

I like to move it move it!

Analysing first-aid instruction videos for moving a victim

ABSTRACT

Instructions, including first-aid instructions, are increasingly made available on video. We need methods for analysing instruction videos that:

- allow comparisons with their static counterparts which use text and pictures
- support experimentation to optimize their design.

In the PAT Project, we have developed an annotation system in ELAN (Version 5.2, 2018), using as an existing annotation scheme for written first-aid instructions (Van der Sluis et al. 2017) to which film-specific annotation categories have been added.

This poster presents how this annotation scheme can be used for a functional analysis of first-aid videos. We used a corpus with 15 videos from different organisations concerning first-aid procedures where a victim needs to be moved: Dragging (i.e. Rautek from the Ground, Rautek from a Car Seat) and Turning (i.e. Recovery Position, Prone-To-Supine Roll).

Our systematic annotation shows how features (e.g., voice-over text, use of stills, film techniques, and added elements) are used in various kinds of action presentations and offers directions for future experiments with viewers and users in actual training situations to test their functionality.

RESEARCH QUESTION

How are language, image, and sound used in first-aid instruction videos about dragging and turning victims?

METHOD

- Development of annotation scheme based on Borger (2018)
- Implementation in ELAN 5.2
- Pilot Study to validate the annotation scheme
- Corpus selection (15 videos: 7 for Dragging and 8 for Turning)
- Corpus annotation with control and reconciliation cycles by two annotators
- Quantitative and qualitative corpus analysis (ongoing)

CORPUS



Rautek from the ground (Rode Kruis Vlaanderen, 2012)



Rautek from a car seat (Uitgeversgroep, 2017)



Placing a victim in the recovery position (Het Oranje Kruis, (2017)



Prone-To-Supine Roll (Human Drive, 2015)

	Task	Video#	Organisation	Length (min:sec)	Total (min:sec)
Dragging	Rautek from the ground	1	Rode Kruis Vlaanderen	01:40	09:15
		2	112BHV	00:51	
		3	Oranje Kruis	01:28	
		4	Human Drive	01:09	
	Rautek from a car seat	5	Rode Kruis Vlaanderen	01:30	
		6	Oranje Kruis	01:40	
		7	Uitgeversgroep	00:57	
Turning	Recovery Position	8	Rode Kruis Vlaanderen	01:05	09:11
		9	112BHV	00:49	
		10	Oranje Kruis	01:48	
		11	Human Drive	01:03	
	Prone-To-Supine Roll	12	Uitgeversgroep	01:38	
		13	Oranje Kruis	01:10	
		14	Human Drive	00:58	
		15	REHBO	00:40	

REFERENCES

- Borger, A.C. (2018). Een onderzoek met een gebruiksaanwijzing. Multimodale analyse van EHBO instructievideo's. MA Thesis, Communication and Information Sciences, University of Groningen.
- Borger, A.C., Van der Sluis, I., & Redeker, G. (2018). Multimodale analyse van EHBO instructievideo's. Poster presented at the 28th Anéla/VIOT Juniorendag, Tilburg, 20 April 2018.
- ELAN (Version 5.2) [Computer software]. (2018). Nijmegen: Max Planck Institute for Psycholinguistics. <https://tla.mpi.nl/tools/tla-tools/elan/>.
- PAT Project (n.d.). https://www.rug.nl/research/clcg/research/dc2017/_dcresearchprojects/pat/
- Van der Sluis, I., Eppinga, A., & Redeker, G. (2017). Text-Picture Relations in Multimodal Instructions. In Nicholas Asher, Julie Hunter, & Alex Lascarides (eds.), *Proceedings of the workshop on Foundations of Situated or Multimodal Communication (FMSC) at IWCS 2017*.

ANNOTATION SCHEME

CATEGORY	SUBCATEGORY	VARIABLES
Spoken Text Image Written Text	Global Structure	Title, Preamble, Instruction, Closing, Extraneous Information
	Action Type	Preparatory, Core, Closing
	Action Status	Obligatory, Alternative, Conditional
	Action Aspect	Process, Result
	Control Information	Warning, Condition, Purpose, Manner, Advice, Situation Sketch, Explanation, Other
Image	Shot Size	Close Up, Medium Shot, Long Shot, Undecidable
	Number of Persons	Zero, One, Two, Three, More than Three Persons, Undecidable
	Image Technique	Still, Snap Shot, Pan, Tilt, Zoom In, Zoom Out, Fade In, Fade Out, Split Screen, Transition
	Added Elements	Logo, Arrows, Lines, Symbols
Talk	Any talk by participants or devices in the scene	
Sounds	Any background noises or sound effects	

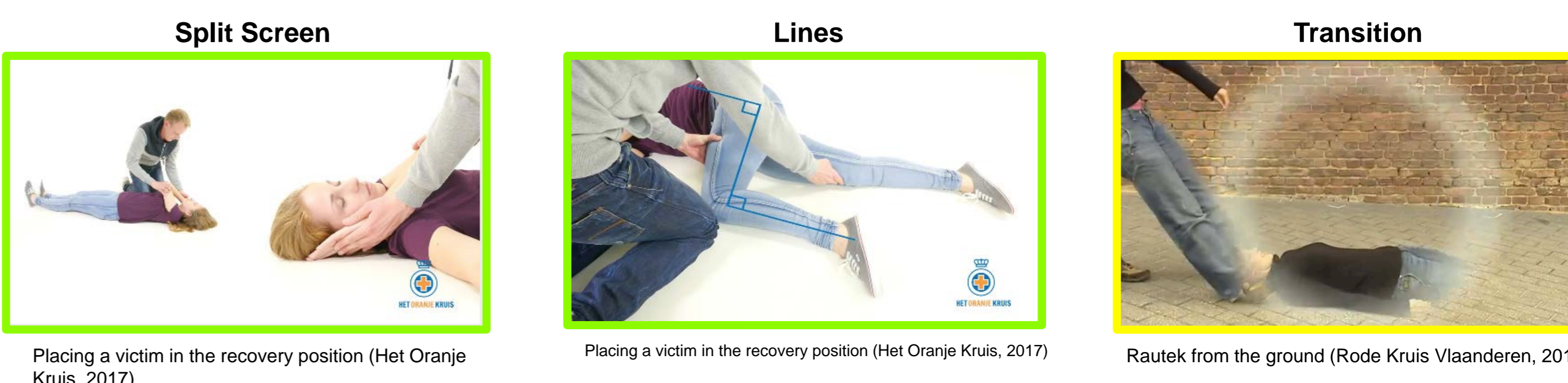
Screenshot of Annotation in ELAN



RESULTS



Image Techniques



FINDINGS SO FAR

- **Action Types:** The number of preparatory and closing actions depends on the task; they are presented in text and in image.
- **Action Status:** We found hardly any conditional or alternative actions.
- **Action Aspect:** Most action presentation concern the action itself (process); in the images, we also find some result presentations (often in addition to a prior process presentation).
- **Control information:** Most types of control information occur only in text; only Manner and Situation Sketch occur in the images.
- **Image Techniques:** A variety of image techniques are used to present control information (e.g. Split Screen, Lines) or to aid the flow of the video (Transitions between shots).