

We thank the reviewers for their well-considered comments and suggestions.

As we detail below, we have worked hard to address all concerns in full, and we believe our manuscript has been strengthened.

Reviewer 1

Comment

I am not fully satisfied with the updates that the authors have provided. After taking into account the comments by Reviewer 2, many of which are valid concerns, I would like to see another revision addressing the following two points.

- (a) Present in an algorithm form, the steps that the authors used to compute the "Traversal-Funnel" based influence measure instead of a descriptive discussion. Comment on the running time complexity of the same.
- (b) Please double check the eigenvector centrality values. Normally the eigenvector corresponding to the top eigenvalue is selected and the entire are all non-negative. There are some negative entries present in the values shown.

Reply: In response to the reviewer's suggestions, we:

- (a) Included pseudo-code for the traversal funnels algorithm as well as a description of the runtime and auxiliary memory usage in section B (Traversal Funnels). We have also made all code used in this work available on the online appendix.
- (b) Re-rendered the Centrality Measures table (Fig. 4) to reflect the accurate, non-negative eigenvector centrality values. The previous submission contained incorrectly rendered scientific notation showing negative values. The true values included in our source code (see online appendix) are effectively zero: D: $-3.65 * 10^{-17}$, F: $-3.81 * 10^{-17}$, and G: $-8.26 * 10^{-18}$. The Centrality Measures table (Fig 4) now correctly displays the true values.

Reviewer 2

Comment

I am satisfied with the modifications made and the author response. I would suggest adding something to the introduction pointing out that you are introducing the new notion of traversal funnels, and make it a bit more prominent that this is a novel measure you have created.

Reply: In response to the reviewer's suggestion, we more prominently highlighted traversal funnels as new measure of influence in various sections including the abstract, introduction, and conclusion.