

Reviewer: Jake Hanson

Author: Tucker Ely

Title: Shakespearian Information

General Strengths:

This subject is absolutely fascinating – especially when viewed through an information theoretic lens. The results are clear and intelligible.

General Weaknesses:

The subjective aspects of the methodology were not as overt as they could be. Questions such as what defines an interaction should be explicitly defined in order for the reader to understand the parts of the study that weren't purely quantitative.

Abstract

This measure, known as transfer entropy, displays a sizable deviation from random.

- Random is very vague in this context. Perhaps a little more detail here would help the reader get a feel for what's to come.

Introduction

In context of performance art, this may be understood as the future presence of characters based on the current presence of others.

- Is it just the current presence that matters, or is additionally conditioned on the past?

If all pairwise character interactions are considered for TE, it may be predicted that the master-minds of these plots may impart an increased knowledge about the future states of their targets, relative to their targets own histories.

- What are their targets in this context? Is it referring to the TE between them and a different character?

Of the myriad other interactions taking place within the play, it may be expected that Don Pedro, Claudio, and Leonato, share a high transfer entropy with the targets of their love-plot, Beatrice and Benedick.

- This helps clarify the point above, but a slight revision to the previous sentence would still help.

Model Description

In order to apply TE to Shakespeare's work, the original written form of MAAN was divided _rst into its 17 natural scene,

- Clarify what “natural scene” means – even though most people likely understand.

In this formulations characters are represented as nodes, while interactions between characters are represented as edges.

- Can it be assumed that everyone knows about edges and nodes at this point? You may want to give a brief sentence on nodes and edges in relation to networks/patterns sometime earlier (perhaps in the introduction).

All characters present in a given sub-scene were given credit for their participation with each other in the form of unit-weight edges.

- How is the weight determined? Subjectively? Or relative to some measurable quantity?

The pairwise interactions between all participants within all sub-scenes of a scene were then summed

- What determines an interaction?

In short, the above equation compares the amount of information contained within the self history of character X as to its own future state, with the increased amount of information which would be gleaned if the current status of character Y is known. Therefore TE references the affect of character Y on character X.

- Good description of TE!

Results

The transfer entropy statistics displayed in FIG. 2 evidence a system where the majority of node pairs (77%) contain a non-zero transfer entropy. Slightly more than half of which, do no share an edge with one another (42% vs. 35%).

- Putting a small interpretation with this would help the reader remember the results when it comes to the discussion. As it stands the results mean very little and don't leave much of an impression.
- Or, point out what the reader should notice here.

Discussion

Thus, the characters appear to contain more information about their future in their own pasts than if their pasts were randomized, and this has the effect of decreasing the influence of other characters relative to the random associations.

- Is this interpretation certain? Or are there alternatives? If it is certain then its fine as written.

The relative placement of the love-plot (red dots) vs. the hate-plot (black dots) also appears to fall in line with their changing relative importance as the play matures.

- Does this mean that the hate-plot becomes more important than the love plot?

Do all artistic performance pieces display negative deviations from random in their TE measures?

- This is nice because it puts this work in the context of a broader question.
- What would it mean if the answer is yes? I think there is a bigger question here.

Follow-on work will therefore focus on the differences between the various genres for which Shakespeare was renowned - tragedies, comedies, etc. - laid against a backdrop of his contemporaries.

- This point naturally asks why one would want to compare him to his contemporaries which is something you may want to end with (e.g. "... providing quantitative evidence for why his work has perpetuated..).