Universitat Autònoma de Barcelona
Department of Translation, Interpreting and Asian Studies

AUDIO SUBTITLING: MAKING MULTILINGUALISM ACCESSIBLE
A study on user experience

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Contents

- Introduction: audio subtitling (AST)
  - Categorisation
  - AST in regulations, standards and guidelines
- Multilingualism and AST: different strategies
- User experience
  - Experimental procedure
  - Pilot study

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Introduction

- Audio subtitles or spoken subtitles
  - AST as the aurally rendered and recorded version of the subtitles of a film.
  - AST are read, sometimes acted out, by one or more voice actors or by TTS software.
  - AST is recorded as a form of voice-over. The original dialogues can be heard briefly before the translation starts.
  - Sometimes it is recorded in a semi-dubbed form. Original dialogues are substituted by a form of dubbing (Reviers & Remael, 2015)
- Challenges: hybrid technique
  - Interface between subtitling, audio description and voice-over (Braun & Orero, 2010)

Technical categorisation

- Autonomous
  - Use of different technologies (TTS and OCR)
  - Experiences:
    - The Netherlands (Miesenberger, Klaus & Zagler, 2002; Theunisz, 2002; Verboom et al., 2002)
    - Sweden (Ljunglöf et al., 2012)
    - Denmark (Nielsen & Bothe, 2008; Thrane, 2013)
    - Czech Republic ((Hanzliček, Matoušek, & Tihelka, 2008)
    - Estonia (Mihkla et al., 2013)
- Integrated
  - Synthetic vs. human-voiced
  - Human-voiced in fiction (Walczak & Fryer, 2017)
  - Study: (pre-recorded) human-voiced AST for fiction

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Regulations, standards and guidelines

- Regulations
  - Some countries: AST as a regular service
  - Normally referred to as “on-screen text”

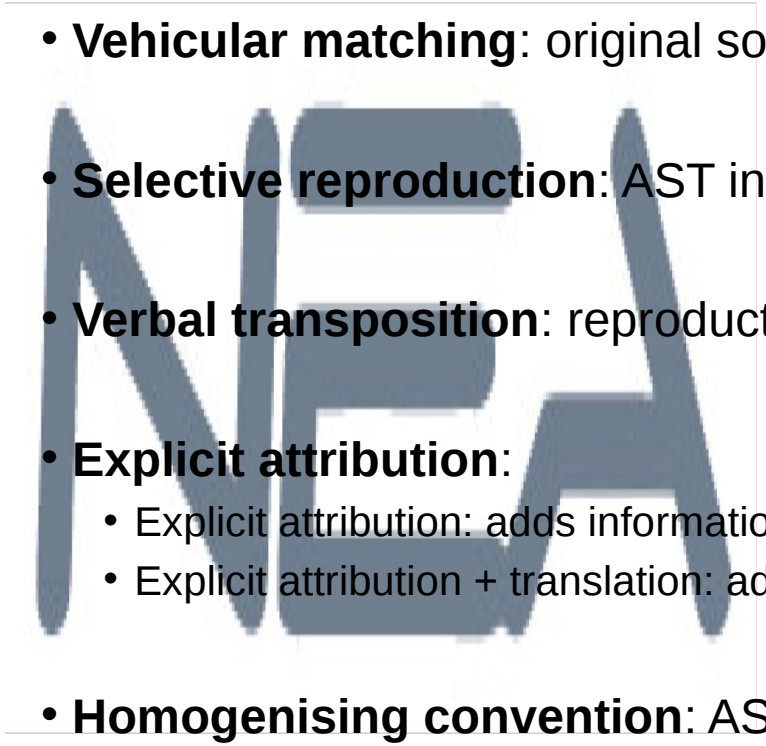
- Standards and guidelines
  - What has to be described but no or less information on the how.
  - Some guidelines:
    - Use of different voice talents to distinguish AST and AD
    - Adding “subtitle reads”, “he/she says”, etc.

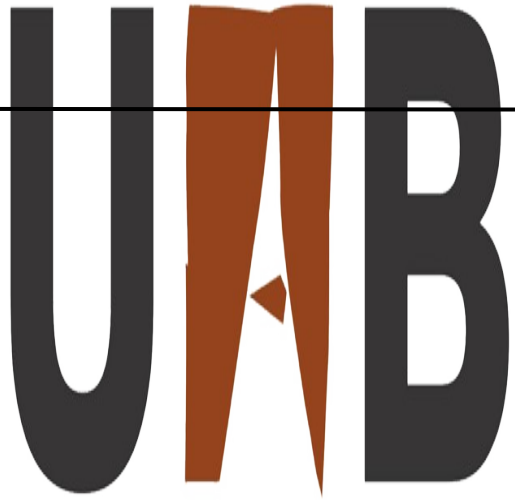
Multilingualism

- Trend
- Dubbing countries (Spain)
  - Either disappear or maintained with subtitles
  - Blind and visually impaired: AST
- Different information can be revealed to the audience
  - In subtitles for the deaf and hard of hearing: Szarkowska et al. (2013)
    - Sternberg's theory (1981)
      - Based on visual features (information provided, colours and form)
  - Applied to AST

Multilingualism through AST

- **Vehicular matching**: original soundtrack
- **Selective reproduction**: AST in voice-over effect
- **Verbal transposition**: reproduction of original patterns (dubbing/voice-over)
- **Explicit attribution**:
  - Explicit attribution: adds information about the language
  - Explicit attribution + translation: adds information about the language and translation
- **Homogenising convention**: AST in dubbing effect





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AST and their “effects”

- Dubbing and voice-over: two different strategies (Braun & Orero, 2008; ISO/IEC 20071-25, 2016, Remael, 2014; Reviers & Remael, 2015)

- Dubbing effect
  - Acted (dubbese, “imitation” of orality) (see Baños & Chaume, 2009; Sánchez Mompeán, 2016)
  - Original barely heard
  - Synchronised

- Voice-over effect
  - Read (less changes in prosodic features)
  - AST is superimposed and original can be heard
  - AST displayed after the original (imperfect isochrony)

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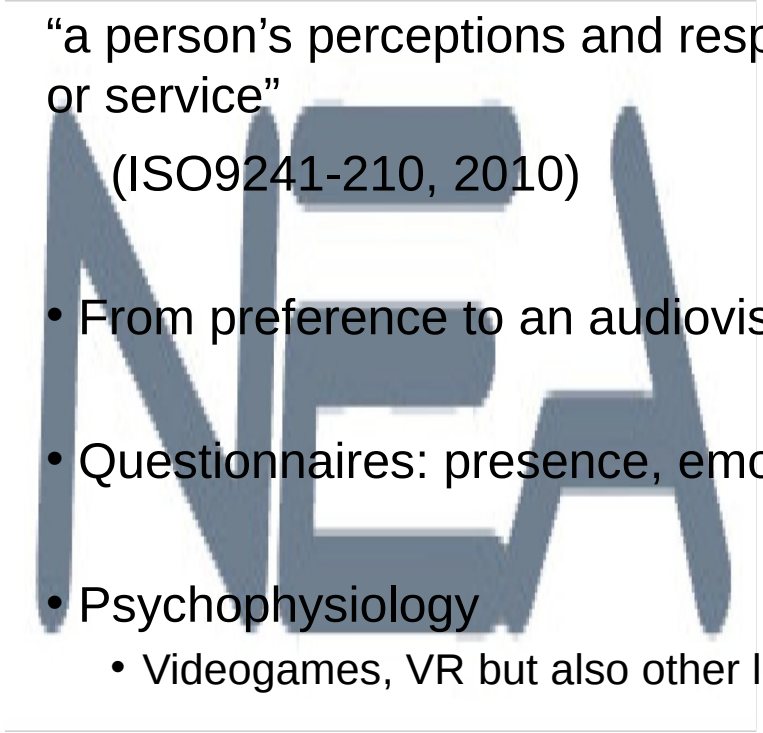
User experience (UX)

“a person’s perceptions and responses that result from the use of anticipated use of a product, system or service”

(ISO9241-210, 2010)

- From preference to an audiovisual/filmic holistic experience
- Questionnaires: presence, emotional arousal
- Psychophysiology
  - Videogames, VR but also other less immersive activities



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Methodology's theoretical framework

- Main use of media entertainment (Plantinga, 2009; Vorderer & Hartmann, 2008)
- Entertainment media flow (Sherry, 2004), presence (Lombard & Jones, 2015) emotional arousal
- Emotional arousal changes in organism psychophysiological markers
  - SAM questionnaire (Bradley & Lang, 1994)
  - Psychophysiology
    - EDA
    - HR

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Experimental procedure

- Validation of scenes (Polish language) online
  - Which emotion does the scene suggest?
  - SAM questionnaire*
- Subexperiment 1: blind and visually impaired participants
  - Randomly assigned audio subtitled scenes with dubbing and voice-over effects
- Subexperiment 2: sighted participants
  - Subtitled scenes

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Pilot study

Serrano Ratera, A.; Méndez Ulrich, J.; Soler-Vilageliu, O.; Iturregui-Gallardo, G.; Jankowska, A. (forthcoming)

- Sighted participants
- Previously validated scenes (Megía et al., 2011)
  - When Harry met Sally… (Reiner, 1989)
  - Schindler's list (Spielberg, 1993)
- Pre-experimental questionnaire
  - Toronto Alexithymia Scale (TAS-20) (Bagby et al., 1994)

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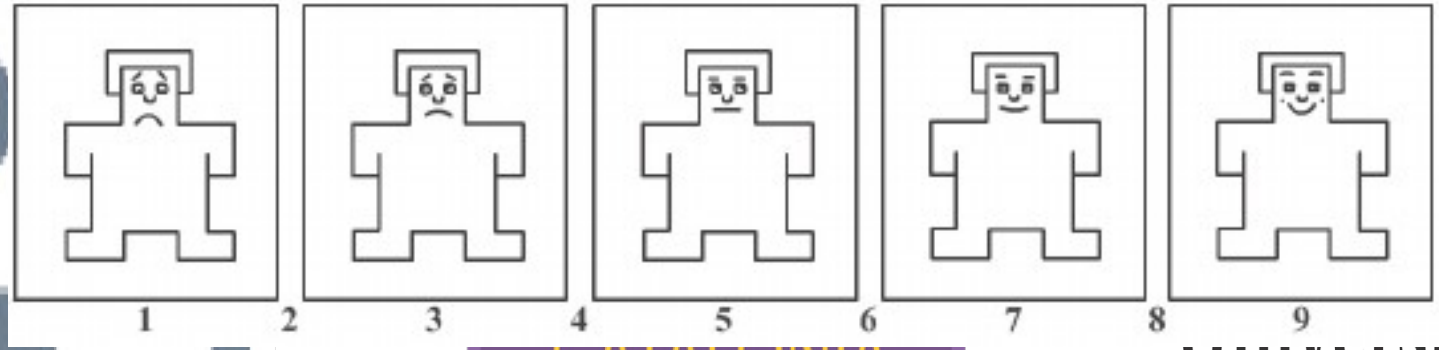
Pilot study

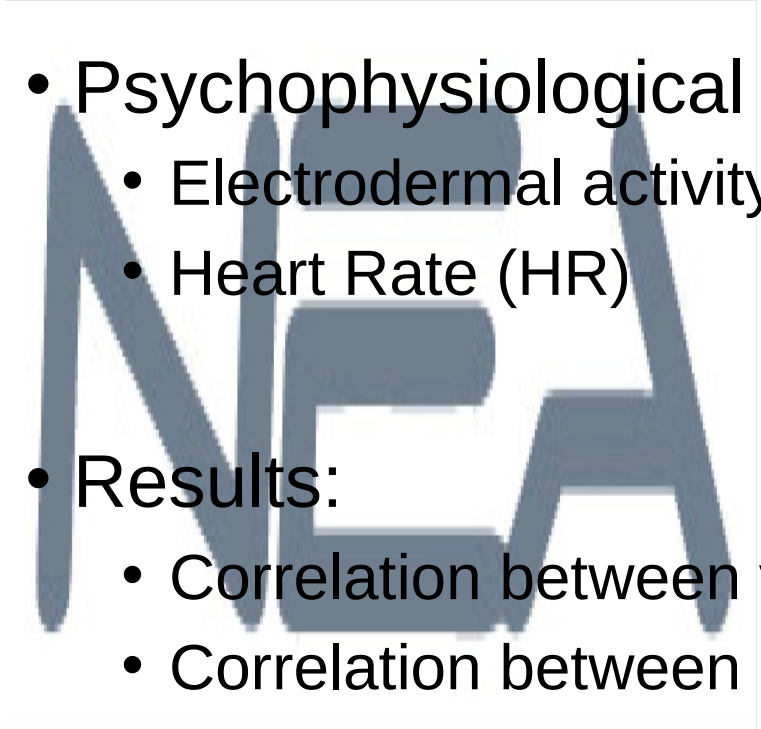
- Questionnaires
  - Emotional Arousal: SAM questionnaire

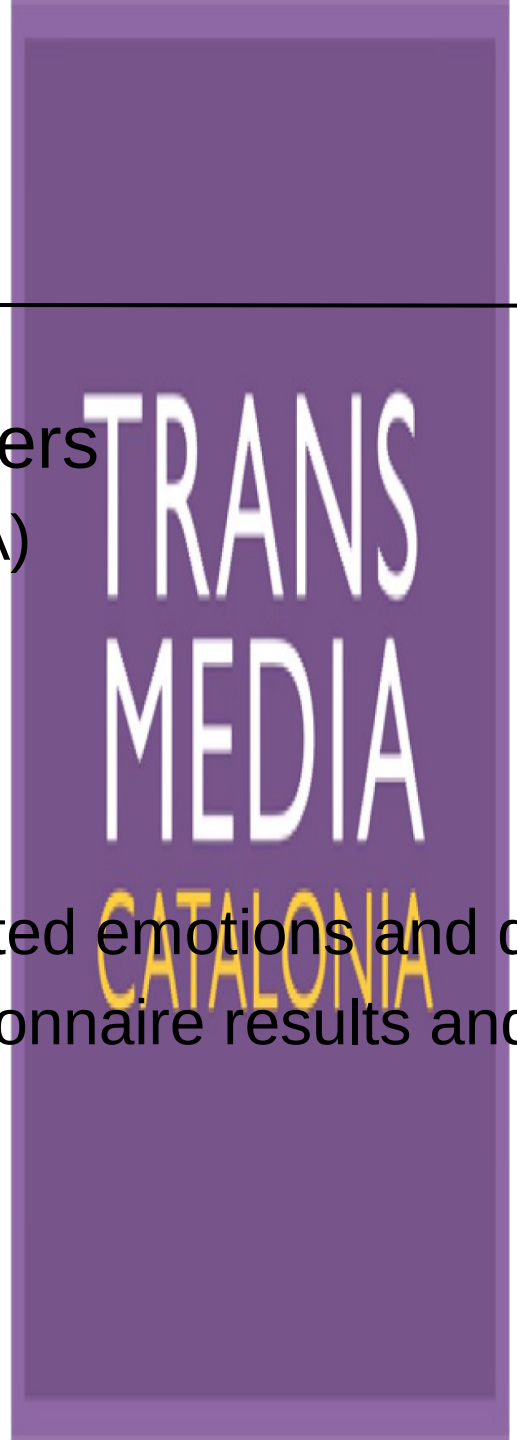


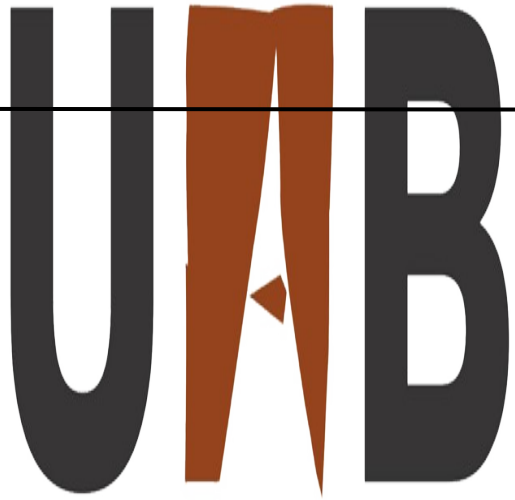
  - Presence: Busselle & Bilandzic (2009)

Pilot study

- Psychophysiological markers
  - Electrodermal activity (EDA)
  - Heart Rate (HR)
- Results:
  - Correlation between validated emotions and data collected
  - Correlation between questionnaire results and data collected







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