Vienna Doctoral College on Digital Humanism

DIGHUM college

Human-centered design and inclusive technologies

Visualization of Argumentation Networks

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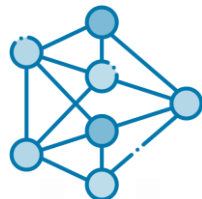
Project

Arguing is a common way of resolving conflicts. Yet the network-like structure of even small-scale argumentations is often quite hard to understand without substantial effort.

This projects aims to **design and investigate novel ways of modelling and visualizing argumentation networks in a human-friendly fashion**.
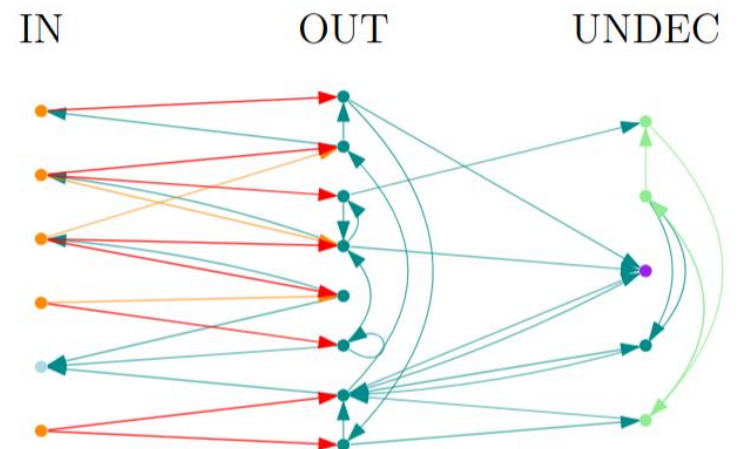
Visualization of coherent sets of arguments (called: *extensions*) based on colored nodes and edges.

From: Nöllenburg, et al. (2024) *Visualizing Extensions of Argumentation Frameworks as Layered Graphs.*

Interdisciplinarity

- logic
- data science
- communication science

Methodology

- **adapt and extend existing argumentation formalisms**, allowing for advanced user interfaces
- **develop layout objectives**, ensuring stability over time in dynamic settings
- **investigate interaction techniques**, respecting the mental map of users
- **apply state-of-the-art visual data analysis**, addressing scalability & explainability issues

Contribution

- **mediation processes**
- **analysis of multi-party discourses**
- **deliberation platforms**

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