [0]
8 "KARESUANDO"				
• Placing the action in Karesuando	86% [43]	14% [7]	0% [0]	0% [0]
• Recognition of Karesuando as a town in Northern Finland	98% [49]	2% [1]	0% [0]	0% [0]
9 [Come to the church. Laestadius is speaking.]				
* Recognition of Laestadious as a historical figure	0% [0]	100% [50]	0% [0]	0% [0]
* Interpretation of Laestadius as a religious figure	74% [37]	0% [0]	26% [13]	0% [0]
* Interpretation of Laestadius as a Lutheran pastor	74% [37]	26% [0]	0% [0]	0% [0]
10 Close shot on the main character hanging dry meat				
• Recognition of the visual elements as dry meat	100% [50]	0% [0]	0% [0]	0% [0]
11 Clothes of the State Lutheran pastor				
• Interpretation of the religious figure as a State Lutheran pastor	70% [35]	30% [15]	0% [0]	0% [0]

The identification of the characters as Sami and Norwegian, and the hierarchy between them, was achieved through their languages and clothes. Giving extra information on the spoken languages seems to have helped participants achieve the expected interpretation. All participants identified the spoken languages and inferred they were Sami and Norwegian with different social statuses. The clothes were now identified as "typical Sami clothes" and "regular clothes from the 19th century".

Regarding the character Laestadius, nobody was able to identify him as a historical figure; however, 74% identified him as a religious figure and a Lutheran pastor more specifically. The level of confusion

was reduced with 0% of unexpected interpretations. This was also true regarding the second pastor, who appeared towards the end of the clip. The reference to "siida" was also easier for participants to interpret, as 74% identified the reference, and 0% gave unexpected answers.

When asked about their opinion regarding the subtitling, 100% of the participants used terms such as "different", "unexpected", "not traditional" and "not typical". The majority (around 80%) thought the experience had been "positive" or "very positive" and described it as "interesting", "good", "useful" or "important". Around 20% of the participants did not enjoy having the extratitles on-screen, with 8% (Clip D) and 4% (Clip B) saying that having additional information on the screen was "not how subtitling was done" and was at times "patronising". However, the remaining 92% (Clip D) and 96% (Clip B) mentioned they "could get used to it in time". When asked if they would like to have optional extratitles, 100% said "yes".

When asked if they would like to see the rest of the film they had been watching, 100% (Clip D) and 96% (Clip B) of the participants said "yes". Although this result is unsurprising for Clip B, the lower figure for Clip D is striking. Out of the 96% of Clip D viewers who said they would like to see the rest of the film, 100% now described the film as "good" or "very good", 84% also described it as "beautiful" and 12% noted that it was "nice to learn about this [Sami] people".

3.3. Eye-Tracking Data

A full set of the eye-tracking data collected is provided and the report includes further details/definitions/analytical steps.

Figures 1 and 2

*Graphs With Results Regarding DT for Both Films and Conditions*
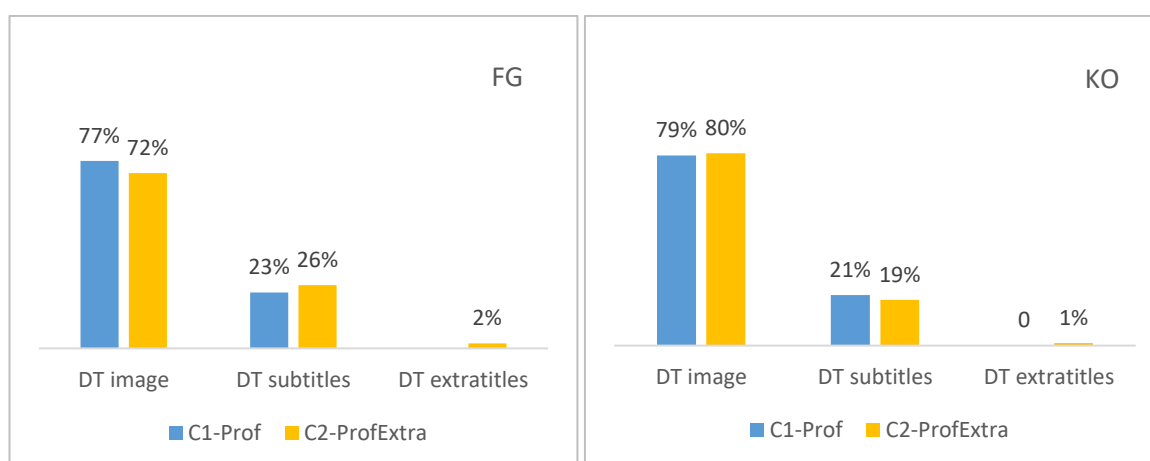
As seen in Figures 1 and 2, participants dedicated more time to the image AOI under both conditions in both FG (77% and 72% in Cond 1 & 2 respectively) and KO (79% and 80% in Cond 1 & 2 respectively).

This indicates that neither the presence of subtitles nor extratitles was so distracting that it prevented participants from "watching the film".

Two other measures are important at this stage. Looking at the amount of time spent on subtitles as a percentage of the overall time subtitles were on screen (PDT subtitles) gives us an indication of the degree to which participants made use of subtitles, while looking at the number of fixations per word gives us an estimate of the degree to which the words were processed given that a higher fixation count per word indicates more careful processing.

Figures 3 and 4

Graphs With Results for PDT and Fixations per Word Under Both Films and Conditions
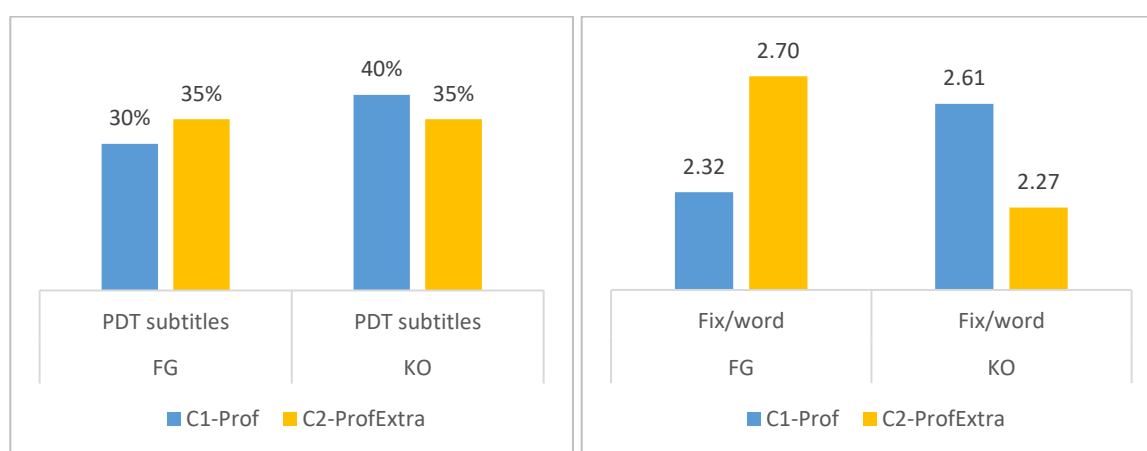
The results for PDT subtitles (Figure 3) and the number of fixations per word (Figure 4) might seem very similar at first sight. However, the Mann-Whitney U tests conducted show that the difference between conditions is statistically significant in both films. There is a very small effect size for PDT subtitles (**FG:** $U = 737433.5$, $n1 = 1330$, $n2 = 1324$, $p = <.001$, $d = 0.1$; **KO**: $U = 1832172$, $n1 = 2073$, $n2 = 2082$ $p = <.001$, $d = 0.09$) and a small effect with regard to fixations per word (**FG:** $U = 685834.5$, $n1 = 1330$, $n2 = 1324$, $p = <.001$, d=0.19; **KO:** $U = 1745206.5$, $n1 = 2073$, $n2 = 2082$, $p = <.001$, $d = 0.19$).

It is important to note that, as shown in the graphs above, the results for PDT subtitles indicate that the presence of extratitles in C2-ProfExtra, when compared to C1-Prof, seems to have led participants to make more use of subtitles in the case of FG than in the case of KO. The results for fixations per word indicate that the presence of extratitles led participants to process subtitles more thoroughly in FG than in KO.

This study was primarily designed to perform comparisons between conditions and not between films. Still, the fact that the results point in opposite directions led us to check for a possible interaction between the condition and the film. Given the individual differences between films, this type of comparison raises important questions regarding the validity of the analysis; however, the Linear Mixed-Effect Model (LMER) used for the analysis (see report for details) allowed us to factor in these individual differences to a certain extent. This does not negate the fact that the films are

different in many aspects, but by focusing the analysis on two measures – PDT subtitles and fixations per word – we can account for the difference in volume of text between the two films and ensure that we are comparing the reading of subtitles under the two conditions in the two films. Given the exploratory nature of this article, despite all its limitations and the caveats needed, it was considered relevant to conduct this level of additional testing, given that it could point towards interesting avenues of research for future studies.

The results show that there is a significant interaction between condition and film. This means that the difference between conditions changes with the difference in the film and confirms what was possible to observe in the previous tests. The effects are significant for C1-Prof (β = -8.448, SE = 2.37, z = -3.567, p <0.0004), but not for C2-ProfExtra (β = 0.516, SE = 1.93, z = 0.268, p <0.7887), indicating that participants had processed subtitles quite differently when the professional practice was followed, but in a similar way when extratitles were presented on screen. It is not entirely surprising that knowledge of the source language allows participants to make less use of subtitles as in FG (Orrego-Carmona, 2016), but in the case of KO it was not just the subtitles that proportionally required more attention from participants. As seen before, participants have also proportionally spent more time on the image AOI when watching KO, which raises important questions regarding unfamiliarity with visual signs/cultural practices and the higher processing effort they might require.

In C2-ProfExtra, the results are quite different. Both PDT and number of fixations per word are very similar in both films, which indicates that participants made similar use of subtitles independently of the level of familiarity with the source language and culture and that they processed the words to a similar degree. Participants still spent proportionally more time on the image AOI when watching KO, but the presence of extratitles seems to have lessened the processing effort given that they now spent less time reading subtitles than in C1-Prof. It is reasonable to assume that the additional information provided led participants to disambiguate and clarify unfamiliar elements in the subtitles more quickly, but perhaps also that the easier processing of visual signs (as a result of the additional information provided) led participants not to look for the information in the subtitles. The fact that the opposite is true for FG seems to indicate that extratitles have made subtitles harder to process; however, given some of the answers in the questionnaire, another possibility is that the information provided on extratitles simply made participants more aware of aspects they were missing or misunderstanding and led them to read the subtitles more carefully. Another possibility worth mentioning is the "novelty effect" (Leveridge et al., 2024), given that viewers' attention might just be captivated by the extratitles as something unfamiliar.

4. Conclusion

This article reports on an exploratory study that set out to investigate the possible challenges brought about by verbal and nonverbal elements and the impact of both professional and innovative subtitling on viewers' interpretation and enjoyment of the source film. It set out a series of guiding

questions, which it is important to return to in this concluding section. The data set is limited and valid, mostly in relation to a group of 32 participants. Nonetheless, the results have raised important questions that hopefully will be further tested by future studies with different audiovisual STs, different audience groups, etc.

Question 1 focused on participants' ability to identify key visual and auditory culture-specific elements and interpret their sociocultural meaning when professional subtitling norms are employed. The data seems to confirm that nonverbal elements are not natural universal signs easily interpreted by everyone. Instead, the meaning associated with them is as time/space specific as it is for verbal elements, and this presents challenges to viewers that professional subtitling does not address. Despite its exploratory nature, this study has shown that viewers are often not able to recognise certain elements and/or interpret their sociocultural meaning leading to situations of partial or complete misinterpretation. This was particularly evident when the source film presented a context unfamiliar to the viewer (KO), but it also proved true when the context was familiar (FG).

Questions 2 and 3 focused on the possible benefit and cognitive demand of including a verbal translation of meaning expressed through visual elements. The data seems to allow the conclusion that (un)familiar source language and culture leads viewers to make more use of subtitles and to read them more thoroughly, but also that extratitles have significant benefits in lessening the processing efforts. More specifically, the data points to the benefit of using extratitles to support the recognition of specific elements or avoid misidentification (which tends to lead to misinterpretation). The results were less clear regarding the interpretation of sociocultural meaning and more data needs to be collected through a study focused on testing this particular issue. The presence of extratitles does not significantly impact viewers' attention distribution between image and subtitles, but it might lead them to make more use of subtitles when the source language and culture are familiar. More research is needed to fully understand why, but the participants' expressions of surprise regarding how much they hadn't understood seem to support the conclusion that this results from them being made aware that, despite their familiarity with the source language, they could not rely on the speech mode alone.

It is also important to note that when extratitles were used there was considerably less variation in the participants' answers, i.e. it happened more frequently that a single category had 100% and that there were considerably lower percentages in the categories "Did not know" or "Guessed the expected answer". This means less confusion but also alerts us to the risk of reducing the margin for interpretation that is part of the experience of watching a film. Using extratitles to support recognition seems to allow viewers the space to follow the film while leaving them the opportunity to conduct further research if they wish. Nevertheless, one should not discard the possibility that information on sociocultural meaning can easily slip outside the realm of translation by explaining the film, an issue also discussed in audio description (Schaeffer-Lacroix et al., 2023).

At this stage, questions should also be raised regarding the source audience's reception and their (in)ability to retrieve all the verbally and non-verbally expressed culture-specific information in these

films. As one of this article's reviewers rightly asked, are we placing target viewers on a higher plane of knowledge access? This may well be the case, which is why further studies need to be conducted. This exploratory study posed some initial questions regarding the impact of current and innovative subtitling in the reception of verbally and non-verbally expressed culture-specific meanings; however, alongside the potential to aid identification and interpretation, the data has also shown some potential for explanation and over-accessibility, which needs to be further examined. Given the time lapse between release dates and publication date, it would not be possible to compare this study's data with the film source audience (a situation which only highlights the importance of having information prepared by production teams specifically for translators); however, it is still relevant to collect data from comparable groups within the context of production for comparison. If the results of such a study were to show that participants within the context of production share some of the challenges faced by the target groups included here, this would not invalidate this study's conclusions. Instead, it would confirm the need to consider the audience as less uniform and suggest that we might want to consider the need for extratitles when showing the film to an audience positioned in the same place of production but at a different time.

Questions 4 and 5 focused on viewers' enjoyment levels and perception. The data collected suggests that some viewers are more receptive to strategies deviating from professional norms than we might traditionally assume. When we compare the results for the two conditions for each film, it is significant to note the positive impact that extratitles had on participants' enjoyment of the film and their overall perception of the film. The Hollywood sign-making practices and North American contexts in FG have proven to be more easily interpreted (probably because we are so exposed to them), while the divergent practices and less familiar contexts of KO bring considerably more challenges to some viewers. In the case of KO, addressing these challenges only in relation to verbal elements (C1-Prof) resulted in higher levels of confusion, which then led the viewers not to demand a different translation or even to acknowledge their confusion. Instead, they assessed the film as being low-quality, which they did not wish to continue watching. This seems to point towards two potentially key variables in film reception: that of cultural distance and the dominance of certain film practices (e.g. Hollywood) over others. In this case, viewers' familiarity with American practices and signs allowed a higher level of sharedness (and thus interpretation) which seems to be a key aspect (if not the only one) behind the commercial success of the film. This is certainly something to look into beyond this exploratory study.

As always in translation, the assessment made regarding the possible challenges viewers will face is the great mediator regarding the choice of a particular translation strategy; however, current subtitling norms, production conditions prioritizing standardization and efficiency over quality and co-creation, and technical resources (professional subtitling software allows very little variation regarding subtitles form) do not allow the translator the creative agency and space to make those choices in relation to visually or auditorily expressed meaning. We hope this study is a first step in changing that situation.

Acknowledgements

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