AVT Odyssey: Voyage to the Future

Anna Matamala

Universitat Autònoma de Barcelona

TransMedia Catalonia research group

anna.matamala@uab.cat

Intermedia, 14-16 April 2016

FFI2015-62522-ERC, 2014SGR0027,

FFI2015-64038-P

My view

- Audiovisual translation (including media accessibility): access through transfer
- To the language of the original, to audio and visual elements
- Various content, modalities/services, platforms, agents, and users
- Multiple approaches

Some first thoughts on AVT research

- AVT modalities: dubbing/subtitling versus media accessibility
- Methodological approaches: descriptive, moving towards more empirical and applied.
- Topics: more technology and reception research.

Is this really so?

Research on AVT: data

Jump back 10 years to…

- In So Many Words. London, 2004.
- Between Text and Image. Forlì, 2005.
- Media for All I. Barcelona, 2005.

Research on AVT: data

… and back to the present

- Intermedia. Lodz, 2016.
- Linguistic and cultural representation in audiovisual translation. Rome, 2016.
- Media for All. Sydney, 2015.

Audiovisual transfer modes

AVT MODES	ISMW 04	Forlì 05	M4all 05	TOTAL	M4all 15	Rome 16	Interm 16	TOTAL
Dubbing	20.99	40.91	17.14	26.35%	7.27	36.21	11.76	18.41%
Subtitling	37.04	31.82	17.14	28.67%	45.45	31.03	23.53	33.34%
Dub & subt	13.58	9.09	5.71	9.46%	1.82	1.72	5.88	3.14%
VO	6.17	0	0	2.06%	5.45	3.45	2.94	3.95%
AD	3.70	0	14.29	6%	9.09	0	17.65	8.91%
SDH	2.47	0	14.29	5.58%	9.09	1.72	5.88	5.57%
SDH & AD	0.00	0	5.71	1.9%	1.82	3.45	2.94	2.74%
Sign language	0.00	0	0	0%	5.45	0	0	1.82%
Interpreting	1.23	0	0	0.41%	1.82	0	0	0.61%
Gral/not specified	14.81	18.18	25.71	19.57%	12.73	22.41	29.41	21.52%

BTS: AVT modes

AVT MODES	TSB 04	05	% 04 05	TSB 14	15	% 1415	Total hits and %
Dubbing	14	15	17.37%	13	4	18.89%	239= 15.33%
Subtitling (& surtitling)	42	46	52.69%	27	9	40%	765= 49.07%
Voice-over, voiceover	5	4	5.39%	3	1	4.44%	72= 4.62%
Narration	0	1	0.60%	0	0	0%	10= 0.64%
Audio description (& audiodescription)	1	1	1.20%	9	4	14.44%	130= 8.34%
SDH (deaf and hard-of-hearing, captioning)	0	2	1.20%	1	1	2.22%	12= 0.77%
Sign language & media	9	8	10.18%	6	3	10%	162= 10.39%
Interpreting & media	11	8	11.38%	6	3	10%	169= 10.84%

Approach

Approach	ISMW 04	Forlì 05	M4all 05	TOTAL	M4all 15	Rome 16	Interm. 16	TOTAL
Theoretical	8.86%	13.64%	2.86%	8.45%	3.64%	3.45%	6.06%	4.38%
Descriptive	75.95%	50%	80%	68.85%	72.73%	84.48%	63.64%	73.62%
Reception	5.06%	27.27%	8.57%	13.64	16.36%	8.62%	21.21%	15.40%
Technology and tools	10.13%	9.09%	8.57%	9.26%	7.27%	3.45%	9.09%	6.6%

Topics

- Many diverging topics
- Similar interest
  - Cultural approaches
  - Training, didactics
  - Specific practices
- Slight drop
  - Linguistic approaches (still an important topic)

Topics

- Increase in:
  - reception of certain features by end-users
  - fan translation, crowdsourcing
  - multilingualism

Focus on InterMedia 16

- Technologies: MT and TM, clean audio, second screens, SR (live interlingual subtitling), computational stylistics, collaboration tools
- Reception of AD (diverging strategies, amount of information)
- Process research (respeaking crisis point)
- Different genres (emergency news, TV ads), paratexts (taglines) and strategies

Focus on InterMedia 16

- AVT training and AVT in teaching foreign languages
- Humour and intercultural elements
- Film features: multilingualism and partial subtitling, text on screen
- Subtitling features (segmentation)

Focus on InterMedia 16

- Film adaptation
- Touch tours
- Fan subtitling
- Legal aspects

- Less Western-European-centric approach: Russian, Persian, Arabic, Indian, Belarus, etc.

AVT Research & Technology

The role of technology

- In the process of creating
- In the process of delivering
- In the process of receiving

- In the process of researching

Speech recognition

- Respeaking in subtitling: from intralingual to interlingual
- Respeaking in other AVT-related tasks
  - An example: documentary transcription (ALST, with Lukasz Daniluk and Pablo Romero-Fresco)
- Automatic transcription (ALST, with Héctor Delgado and Javier Serrano)
  - Domain-specific issues, speaker diarization tools, language differences, meaning of error rate

Machine translation

- Extensive research on subtitling
- New research on other transfer modes: AD and VO in ALST
- Focus: translator/describer and end-user

Machine translation: example 1

12 AVT MA students

Human translation vs post-editing

Two short wildlife documentary excerpts (EN>ES): voice-over and off-screen dubbing

Temporal, technical, cognitive effort (Inputlog)

Ortiz-Boix & Matamala (forth)

Machine translation: example 1

- Post-editing, faster; less technical and cognitive effort than translation
- Output quality analysis by experts (different evaluation rounds), in dubbing studio, and by end-users
- Translations, slightly better (trained translators)

Machine translation: example 2

- But what about translator's feelings?

- MT in AD
  - 12 AVT MA students, English into Catalan
  - creation, human translation, post-editing
  - Temporal/technical/cognitive effort
  - Subjective opinions

Machine translation: example 2

- **Temporal**: no statistical differences, but AD creation (55.95'), postediting (44.44), translation (48.66)
- **Technical**: post-editing was statistically the least keyboard intensive task.
- **Cognitive**: post-editing less than AD creation (only statistical difference, although values always lower in post-editing in terms of effort involved)

What about perceived effort?

		AD creation		AD translation		AD post-editing	
		Pre	Post	Pre	Post	Pre	Post
Effort involved	Mean	8.25	7.17	6.17	5.58	6.50	7.50
	Median	8	7	6	6	6	8
Creativity impairment	Mean	3.09	3.82	7.45	7.27	8.45	9.36
	Median	3	4	8	7	9	10
Boredom	Mean	2.09	1.82	4.18	4.18	6.73	7.27
	Median	2	2	4	4	6	8
Calque conveyance	Mean	1.25	2.00	5.25	5.42	6.93	8.33
	Median	1	1.5	5	5	7	9

Machine translation: example 3

- Why do we need MT for? Automatic? Part of a process?

  – Testing on automatic subtitling within HBB4ALL project, proved useful only for certain users

    (Matamala, Oliver, Álvarez, Azpeitia 2015)

Text-to-speech

- TTS AD in Poland (Szarkowska et al), spoken subtitles with TTS
- TTS AD in Catalan (Fernández-Torné & Matamala)
- TTS VO in wildlife documentaries in Catalan (Ortiz-Boix & Matamala)

Other technologies and tools

- Text simplification
  - Simplext project, Able-to-include
- Text compression
  - Aziz, de Sousa & Specia (2012)
- Text segmentation
  - Scaiano et al (2010) and Álvarez et al (2016)

Other technologies and tools

- Automatic image recognition
  - Seeing FB
    http://newsroom.fb.com/news/2016/04/using-artificial-intelligence-to-help-blind-people-see-facebook/
- Automatic lip synch /dubbing

http://aescripts.com/auto-lip-sync/

http://mrl.nyu.edu/~bregler/videorewrite/

http://videodubber.com/

Other technologies and tools

- AVT as big data
  - Text aligned with audio
  - Images aligned with their description
- Information retrieval

Editing tools & the cloud

- Professional technology:
  - Subtitling software vs dubbing software

- Collaborative tools for professionals and the cloud: cohesion

Collaborative platforms

- Crowdsourcing, fan(sub/dubb)ing or user-generated translations (O'Hagan, Dwyer)
    - Dubbing (Dubroo, Dubjoy)
    - Subtitles (Amara, Viki)

Collaborative platforms

- Current framework: collaborative consumption (airbnb) and creation (wikipedia), immediacy, personalisation, conscious economy?

- Legal issues
- What is quality? User expectations?
- Endangered /minority languages
- Professional vs user-generated content

Tools for the end-user

- Consumption across devices
- Apps:
  - MovieReading, Whatscine, ArtAccés, etc.
  - MyLingoApp.

Do they really work? (Walczak's research)

Tools for research

- (Multimedia) corpus analysis tools
  - POS tagging, semantic tagging (in AD)
- Keylogging and screen recording software
- Eye-tracking and electrophysiological measures
- Sentiment analysis in social media
  - http://www.laurenceanthony.net/software/fireant/
- Crowdsourcing (micro)tasks (AMT)
  - Example: Transcriu-me (Biblioteca Catalunya)

Technology impacts on research

- We still need:
  - Concepts (theory)
  - State of the art (description)
- But we can also focus on people (translators, end-users)
  - Process research
  - Reception research

But need to go one step further

Reaching out

Research reaching peers

- An example: the VIW project

http://pagines.uab.cat/viw

- Open access
  - publications and presentations
  - audiovisual content (copyright issues)
  - data sets available

Reaching the end-user

- Science dissemination
  - Raising awareness about our research
  - Going beyond the scientific arena
- As a service incorporated by the industry

Parallel worlds

- Virtual voice-over translation at BBC

https://www.journalism.co.uk/news/how-the-bbc-uses-virtual-voiceover-translation-to-reach-a-multilingual-audience/s2/a620320/

Reaching the industry

- Standardization work

- An example: ISO Work
  - ISO/IEC JTC1/SC35 User interfaces (WG6: accessibility)
- A new standard on audio subtitles
  - Different backgrounds and interests
  - Reaching consensus (content, terminology, etc.)

The future?

- Evolution from descriptive to other types of research (not forgetting conceptual frameworks)
- Adapting to new economies and technologies without forgetting the past
- Alignment with EU policies versus independent research?
- Transfering knowledge to society
- Cooperation: international, interdisciplinary

AVT Odyssey: Voyage to the Future

Anna Matamala

Universitat Autònoma de Barcelona

TransMedia Catalonia research group

anna.matamala@uab.cat

Intermedia, 14-16 April 2016

FFI2015-62522-ERC, 2014SGR0027,

FFI2015-64038-P