

Peer-review report of

Tomašević, A. & Major, S. (2024). Dynamic exploratory graph analysis of emotions in politics. *advances.in/psychology*, 2, e312144. <https://doi.org/10.56296/aip00021>

Round 1

Dear authors,

I'm very pleased to share that I have now received a very detailed review of your paper: Dynamic Exploratory Graph Analysis of Emotions in Politics.

The review provides a constructive critique of your paper analyzing emotions in approximately 200 speeches by public figures using Dynamic Exploratory Graph Analysis (DynEGA). The reviewer commends the clarity of the paper and the thorough validation of the EGA method, highlighting it as the paper's strongest aspect. However, they identify significant limitations:

1. **Affective Literature Review:** The review of emotion-related literature is considered inadequate, lacking both breadth and depth, particularly in the discussion of emotion regulation, which the reviewer finds narrowly focused and largely irrelevant to the study's primary objectives.
2. **Proof of Concept vs. Theory Testing:** The reviewer perceives the study more as a demonstration of the EGA method rather than a rigorous test of theoretical propositions about emotions and their expression, noting a lack of theoretical insights derived from the analysis.
3. **Suggestions for Improvement:**
 - The reviewer encourages the authors to explore the dynamics of emotional expressions further, suggesting the incorporation of research by Diana Tamir and Mark Thornton on predicting emotional expressions.
 - They critique the oversimplified discussion on emotion regulation and urge a deeper examination of the literature, challenging the paper's narrow focus on regulation as the sole driver of emotional dynamics.
 - Questions are raised regarding the classification of scripted emotional expressions as regulation, prompting a call for a more nuanced argument.
 - The asymmetry in measuring predominantly negative emotions is highlighted as a methodological concern, with implications for the study's results.
 - A desire for more hypothesis-driven research is expressed, suggesting that insights from Diana Tamir's work could inform expectations and theoretical grounding.

- The review notes the ongoing debate about the validity of extracting emotions from facial expressions without context, recommending a discussion on this topic to contextualize the findings.
- Clarification is sought on the extraction and use of populism data, as well as the contribution and rationale behind Figure 2.
- The reviewer questions the generalizability of the results and the potential conclusions about emotions and regulation, given the reliance on a specific sentiment analysis tool.

4. Broadening the Discussion of Limitations: Finally, the reviewer suggests that the limitations section should not only address issues in the transformation process but also discuss the broader constraints of the sentiment analysis method employed.

Overall, the review appreciates the paper's methodological clarity but calls for a more comprehensive literature review, a deeper theoretical framework, and a broader discussion of the study's implications and limitations.

Please, review the paper accordingly, and submit a detailed response to the reviewer.

Best wishes,

Hudson Golino

Reviewer 1

The goal of this paper was to analyze the emotions expressed in ~200 speeches by public figures using EGA. I am not an expert in EGA, but from my limited understanding, my sense is that this is the strongest part of the paper. The explanations are clear, and there are multiple tests done at each step to show its validity. I see two main limitations in this manuscript. First, the review of the affective literature is lacking both in terms of breadth and depth. My comments specifically point to the discussion on emotion regulation, which is both very narrow and, in my mind, quite irrelevant to the current project. The second, bigger issue, in my mind, is that this project represents more of a proof of concept of a method than a real test of theory. There is hardly any theory tested, and no theoretical conclusions are made from this analysis regarding emotions and emotion expressions. I am not in a position to determine whether this is suitable for this journal, but I just wanted to point out the limitations. In terms of clarity, the paper and methods are really clear and well-written.

1. The authors are right to claim that there is not a lot of work on the dynamics of emotional expressions. I do want to point out one literature that may be especially

useful for dynamics of expression, which is research by Diana Tamir and Mark Thornton, in which people are asked to predict the next emotional expression given a current one.

2. I found the discussion on regulation lacking in terms of knowledge and simplicity. One example: "The emergence of patterns is due to the regulation of emotions" – this is not a necessity. Emotional dynamics over time can change because of multiple things such as the natural trajectory of emotions, external situations, and regulation. I don't think it makes sense to consider just regulation as the driver of emotional change. A second example: "politicians downregulate emotions in situations where they want to prevent a specific emotion from lingering..." This again is a very one-dimensional description of regulation. I highly suggest the authors do a bit of a deeper dive into this literature beyond the excellent work of Maya Tamir.

3. On the same topic, I am not sure that following a script would be considered regulation, as regulation often involves changing or altering the trajectory of an emotional response. I am not sure that the case of writing a script (where the speaker prepares for the expression of certain emotions) is considered regulation. This is an interesting idea, and I would definitely want to see a more elaborate argument for it. More broadly, I am also not sure what additional benefit is achieved when considering this process regulation. The authors are not comparing emotional reactions to regulation, so what is the meaning of defining this process as regulation?

4. There is a measurement issue in the asymmetry of distinct emotions measured in the current paper where all emotions except for one are negative. I realize that this is driven by the method used (there are others with different distinct emotions), but it's important to recognize this issue right from the get-go. How would that impact the results? For example, as negative emotions are closely related to each other in valence, they are more likely to be associated with each other.

5. This study is purely descriptive with very few hypotheses. There is obviously great value in that, but I think it would be great to get a sense of what we should even expect, given the literature. I think that using Diana's work, in which people predict sequences of emotional states, can be useful in generating some ideas.

6. There is a huge debate in affective science about whether emotions can actually be extracted from facial expressions without context. It would be great to mention that before diving into an evaluation of facial expressions to caveat the certainty these emotional expressions are properly captured. Hillel Aviezer and Lisa Feldman Barrett (among others) have written a lot about this.

7. I may have missed it, but Table 1 shows an average on populism that seems much stronger than everything else. How was this extracted and used?

8. I was not sure what the contribution of Figure 2 is. Perhaps it would be best to provide the rationale.

9. The results are interesting, but it's yet unclear what we can take from them. More specifically, it seems that these results are highly contingent on this specific sentiment analysis tool. What can the authors do or write to generalize these findings beyond the current method? Furthermore, even if we take these results at face value, what conclusions can be drawn from them on emotion or emotion regulation?

10. In the limitation section, the authors mainly discuss the limitations in the transformation. I think a broader discussion could be added on the sentiment analysis method and its limitations.