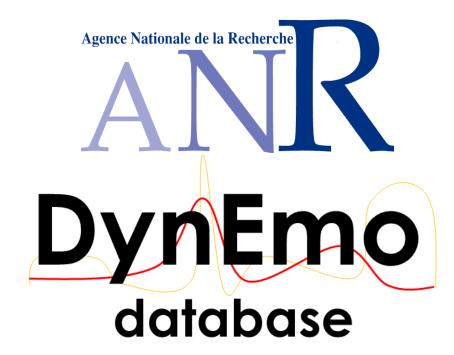


Manual Annotation of Facial Expressions for Experiments



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A new tool for the manual annotation of FEE: the Oudjat software

The annotation procedure is often used to study the recognition of facial expression of emotion (FEE). Today, many tools exist for annotation purposes. However, theses tools seem to be torn between configurability and usability.

Manual annotation Annotation software with user-defined coding schemes (e.g. Nvivo, The Observer, Advene, ANVIL, ...)

Built-in coding schemes annotation software

(e.g. Gtrace, CARMA, EMuJoy, Video TAME, ...)

easily configurable by investigators x not easily usable by novice annotators



x not allow investigators to configure them easy to use by novice annotators

Considering advantages and weaknesses of existing software programs, Oudjat tool has been designed to be both configurable and usable.

Oudjat is an open-source annotation software that dissociates the involvement of these end-users. Because investigators and annotators have different needs, Oudjat considers them as distinct end-users. They do not have the same expectations or skills. This explains why the system is separated into two modules: configuration module & annotation module.

Oudjat's Configuration Module

The configuration module is dedicated to investigators in order to configure their experimental parameters. Investigators can choose:

- <u>Step 1: the annotation procedure (standard forced-choice or more complex procedure)</u>
- <u>Step 2: the experiment languages (all the text fields can be edited in annotator's interface)</u>
- <u>Step 3: the annotators features to indicate (such as age or gender)</u>
- <u>Step 4: the experimentation features (annotation conditions if any)</u>
- <u>Step 5: the medias features (such as the emotion displayed)</u>
- <u>Step 6: the medias selection (Oudjat integrates video processor in order to select the relevant sequences)</u>
- <u>Step 7: the interactions (annotators' answers with buttons, checkboxes, scales, or short free labeling)</u>
- Step 8: the experiment instructions

Example of steps in the configuration:

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Subjects Features		ANK AND	35
Experimentation Features		AND DO DO	
Medias Features		ARY	
Medias Selection		2 -2 1	ALC: NO
Interactions Panels		4 (m) +	
Experimentation Instructions	12	(man)	-
	D0:00:07 / 00:00:10		
	Parameters Features Options	Edit	
	Name of the video	Disgust	

t Edit Help		
Languages	Panels +	
Subjects Features	Panel of buttons : Emotions	
Experimentation Features	Button Joy Button Surprise Button Disgust Button Fear	
Medias Features	Button Anger Button Sadness	
Medias Selection		
Interactions Panels		
Experimentation Instructions		
	Add a button Configure Remove	

Oudjat - Experimentation Instructio	15	
Project Edit Help		
Languages	Message for the starting of an experimentation	
Subjects Features	Configure	

Step 6: A video processing can determine target sequences to show. Investigators can also choose the presentation order

Step 7: Buttons, checkboxes, scales, or short free labeling can be choose for annotations

Experimentation Features	Message for the transition between medias during an experimentation
	Configure
Medias Features	Message for the ending of an experimentation
Medias Selection	Configure
Interactions Panels	Message for the starting
Experimentation Instructions	Message Button Message for the starting of an experimentation in English Hello! you will see some video, please select the correct button.
	Message for the starting of an experimentation in Chinese 您好!你会看到一些视频,请选择正确的按钮。
	Message for the starting of an experimentation in German
Project Test1 : judgements of videos withou	t sequ

Step 8: Instructions for a experiment can be wrote in different languages

Oudjat's Annotation Module

The second module is dedicated to participants' annotation of the selected stimuli (pictures, videos, audio materials). It contains only relevant information to help novice and expert annotators to perform the annotation as easily as possible. The interface displays only the instructions, the annotators' tasks, and an ending message.

This simplified annotation procedure allows to quickly have a large number of annotators.

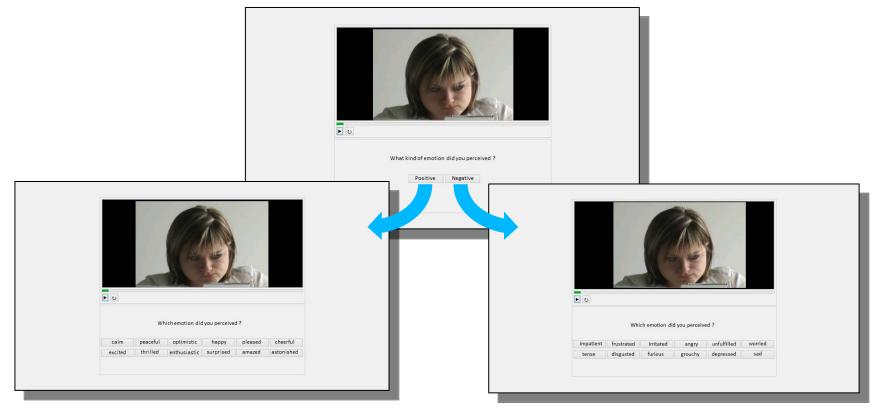
Example of annotation procedures:

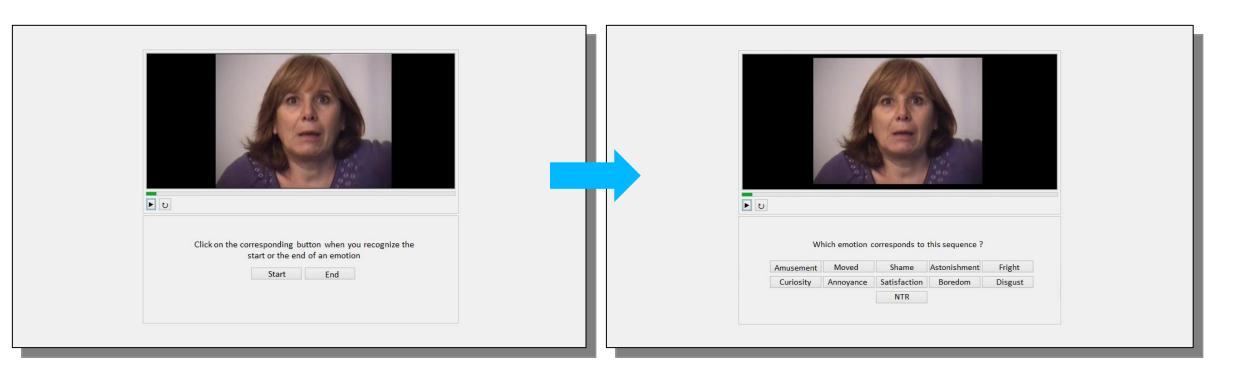
Classic forced-choice procedure

Chained forced-choice procedure

Two-steps annotation procedure







Oudjat offers various annotation possibilities such as free-choice or forced-choice annotations with labels, scales or checkboxes.

Annotators were asked to indicate first if they felt a positive or a negative emotion, and second, what emotion they felt depending on their first answer.

Sequence marking annotation experiments can also be conducted. In this case, annotators first delimitate a temporal sequence in the video and, second, attribute it a label.

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