

# Story patterns in early modern drama

## Visualising character networks and plot speed in 22 Dutch plays

by Nil Volentibus Arduum

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### 1. Introduction

The growing availability of TEI-encoded digital editions opens up new opportunities to study the transnational and multilingual dynamics of early modern drama. The scaffolding of xml-tags in these editions – marking every act, scene, speaker, speech turn and stage direction – not only supports digital editions in different forms and media; it also offers a language-independent blueprint of story patterns (cf. Basu 2018). Theatre corpora such as the Drama Corpora Project (DraCor) – creating access to TEI-editions of plays written in French, German, English, Spanish, Italian, Russian, and other languages – thus enable cross-lingual comparisons of drama traditions in early modern Europe (Fischer et al. 2019).<sup>1</sup>

This paper demonstrates the potential of applying quantitative narratology to TEI-encoded plays for specific questions relevant to the field of early modern (Dutch) literature. It uses a corpus of 22 Dutch plays by French-classicist theatre society Nil Volentibus Arduum (NVA), founded in 1669, as a case study to visualise story patterns. A formalist approach to plot structure is especially relevant to this case because the members of NVA explicitly articulated poetic ideals about the relationship between dramatic forms and their intended emotional and moral effect. During the 1670s and 1680s, NVA developed its poetics in weekly gatherings of its members. Their discussions were informed by an eclectic mix of drama theorists ranging from Aristotle and Horace to early modern French-classicist playwrights such as Pierre Corneille. Leading figures Lodewijk Meijer and Andries Pels eventually published their poetic theories in *Het Gebruik én Misbruik des Tooneels* (1681) and the theatre text book *Naauwkeurig onderwys in de tooneel-poëzy* (first printed posthumously in 1765). This paper questions whether and how the poetic ideals propagated by NVA are reflected in the narrative structure of their plays.

### 2. Corpus

The corpus consists of 6 tragedies ('treurspel'), 7 comedies ('blijspel'), 7 farces ('kluchtspel') and 2 allegorical plays ('zinnespel'). The selection contains 70% of all texts published by NVA that would qualify as a complete play (Dongelmans 1982). The genre labels were borrowed from the title pages of the digitised editions. All editions were retrieved from CENETON, an online repository of manually transcribed Dutch drama editions curated by Ton Harmsen.<sup>2</sup> Each play was automatically enriched with (simplified) TEI-encoding. After that, the encoding was manually checked and further annotated by a group of BA students from the University of Groningen, in the context of a tutorial on theatre analysis and digital humanities. The corpus, including code and documentation, will be made available on GitHub.

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<sup>1</sup> <https://dracor.org/>

<sup>2</sup> <https://www.let.leidenuniv.nl/Dutch/Cenetone/>

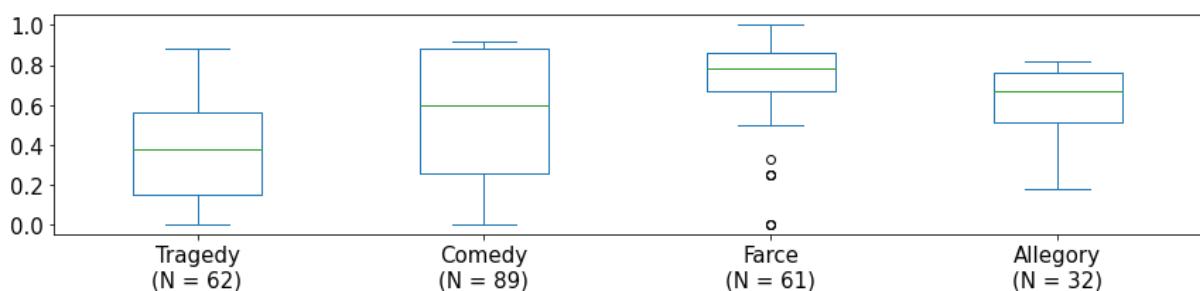
### 3. Method

This paper focuses on two formal representations of story patterns: character networks and ‘plot speed’. Character network analysis has a long tradition in digital literary studies (e.g. Smeets 2021, Fischer et al. 2015, Kraicer and Piper 2018). Franco Moretti argued for the hermeneutic value of modeling character interactions as networks, claiming that network graphs represent ‘time turned into space’ (Moretti 2011). By replacing temporality with spatiality, character networks allow us to view stories as social systems – with hierarchies, centres and margins – which can both challenge and reflect philosophical and political views on early modern societies. Temporality, however, is an important feature of story patterns as well. This paper therefore also formalises Karin Kukkonen’s notions of ‘story world speed’ - whether or not characters are in a rush – and ‘plot speed’ – ‘the conceptual velocity of movement through plot events’ – by quantifying the distribution and length of speech turns in NVA’s plays (Kukkonen 2019).

### 4. Results

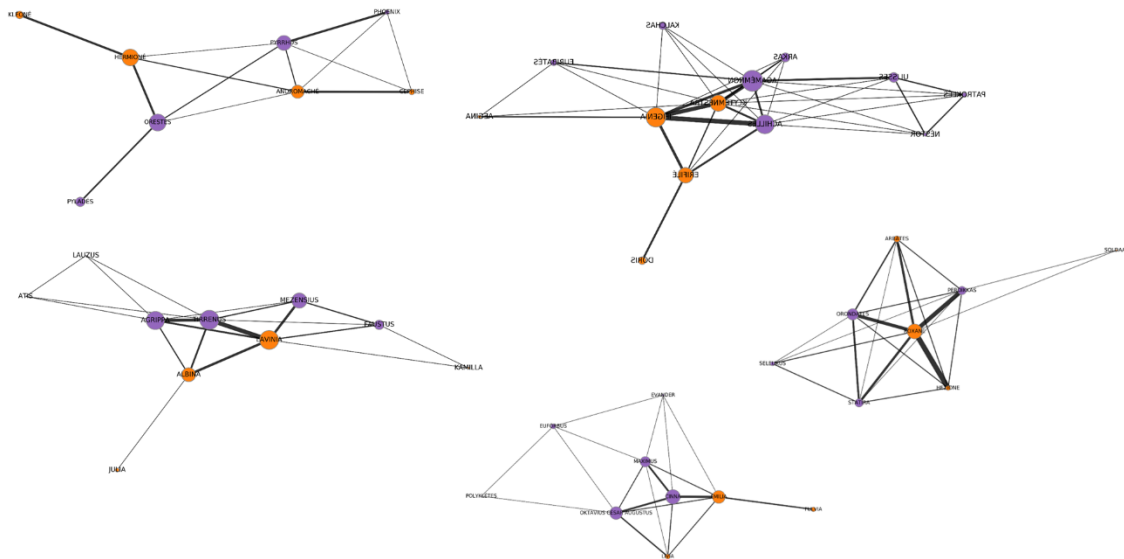
The corpus contains a total cast of 253 characters (male: 57.8%, female: 32.8%; gender unknown: 9.0%). An interaction between characters was established when two characters speak while they are both on stage. Based on these interactions, the connectivity of the social worlds depicted in drama can be quantified. A formal representation of connectivity is ‘network density’, which (for directed graphs) represents the sum of all interactions divided by the total number of potential interactions. The average density of all plays is 0.66, which suggests that most characters interact with a majority of all other characters in the play. However, a closer look reveals that density varies between the genres. The relative degree values per character (number of interactions divided by the total number of potential interactions per character) are relatively low in tragedies, indicating that the social worlds of comedies, farces and allegories are better connected than those of tragedies (see Fig. 1).

*Fig. 1. Relative degree per character, by genre*

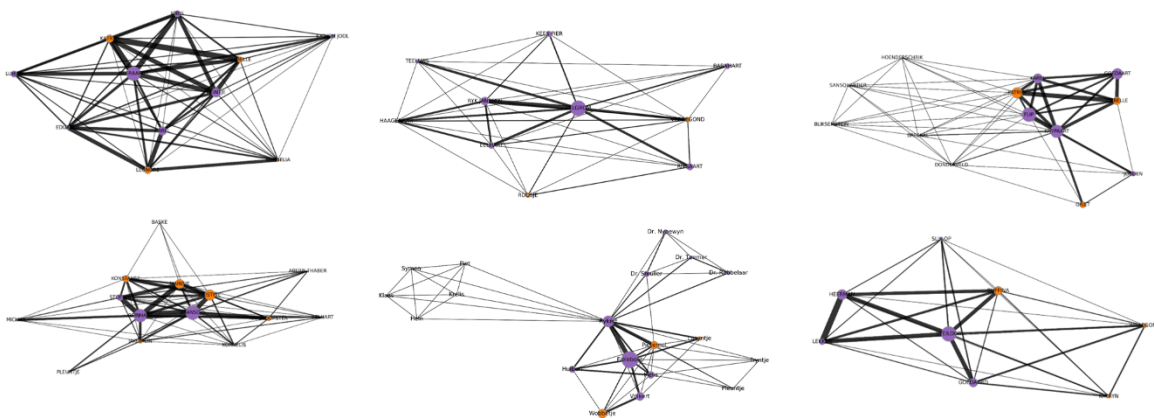


These genre-based differences in connectivity are furthermore confirmed by the differently shaped network graphs of comedies and tragedies. The social worlds of NVA’s comedies are egalitarian, unstructured and chaotic, whereas the social relationships in tragedies are characterised by hierarchy, symmetry and order. These story patterns indicate that the poetic distinction between the social realities of tragedy and comedy – as blueprints for stories about ‘the court’ and ‘the countryside’ respectively – is reflected in the narrative structure of NVA’s plays (cf. Fig. 2 and Fig. 3).

*Fig. 2. Network graphs of NVA's tragedies*



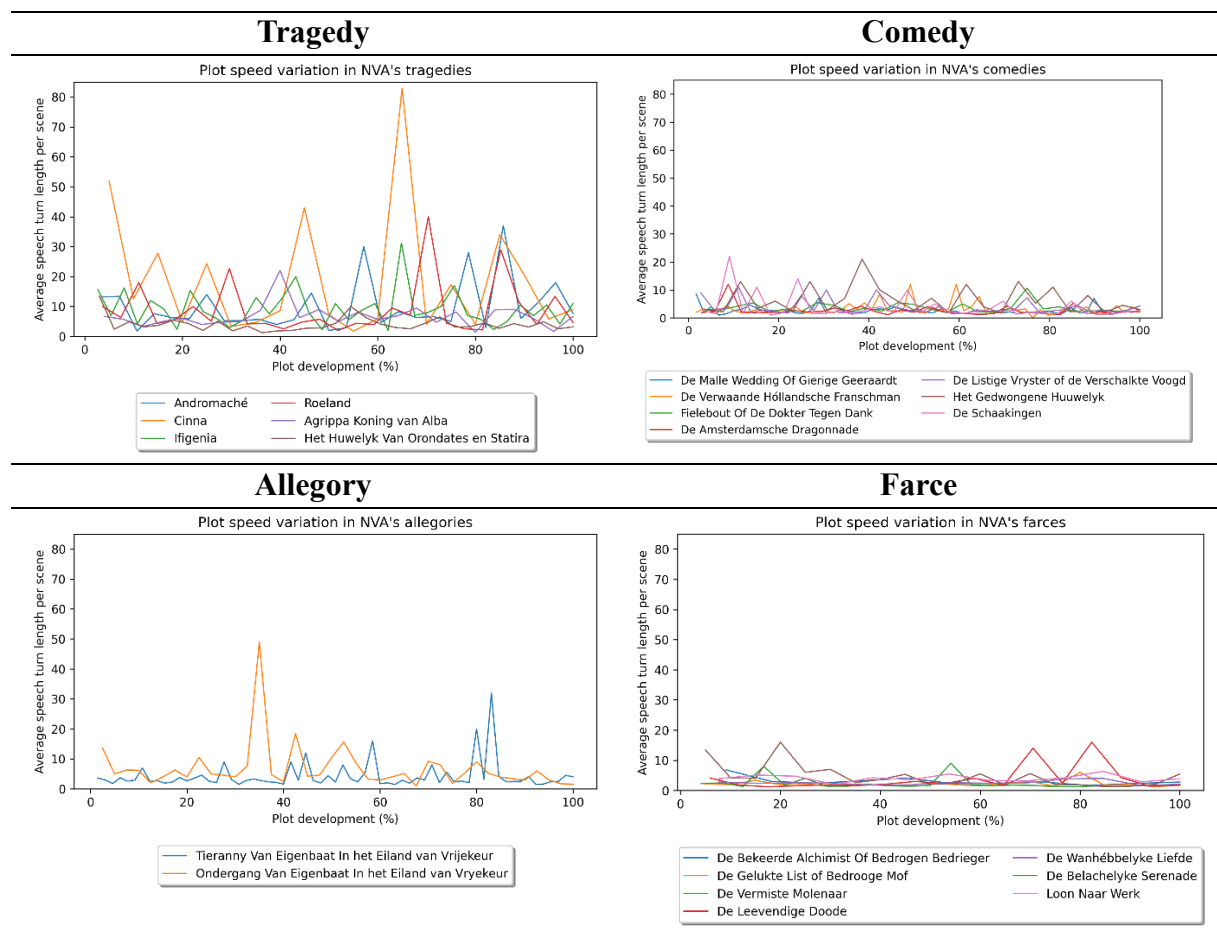
*Fig. 3. Network graphs of NVA's comedies*



Another approach to the relationship between poetic ideals and plot structure is to look at ‘plot speed’. Plot speed can be formalised by quantifying the pace and length of speech turns: number of lines per speech turn and number of speech turns per scene. Although the pace of speakers taking turns cannot be equated to plot speed or story world speed, quantifications of speech turns do offer a formalised indication of those plot features. Figure 4 shows the variation of plot speed by genre, measured in average speech turn length per scene. The number of scenes has been normalised to allow for comparisons between plays.

The relatively high variation of plot speed in NVA’s tragedies provides additional evidence of the genre difference described above. The pace of dramatic discourse in tragedies is volatile, alternating embellished monologues and rhetorical outbursts with snappy dialogues, whereas the narratives of comedies, farces, and (to a lesser extent) allegories evolve on a persistently high level, mimicking the speed and style of colloquial language. These different levels of story speed align with the poetic distinction between the universal, stylised world of the tragedy versus the local and messy realism depicted and mocked by the comedy.

Figure 4. Plot speed variation by genre



## 5. Conclusion

In 2011 Moretti predicted that formalist analysis of narrative structure will ‘perhaps make us see different genres – tragedies and comedies; picaresque, gothic, *Bildungsroman* – as different shapes’. With the digital corpora and computational methods available to us today, we might now be in a position to start doing just that. This paper demonstrates how quantitative narratology can be applied to manually annotated TEI-editions to analyse the relationship between poetic ideals and story patterns in early modern drama. It formalises these story patterns from two different angles: character network analysis and quantification of plot speed. Both angles reveal a strong genre difference between narrative structures of tragedies on the one hand and those of comedies, allegories and farces on the other. The observed contrast in story patterns reflects poetic distinctions between the social worlds of tragedies versus comedies – court versus countryside – and between different mimetic functions – universalism versus realism. Future studies will have to examine such relationships between poetics and poetic practice on a larger scale – for example by comparing NVA’s drama to other Dutch playwrights, or to the major theatre traditions from early modern France, Spain, Italy and England. Because of the interoperability and standardisation ensured by the TEI-encodings, the approach demonstrated here can be easily adapted to suit any other period or language field.

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