

Developing the Ottawa Database of Emotional Movies (ODEM)

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Goals:

The objective of this study is to produce a reliable database of video clips, by selecting videos from various unknown sources to minimize familiarity, as this impacts emotional responses.

Background:

Emotional responses to stimuli influence appraisal and retrieval; the emotions elicited by a stimulus plays a large role in determining how we interpret and store it on an often subconscious level. Previous still-picture databases are largely outdated, as the pictures are dated and ratings about their emotional content were taken long ago, at a time where societal and personal opinions and attitudes may have differed. Still pictures fail to capture the nuances of the natural non-stationary world which impart so much emotional information, and no such comprehensive video database exists as of yet. So, research is now turning towards the use of videos for emotional studies.

Methodology:

Clips (n=300)

- Chosen for their positive, negative, or neutral content
- Variety of categories: human interactions, animals, nature
- Minimal cinematography and no sound
- 3-15 seconds in length
- devoid of repetitive scenes from the same source, in order to minimize confounds

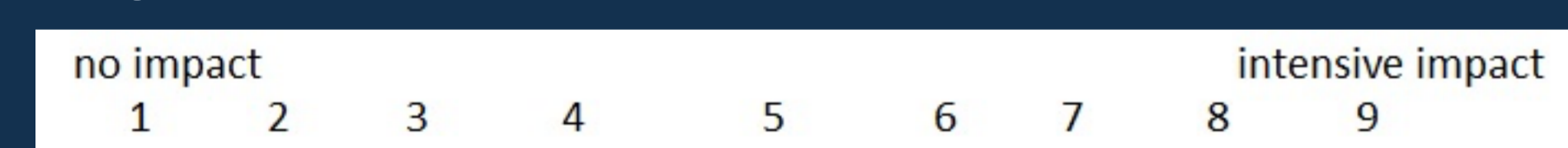
Measures:

- Emotional valence, impact and arousal were measured using a nine point self-assessment scale (see below), and participants indicated if they had seen the video prior to the study
- Questionnaires were completed by the test subjects regarding their mood, personality, and education level attributes to be studied in conjuncture with the rating data.

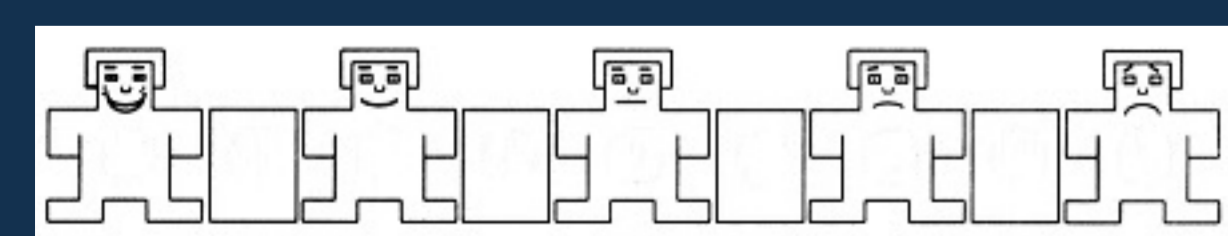
Participants:

- Male and female participants (n=90) aged 19-35
- Participants rated all the clips on one of the three scales, as well as participants rated familiarity

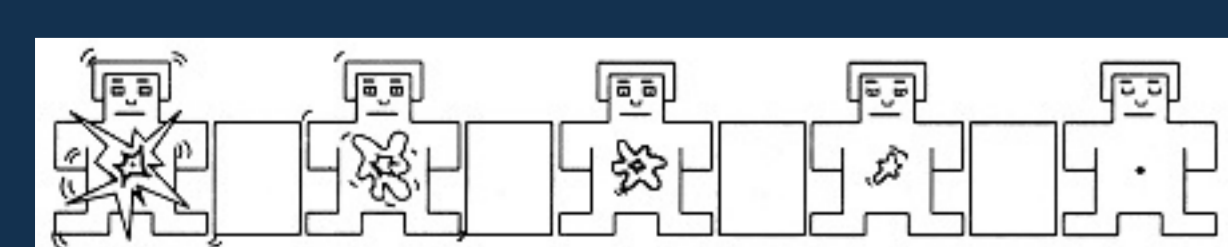
Impact:



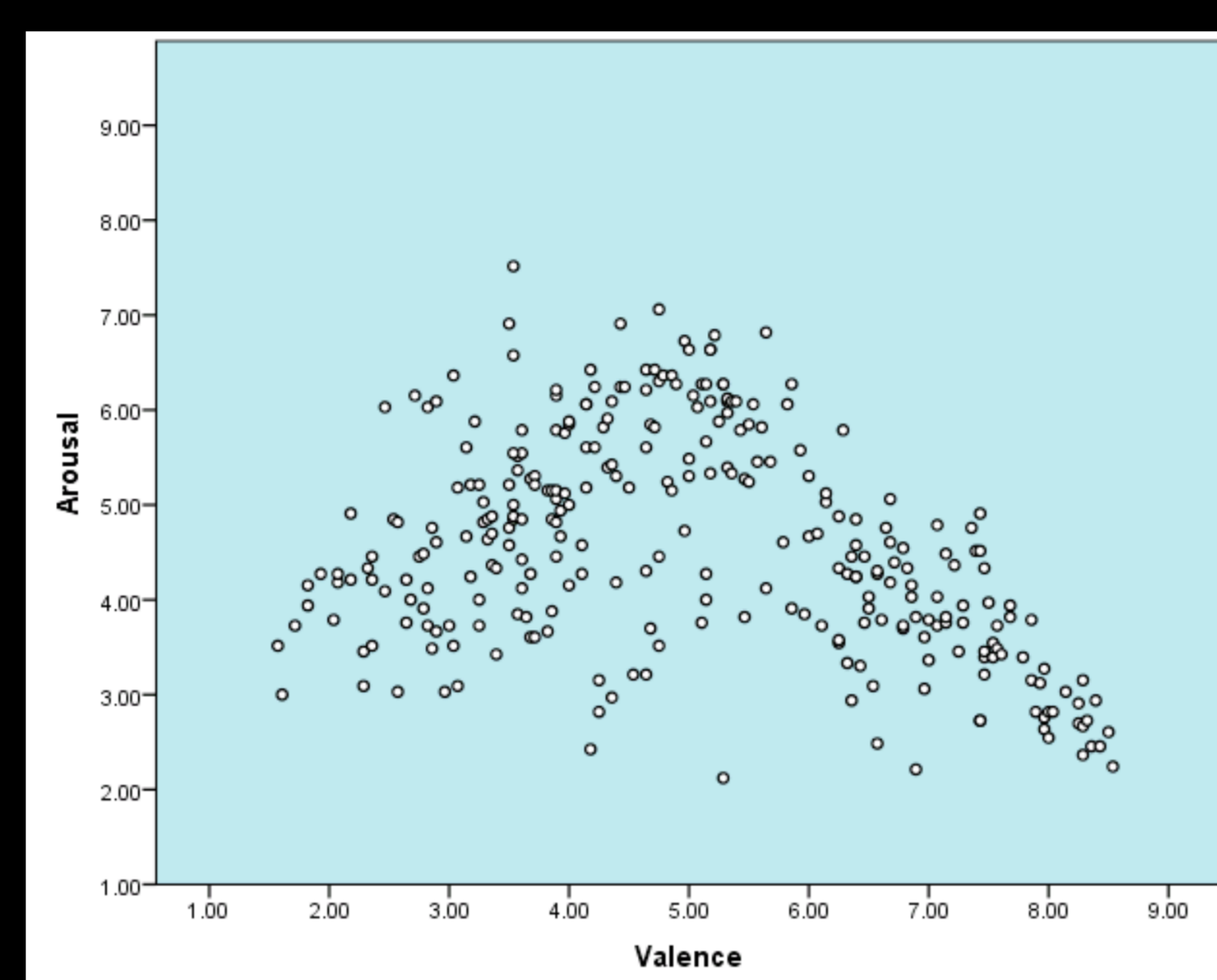
Valence:



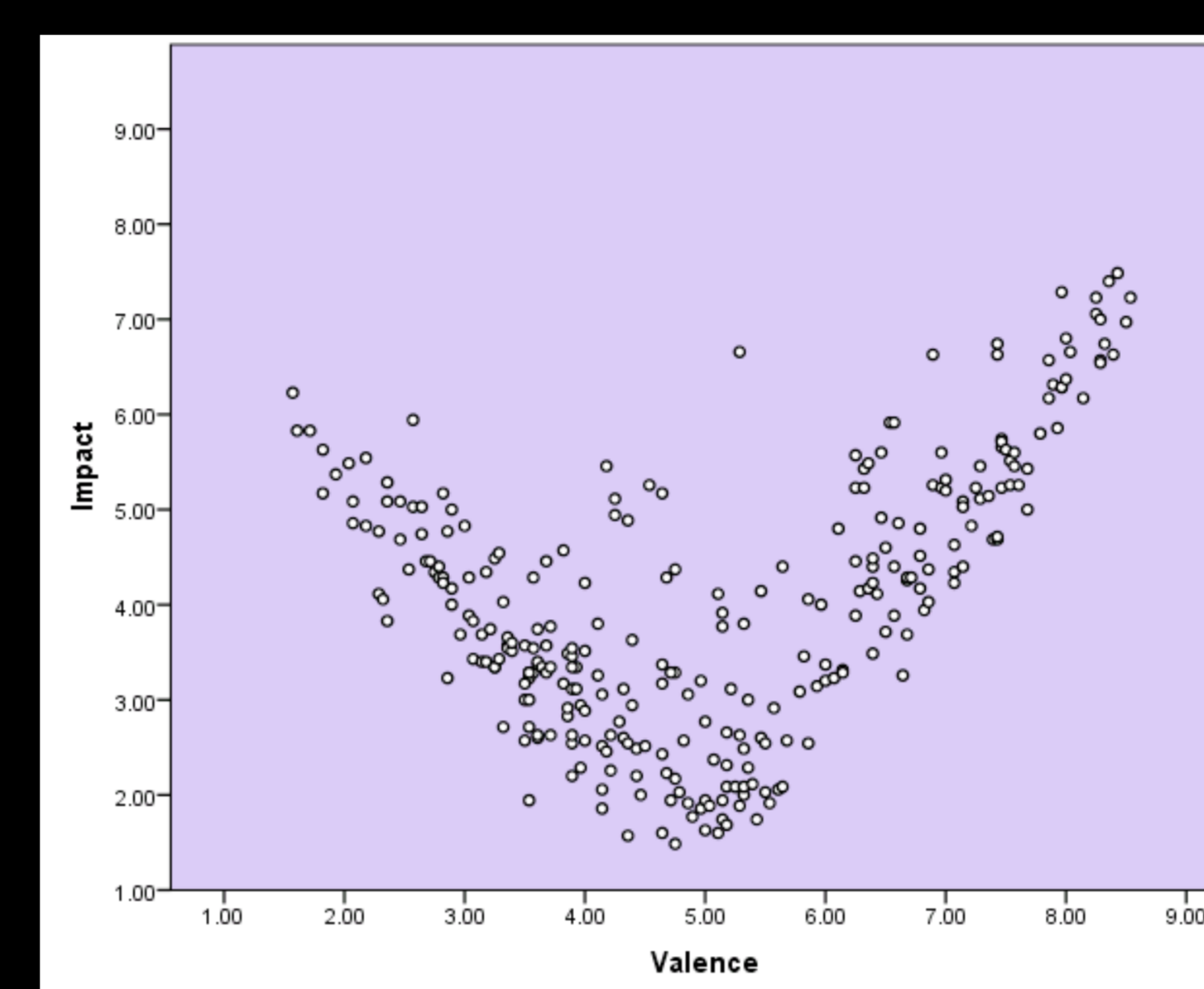
Arousal:



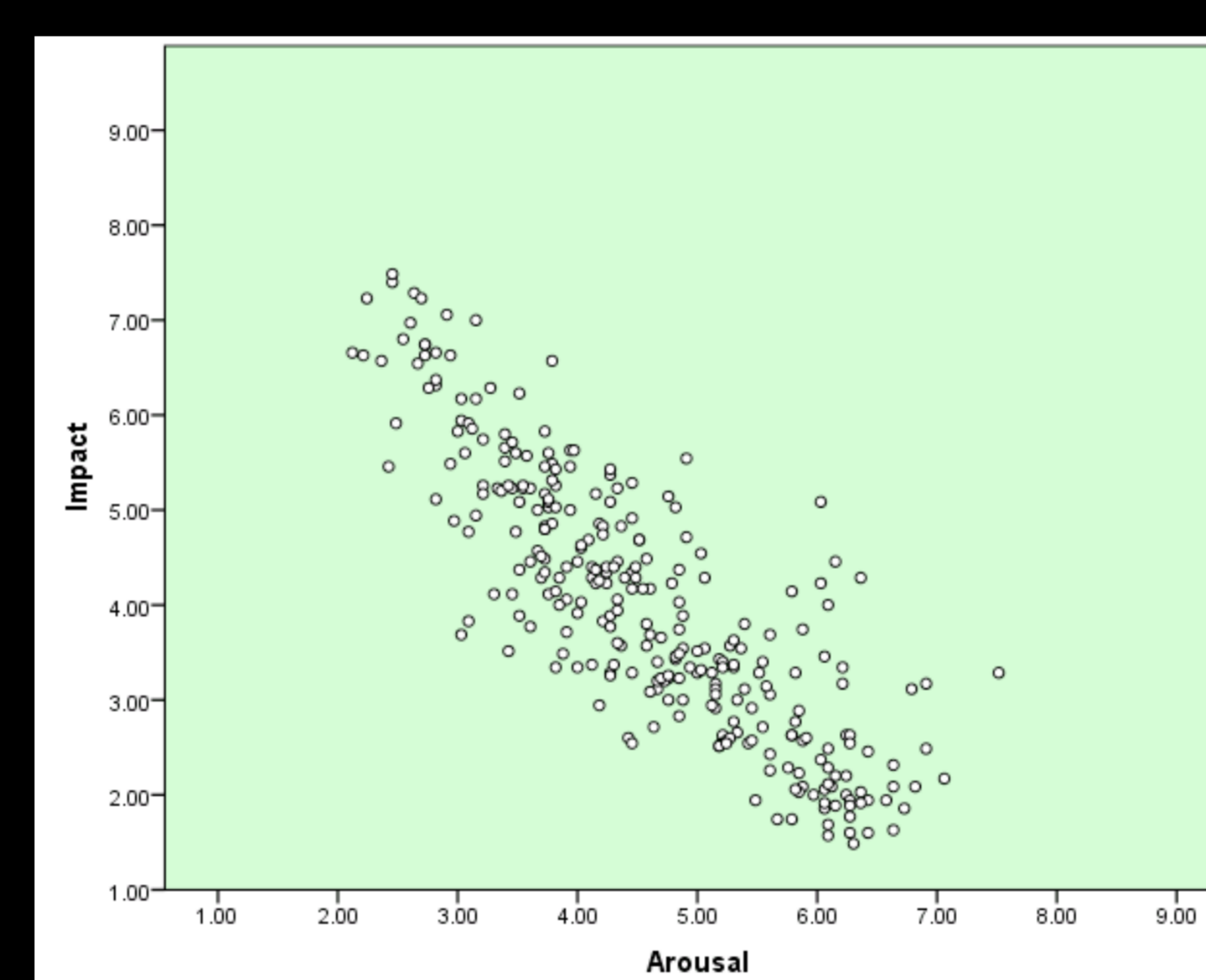
Valence vs Arousal



Valence vs Impact



Arousal vs Impact



Results:

- The data collected support the emotional impact and range of emotion in the clips
- A U-shaped correlation between valence and arousal can be seen, suggesting subjects reporting a higher arousal also reported a higher positive or negative valence
- A U-shaped correlation was seen for valence and impact, suggesting subjects reporting lower impact reported valence as being more neutral.
- A linear correlation between impact and arousal can be seen
- Clips were largely unfamiliar; less than 5 % of participants had seen the videos before

Scale:

Participants	Valence	Arousal	Impact
n	30	33	35
Mean Age	18.7	18.97	19.86

Conclusions/next steps:

- The results validated the hypothesized emotional positive/negative/neutral content; The low familiarity and clear trends validate the emotional impact and range of emotions in the clips
- Several directions can be taken with a database such as this one, involving future memory or emotion studies, as well as further analysis of the participants who rated the videos through the questionnaires. This data could provide further insight into the appraisal of the clips
- As research in neuropsychology moves towards using more realistic moving image stimuli, stronger correlations and conclusions can be drawn about how cognition functions in real life

Neutral



Positive



Negative



References:

The Emotional Movie Database (EMDB): a self-report and psychophysiological study.: <http://www.ncbi.nlm.nih.gov/pubmed/22767079>

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