

APA citation of journal article: Kang, O., & Wheatley, T. (2017). Pupil dilation patterns spontaneously synchronize across individuals during shared attention. *Journal of Experimental Psychology: General*, 146(4), 569-576.
<http://dx.doi.org/10.1037/xge0000271>

The Basics:

1. What was the broad question being asked by this research project? What was the specific question being asked by this research project?
 - a. Summarize the background information on the research topic in three sentences.
 - b. What is the gap in the literature identified by the researchers? What question(s) are they trying to answer? What is their hypothesis and what should happen if the author's hypothesis is true?
 - c. What are alternative hypotheses?

Is pupillary synchrony an index of shared attention between minds? Individuals with a visual narrative are more likely to have higher emotional salient charged responses than those without. There is a gap in that these indexes were not compared in previous research. If it is true, they can use this to determine how connected a listener is.

2. What experiments were done to test the hypothesis or investigate the research question?
 - a. Explain the task design – what are participants instructed to do and what is being measured? Think about the independent and dependent variables.

Participants watched videos of speakers while being eye-tracked. The speakers in the videos were also eye tracked. The pupil dilation patterns between the speaker and listener were compared and this data was compared to the emotional salience of the narrative.

3. What evidence supports each of the conclusions?
 - a. Before you read the discussion, summarize the main findings and link each one back to the research question(s). How does each result inform the hypothesis?

The pupil dilation patterns were found to be greatest during the highest emotional peaks of the narrative and vice versa.

4. What are the major conclusions?
 - a. What do the results add to the field? How do the researchers interpret their findings? Summarize any limitations identified by the researchers.

Pupillary synchrony is an implicit corollary of shared attention, able to be used to track mental coupling.

The Critique:

1. Is the paper well written? How do you know? For week 2 & later, use this space to practice headlines & summaries of the articles via tweets.

Have you ever felt super engaged or disconnected while someone told you a story? Researchers used eye tracking to determine the pupil dilation patterns of speakers and listeners became synchronized whenever attention was at its highest, occurring most often at emotional peaks.

Researchers Kang and Wheatley used eye tracking technology to view the pupil dilation of recorded speakers and participants. Findings suggested participants' dilation patterns modeled that of the speaker more closely during higher emotional topics.

2. Do the conclusions seem logical given the data processed? Why or why not? Another way of thinking about this: do the results adequately support the conclusions that are drawn? Are there alternative explanations for the findings? What inferences about the hypotheses and questions can be made based on these results?

The conclusions do seem to be logical. There is ample evidence and plenty of previous research was used, allowing for the correct variables to be tested and therefore more sound conclusions to be drawn.

3. Are the conclusions important? How do you think this relates to everyday behavior? The conclusions are important. This will help people understand when listeners are most attentive and are more likely to feel connected to a narrative.

4. What were the best aspects of the research presented, and how could the research be improved? Name at least one way to improve the experiment. I believe this experiment was well executed, and the background research was well explained. I believe more tests could be conducted regarding other emotions in narratives.

5. How would you follow-up this experiment or study?

I believe more tests could be conducted regarding other emotions in narratives.

Additional Resources: What are the basic concepts that you need to know to understand the science presented in your paper? What other information or resources would help you better understand the paper? This is helpful to consider for your science communication pieces.

The basic info that would be needed to understand the experiment is discussed in the background information.

Further Questions:

Write at least five comments or questions about the article to discuss with the class.

1. Is eye tracking technology readily available?
2. Has this study been done again?
3. Is the data able to be generalized to all types of emotions?
4. I liked how much background information was analyzed.
5. The experiment seemed to fill a tight gap between previous research.