

Quantitative Perspectives on European Baroque Drama: A Network Theory-based Analysis

Luca Giovannini, M.A. (Supervisor: Prof. Dr. Peer Trilcke)

Research background

Many critics share the belief that the various “national forms” of early modern drama, such as the English Elizabethan theatre, the German *Trauerspiel* or the French *théâtre classique*, represent autonomous systems, sharply separated from one another by linguistic and cultural boundaries.

According to Moretti (1994), such national variations were born during the **Baroque era**, when classical and medieval dramatic models, once shared across the continent, began to fall into disuse, while each local form of drama developed its own set of stylistic features.

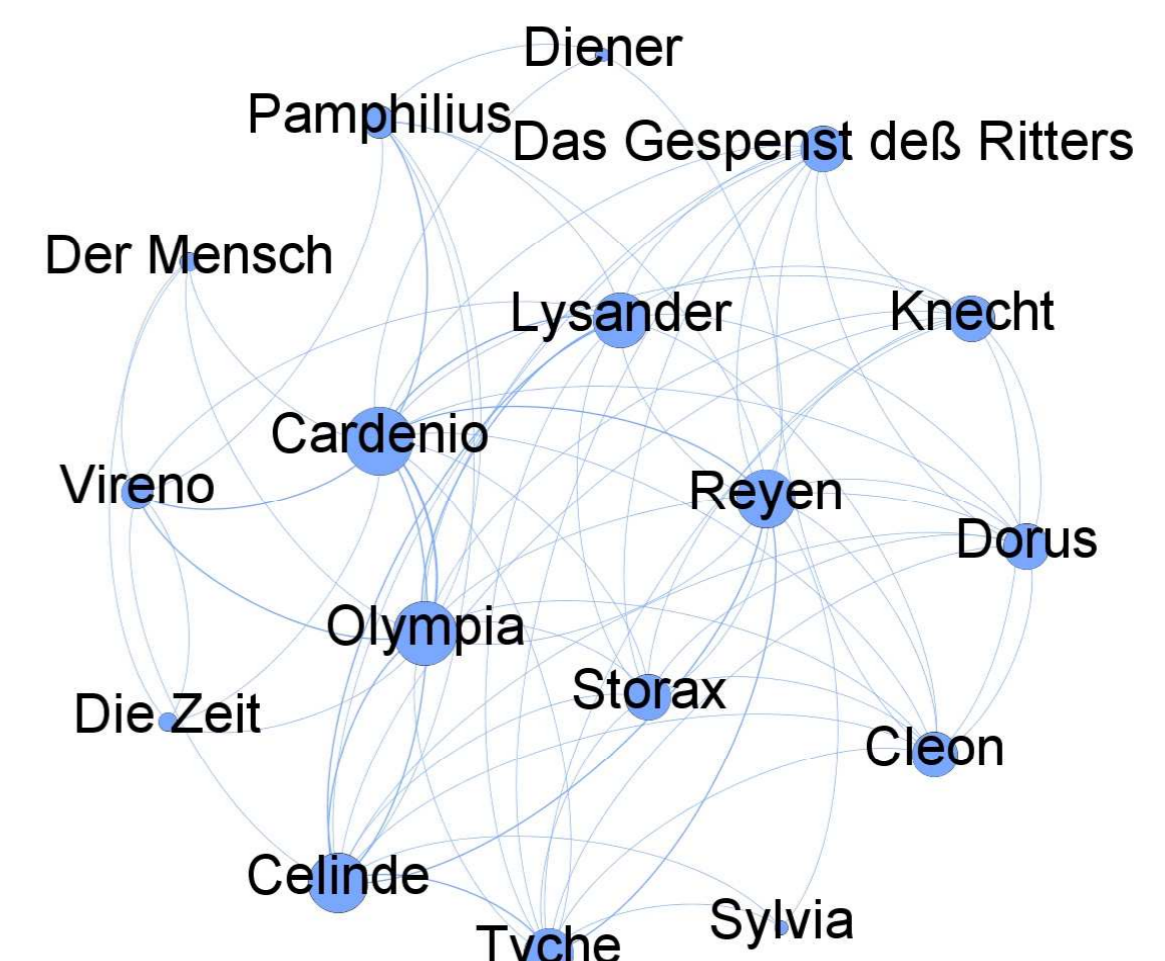
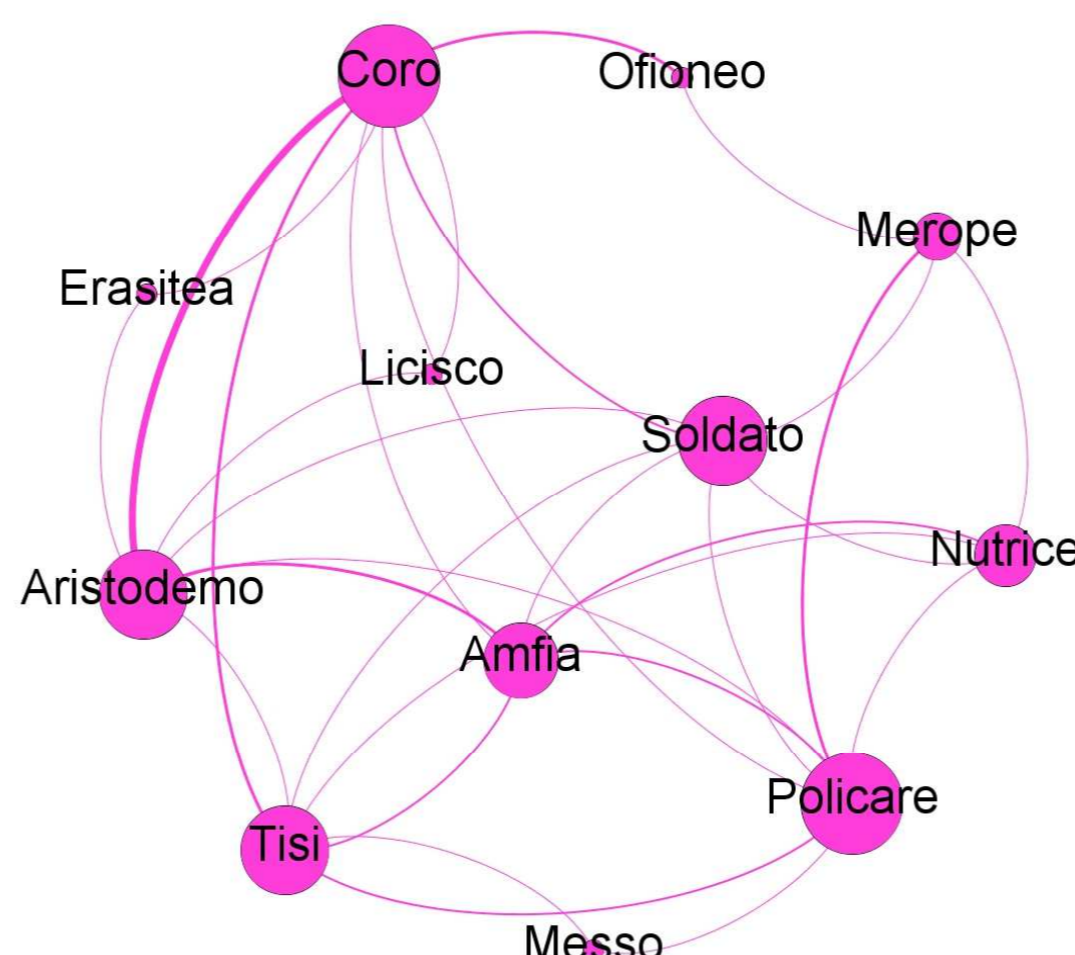
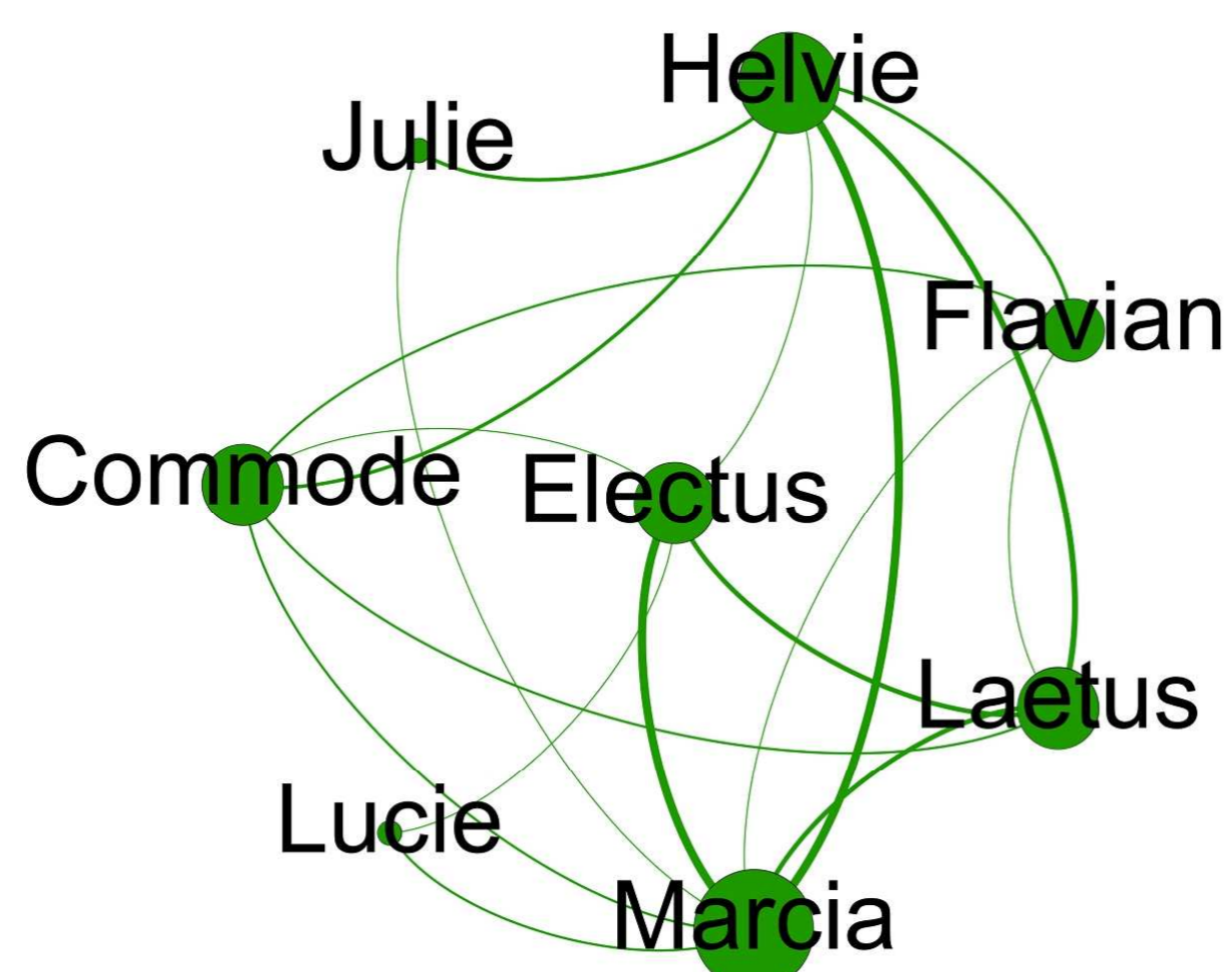
But how independent were these forms, actually? While some studies have explored the circulation of dramatics materials and ideas through Europe (Küpper 2019), none so far has attempted **a quantitative review** of the (possible) exchanges of **formal features** between plays from different linguistic areas – something LiNA (→) seems well suited to measure.

Methodology

In the last two decades, **literary network analysis** (LiNA) has established itself as an effective methodology for computational criticism (Trilcke 2013). Focusing on patterns of relations among fictional characters, LiNA investigates textual structures through the use of **network and graph theory** and provides statistics and visualisations for a variety of scholarly purposes (e.g. studying plot evolution, exploring options for literary periodisation, describing literary characters and in-text social formations, etc.).

Thanks to the development of NLP techniques, the extraction of network data from texts can now be partially automated (cfr. Labatut and Bost 2019), allowing the creation of large repositories of networks – such as the one maintained by the **DraCor project** at the University of Potsdam & the Higher School of Economics, Moscow (Fischer et al. 2019, dracor.org).

An example of network visualisation: a year in European drama (1657)



From left to right: “La Mort de l'Empereur Commode” by Thomas Corneille (FR), “Aristodemo” by Carlo De' Dottori (IT), and “Cardenio und Celinde oder Unglücklich Verliebete” by Andreas Gryphius (DE). Gephi elaboration on DraCor data, nodes ranked by degree.

How do the plays' structures differ? Which are the roles and the relationships between their characters?

Roadmap & Goals

- » Assembling a research corpus of **150 machine-readable plays**, stemming from the five main European dramatic traditions (DE, FR, EN, IT, ES) and covering the timespan **from 1561 to 1710**. While part of the corpus is already hosted on DraCor platform, the project involves annotating a large number of additional texts from structured (.xml) or plain (.txt, .html) sources.
- » Extracting character networks from the plays by means of the **DraCor API** and visualising them with **Gephi** (Bastian et al. 2009) or similar software.
- » Studying textual structures according to the essential metrics of **network theory** (degree, centrality, modularity, etc.), examining the characters' connections, distribution, and segmentation into clusters.
- » Measuring patterns of formal convergence and divergence between works from different linguistic milieus as highlighted by the networks' properties.
- » Exploring the transnational evolution of drama within the European space, assessing whether and how formal components like **plot structures** or **characters' roles** have been transferred between cultures.

References

- » Bastian, Mathieu, et al. “Gephi: an open source software for exploring and manipulating networks”, in *Proceedings of the International AAAI Conference on Web and Social Media* (2009) 3, 1, pp. 361-362.
- » Fischer, Frank, et al. “Programmable Corpora: Introducing DraCor, an Infrastructure for the Research on European Drama”, in *Proceedings of DH2019: “Complexities”*, Utrecht University (9-12 July 2019).
- » Küpper, Joachim. *The Cultural Net: Early Modern Drama as a Paradigm*. Berlin: De Gruyter, 2019.
- » Labatut, Vincent, and Xavier Bost. “Extraction and analysis of fictional character networks: a survey”. *ACM Computing Surveys* 52, 5 (2019), pp. 1-40.
- » Moretti, Franco. “Modern European Literature: A Geographical Sketch”, *New Left Review* July-August 1994.
- » Trilcke, Peer. “Social Network Analysis als Methode einer textempirischen Literaturwissenschaft”, in *Empirie in der Literaturwissenschaft*, ed. by Philip Ajouri, et al. Münster: Metis, 2013, pp. 201-247.