The workshop „Networks Across Time and Space“ at the Academy of Sciences and Literature | Mainz brought together an international group of scholars from history, archaeology as well as cultural and literary studies to reflect on the potentials and challenges of network research in their fields. Apart from presentations by more advanced scholars, the workshop intended to provide a platform to discuss the possibility of applying network approaches to a variety of research projects in different stages.

The theory and methods of network research originally stem from sociology, an area in which qualitative and quantitative research data has very different features than those datasets used to reconstruct the human past. Indeed, historical sources are potentially biased, fragmentary, or even misleading. Over these two days, however, it became apparent that it is precisely the critical engagement with research data and the questioning of the relations between people, objects, and events that renders network approaches so meaningful.

To showcase the potential of „network thinking“ and data-driven explorations to address a variety of historical and archaeological questions, we have collected project outlines from workshop participants in this booklet. We hope that these projects might become a source of inspiration and a starting point for a more extensive debate on how to employ, advance, and teach network approaches across disciplinary boundaries in the humanities.
This research improves our understanding of the functioning of the network of Hanse cities between ca. 1450 and 1650 by studying the urban communication system.

Geographical focus: Cologne region (roughly the area around the Zuiderzee, the Lower Rhine Area and Westphalia); particularly Guelders.

Data: Meeting reports, letters, and travels of messengers and envoys in city accounts reveal cities’ communication radiiuses, the intensity and nature of contacts, and communication strategies on information’s distribution routes and the medium of communication, such as letters or meetings (incl. their location).

(Geographical) network analysis:
• Detecting the possible interrelation of the Hanseatic network with other urban networks;
• Explaining the development and operationalization of the Hanseatic network by visualizing the aspects above on maps in relation to developments such as shifting borders and accessibility of roads and waterways.

Travels of messengers of Nijmegen with ‘Hanse’ named as reason for the journey, city accounts 1557-1559.
The Battle for the Right to Strike
An Intellectual History of the Networks of Employers, Trade Unions, and Social Ethicists Preparing, Defining, and Promoting Catholic Social Teaching on Labor (1957-1968)

On December 7, 1965 the Second Vatican Council recognized the workers’ right to strike (Gaudium et Spes, § 68). This novelty in conciliar history and Catholic Social Teaching is a symbol for the hard-fought battle of networks with years of practical experience concerning the meaning of labor. This project develops an intellectual history of three international representative networks that prepared, defined and further promoted a theoretically realistic and practically engaging view on human labor as fundamental for human dignity and workers’ rights in the context of Vatican II.

Three International Organizations
International Union of Catholic Employer’s Associations (UNIAPAC)
International Federation of Christian Trade Unions (CISC)
International Union of Social Studies of Malines (UIES)

International Collaboration
Shared organization membership
Conference participation
Correspondence

Influence on Vatican II
Commission membership
Links with commission members
Drafting texts
New Analytical Features in nodegoat

Pim van Bree & Geert Kessels, LAB1100.

The open-source software package nodegoat¹ has recently been expanded with network analytical features. These new features have been developed by LAB1100² in partnership with the Study Platform on Interlocking Nationalisms³ at the University of Amsterdam, to analyse the content of their Encyclopedia of Romantic Nationalism in Europe.⁴ All individual and institutional nodegoat users can now make use of these functionalities. In the last years, nodegoat has proven to be a reliable tool for the storage and exploratory visualisation of historical networks.⁵ Networks created in nodegoat, are embedded in time and space.

The newly developed network analytical functionality builds on the workflow in nodegoat that has been in use since 2013. This workflow allows scholars to define a custom data model and manually enter or import data into this data model, in an individual or collaborative research process. Filters can be applied to create data selections and scopes can be used to include additional data or exclude specific relationships. Once such a selection has been made, a scholar can now select an algorithm (e.g. degree centrality, betweenness centrality, closeness centrality, PageRank, etc.) to analyse the network in this selection. nodegoat dynamically generates a graph database based on the selected paths in the data to perform the calculation in a custom built C++ framework.⁶ The results of the calculations can be stored per nodegoat Object to compare various outcomes, and be used in filter, analysis, and visualisation operations.

These network analytical features offer scholars a new array of possible modes of analysis, but also add an additional level of complexity to the challenges that have to be dealt with when analysing historical networks. As networks in nodegoat are often based on heterogeneous data, and historical networks are per definition dynamic and incomplete, a betweenness centrality value for a node in an incomplete and multi-modal network needs many layers of interpretation before it can be used as a research outcome. We currently emphasise the usage of these metrics in an exploratory manner, rather than using them to generate definitive results.

With this contribution, we want to discuss the implications of these features on historical research processes and we want to solicit feedback on how to improve the way in which these features can be presented to scholars.

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¹ https://nodegoat.net
² https://LAB1100.com
³ https://spinnet.eu
⁴ https://ernie.uva.nl
In the 1950s, Austria realized many infrastructure projects to push forward a system of alpine crossing streets. A transit country was regarded as a beneficial for European Integration. Since the 1970s there has been a huge resistance by the population against the increasing transit traffic along the Brenner route, which resulted in foundations of local protest groups. They defended themselves against noise and exhaust emissions that had caused environmental damage and personal injuries caused by transit traffic. By using spectacular forms of protest – like blocking the motorway – they caused a press sensation and established transit traffic as a relevant topic in politics that dominated the Austrian discussions and negotiations about joining the EU.

Because of protests of local initiatives and environmentalists this problem has been gaining importance in political agendas not only on a national but international level over the last 30 years, and it is still an important and controversial topic in society.

The debate got even more serious during Austrian negotiations about joining the EU and the contract conclusion of the transit negotiations with the EU in 1992. When Austria joined the EU in 1995, there was an institutional integration of transport policy and, consequently, the liberalization of transit traffic. This process went hand in hand with the rise of the Alpine conservation movement, pushing an ecologisation of transport policies. In consequence, the EU took a contrary position towards local initiatives, aiming for opposite developments. In fact, the initiatives needed the EU to realize their goals on the basis that the EU had more power and possibilities to change something in comparison to smaller governments.

Taking Alpine transit as a case study, the dissertation focuses on the complex negotiations of transport and environmental policy in the context of European Integration. In a bottom-up approach the study focuses on different actors of local protest groups, transit, politics and environmental organisations dealing with transit traffic and Alpine Conservation on regional, national and European levels. By applying a network analytic approach, the dissertation asks, how do different actors of local protest groups, politics and environmental organizations link up.

It is a Two-Mode-Network that includes individuals or organizations like local protest groups, alpine protection and environmental organizations in Tyrol and South Tyrol and politicians and parties in Tyrol, South Tyrol, Austria and the EU. The network results from participation in protests, meetings and information events, but also from correspondence and publications.
The Emperor’s Desk between the Empire and the Citizen and in between Vienna and the Global

At the heart of the Habsburg Empire, in Vienna, stood one of the most pivotal sites of decision making of the monarchy: the desk of the Emperor. Before the Emperor formally resolved each and every single decision personally, the issues were negotiated within networks of governance and patronage, heavily depending on influential intermediaries, such as the director of Emperor Francis Joseph’s I. cabinet office, Adolf Braun. In my PhD I analyze Braun’s correspondence during his tenure 1865–1899, aiming for a deeper understanding of 19th century political culture (Reinhard 2001) in the Habsburg Empire, illuminating various networks of governance as well as investigating a political practice of policy making beyond the formal rules and regulations. Following the lead of theoretically advanced political sciences (Grunden 2014; Rüb 2014) and historical network research (Düring, Eumann, Stark, Keyerslingk 2016) I examine the ways in which individual, collective, and corporate actors employed networks of governance and patronage to influence political decisions to their favor. The letters preserved among Braun’s papers provide for the reconstruction of an ego-centered-network. With the center of the Empire embedded in a vast web of clients, patrons and intermediaries from various Empires and regions of the world, the processes of agenda setting and policy making become far more complex by taking place within informed, multidirectional networks on the regional, imperial and international level. Additionally, I explore how intermediaries connected the regional to the imperial to the global within certain policy fields and furthered imperial integration by creating transnational networks of patronage.

The main challenge regarding my research questions lies with the sources, which only allow the reconstruction of fragmentary networks. Also, essential moments of the examined political culture, e. g. meetings at Cafés or secret talks during gatherings, are at best hinted at in the letters. In my presentation I discuss these difficulties and how other source material available (seating plans) can be consulted in order to enrich fragmentary networks of governance.

Shortbio

Andreas Enderlin-Mahr is a doctoral candidate at the University of Vienna, where he also received his BA and MA degree in history. His PhD project is titled: ‘Informal ways to the Emperor’s Desk – governance networks, political practice and culture in the 19th century’. Since February 2018, he is working as a research assistant at the Institute of Austrian Historical Research, University of Vienna, as part of the FWF-Project „The Emperor’s Desk: A Site of Policy Making“. Also since February 2018, he is holding the position of a research associate at the Institute of Modern and Contemporary History, Johannes Kepler University Linz. He is a doctoral fellow of the Vienna Doctoral Academy Theory and Methodology in the Humanities. His research fields include masculinity studies and digital game studies.

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Discussing the Assyrian Imperial Network in the Southern Levant

Alexander Fantalkin, Oren Tal (Tel Aviv University)

The idea of identifying Assyria as a ‘network empire’ was put forward by Liverani as early as in 1988. Although a number of his premises were criticized by Postgate (1992), both views are not mutually exclusive but complementary, especially with regard to the southern Levant during the period of Neo-Assyrian domination. In this part of the world, conquered by the Assyrians in the second half of the 8th cent. BCE, the physical manifestation of the empire indeed should be seen „not a spread of land but a network of communications over which material goods are carried“(Liverani 1988: 86). Interestingly enough, before the second half of the 8th century BCE, the Assyrian empire was basically a land-locked kingdom, with developed abilities of river transportation. Following the incorporation of the Levantine coast into the Neo-Assyrian realm, with direct access to the Mediterranean, new strategies of imperial domination were created. Using one of the recently studied test cases, it will be demonstrated how under these circumstances both the rivers and the sea became connected within an intentionally created imperial network and landscape.
Testing Networks' Resilience: The Impact of Institutional Shocks on Spanish Emerging Innovation Networks (1878-1939)

Pablo Galaso¹ - Patricio Sáiz² - David Andersson³

The relevance of collaboration in innovation processes has been profusely analyzed from different streams of research (Allen, 1983; Lundvall 1992). A growing number of studies have used social network analysis techniques in order to measure structures of collaboration for innovation as well as to estimate some of the causes and consequences of such structures (see Phelps et al., 2012 for a review). However, almost all this research effort has focused on relatively recent periods – from 1975 onwards – and therefore on established innovation systems. As a consequence, they dealt with networks in an advanced development state. Network theory suggests that one of the characteristics of mature networks is their robustness and stability over the long-term (Cohen et al. 2001).

The aim of our research is to use historical patent data as a proxy to construct and analyze emerging innovation networks in Spain between 1878 and 1939 in order to evaluate their topological characteristics and to test the impact of significant institutional shocks on their evolution. To do so we use an outstanding patent database elaborated directly from archival sources. Such database contains detailed information on all patents registered in Spain between 1878 and 1939. The nodes of our networks are inventors, manufacturers, entrepreneurs or investors linked via co-applications of patents. Nodes include both resident and non-resident actors as well as firms and individuals, which allows to study internal network connectivity, openness to external nodes and degree of interactions between firms and individuals, among other aspects.

This project builds on the findings of our recent study on historical patent networks in Europe before 1914 (Andersson, Galaso, and Sáiz 2019), expanding the period of analysis and introducing new research purposes. Between 1878 and 1939, Spain experienced not only a reasonable industrial development and the birth of its national innovation system, but also dramatic events such as the Cuban War of Independence (1895-1898) or the Spanish Civil War (1936-1939). Our main goal is to test how these institutional shocks

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affected the structures of the emerging collaboration networks. Our first hypothesis is that these shocks reduced network size, internal connectivity and external connections. To test this hypothesis, we will combine time series analysis of network statistics with network robustness analysis (Callaway et al. 2000). Our findings are two-fold: by studying collaboration patterns in innovation processes during a key period of European development, we contribute to open new paths in economic and business history as well as in innovation studies; and by analyzing the effects of external shocks on the network long-term evolution we contribute to the technical and theoretical literature on the topology of social networks.

References


Central Euboean Trade in the 8\textsuperscript{th} and 7\textsuperscript{th} Century B.C. through Social Network Analysis

**Personal information**

Daniela Greger  
Swiss Archaeological School in Greece (ESAG)  
University of Lausanne

**Research area**

- Central Euboean trade relationships in the Early Iron Age  
- Pottery analysis and distribution studies in the Mediterranean  
- Mobility in the Greek Early Iron Age

**Research questions**

- What was the extent of the Euboean trade network?  
- Which are the main actors in the network?  
- Which commercial interactions were direct and which relied on redistribution?  
- Which role did the Euboeans play in interregional Early Iron Age trade?  
- How do trade, migration and colonization processes interact? Can they be distinguished through archaeological evidence?  
- What are the benefits and limitations of a Network Analysis-based approach for trade relations in protohistoric periods?

**Elements of the network**

- Research based on imported pottery discovered on 11 sites, as well as exported Euboean wares in general; the two datasets will be treated comparatively.  
- Sites will serve as actors.  
- Directed arcs will indicate the transport of pottery from its production centre to its findspot.  
- Pottery quantification will be used to ponder arches in order to show stronger and weaker ties.  
- Several comparative networks will be generated according to datasets and chronological periods in order to observe changes over time as well as differences between import/export distributions.
A Pilot Project

Does Networking Always Advance a Career?

How Wilhelm Kopp (1461-1532)

Became Personal Physician of the King

Louis XII (1462-1515)

Francis I (1494-1547)

1. Personal Network
2. University Network
3. Reception of Contemporaries

Romina Heim  
PhD candidate

Faculty of Translation Studies, Linguistics and Cultural Studies (Germersheim, University Mainz)  
DFG Research Project *New Religious Cultures in Late and Post-Soviet Russia: Ideologies, Social Networks, Discourses*

**The History of Mystical Anarchism: Texts – Actors – Concepts**

- What were the origins of the movement?
- Who were the persons involved?
- How did a translation process take place?

**Network Elements**

- actors
- connections (direct, indirect)
- translation process (transfer of texts, ideas, concepts)
Research question:
The thesis questions the idea of a “center” (London) and the “periphery” (colonies) within the British Empire and argues that the British Empire should be understood as an asymmetrical network between many geographical places.

Figure 1:
The research subject, spatial and temporal terms

Figure 2:
The network of the key actor William Des Voeux in the context of indenture

Elements of the network:
- Sources: letters and (auto-) biographies
- Knots: biographical stations of the subjects
- Lines: Transfers of ideas and knowledge as well as changes in the system of indenture

Main Archives:
- National Archives London, Colonial Office
- British National Library, Manuscript Collections Asian & African Collections
- Oxford Bodleian Library, Special Collections

Literature:
German-American newspapers flourished during the era of 19th-century mass immigration to the United States. Editors of the German-language newspapers significantly influenced the American press landscape. So far, these rich historic newspaper repositories have only been used essentially in non-digital form for site-related and genealogical work. Cross-cultural and socio-historical connections among the German immigrants are virtually non-existent. The objective of this project is to move beyond the textual level integrating also metadata information to trace the transatlantic and German-American networks to illustrate, on the one hand, the diversity of integration experiences, and, on the other hand, the simultaneity of a cultural attachment to the home country and economic and social integration in the United States over a longer time period.
Research Area
My dissertation project lies at the intersection of European integration history and quantitative intellectual history. It aims to contribute to the clarification of the ordoliberal influence on EU competition policy by examining the competition law publications of the European Commission (c. 1952 – 2018). Ordoliberalism is a German school of legal and economic thought that emerged in Freiburg during the 1930s. Drawing on new quantitative text analysis methods from the field of Digital Humanities, this dissertation project shifts the focus from the alleged influence of Ordoliberalism on the genesis and formulation of EU competition law to an examination of the actual relevance and dissemination of ordoliberal concepts in EU competition policy.

Research Questions
My research project is based on the conviction that an analysis of Ordoliberalism and its influence cannot be limited to the ideas of its initial founders. Subsequent generations of Ordoliberals reconsidered some of the initial notions of the first-generation scholars without, however, giving up its fundamental principles. To be able to define Ordoliberal thought dynamically for a later comparison with EU competition policy, we need to know first who belonged to the different generations of Ordoliberal scholars.

To identify these generations in the first part of my dissertation, I have constructed a corpus that contains all articles published in the most prominent Ordoliberal journal ORDOR between 1948 – 2014. By analysing these articles and their authors, we can get a good impression of the significance of individual authors within the Ordoliberal community. Accordingly, potential research questions are: Who is the most connected (i.e. influential) author? Are there clusters of tightly connected scholars? Are there a few key players that connect clusters of authors?

Network Perspective
I propose to analyse this corpus of ORDO articles as an information network, which means analysing the network of citations between academic papers. Academic citations form a network in which the vertices are articles and a directed edge from article A to article B indicates that A cites B. The structure of the citation network then reflects the structure of the information stored at its vertices, hence forming an “information network”.

Visualisation
In previous work, I have already investigated this information network on a semantic level. For instance, the figure below illustrates which Ordoliberal authors tend to be similar to each other in terms of text content, based on the pairwise correlation of word frequencies between these authors’ ORDO articles.
Trade and transport in the roman provinces of Gaul and Germania

In my presentation, I want to talk especially about the problems I have encountered while using social network analysis. When I started my project, I wanted to focus on the merchant itself and on his social background by analysing inscriptions. I also tried to find trading networks of merchants or families involved in trade, but this wasn’t as successful as I was hoping it would be for different reasons that I will explain during the presentation and which I think are probably quite common in ancient history. While the social aspect will still be a small part of my work, my main focus shifted to the question of mobility and trade or transport routes. Based on the Barrington Atlas of the Greek and Roman World I now want to reconstruct trade/transport networks between different cities or regions and to discover previously unknown roman roads. To do that I use Geographic Analysis Software and to a lesser extent Network Analysis and I try to combine both to find the new roman roads. A famous example of a tool that is somewhat similar to my project is ORBIS. I will give a short introduction to the tool and talk about the reasons, why I don’t think it’s useful for historical research. ORBIS was developed under the supervision of Walter Scheidel and Elijah Meeks in 2011/2012 (first version) and 2013/2014 (second version) and aims at simulating travel, transport and the transport network during the Roman Empire.
NAME AND AFFILIATION: Cristina Erquiaga Martínez, Universidad de Salamanca

RESEARCH AREA: XIX-XXth Century Spanish Intellectual History

RESEARCH QUESTION:
How can we express through a network the relational nature of the topics addressed in a correspondence? How can the network perspective help me to explain that the ideas, opinions, and reflections contained in the letters Unamuno received didn’t exist in isolation but were part of a broader intellectual and cultural context?

ELEMENTS OF THE NETWORK: The main characters are Miguel de Unamuno and his correspondents but the network also deals with letters, dates, places, common contacts and topics.

VISUALIZATION

Excerpt of the locations from where correspondents wrote to Unamuno (size of the dot is proportional to the number of correspondents). Tool: Palladio
HOW DO THE AUTHORS CONSTRUCT THE CHANG’AN CITY IN THEIR NOVELS IN TANG DYNASTY (618-907 A.D.) IN CHINA?

MA Zhaoyi, LIU Shuaishuai, HE Jie
zhaoyi067@hotmail.com, liushuai_1994@sina.com, janushe@tju.edu.cn
School of Architecture, Tianjin University, China

REASERACH AREA: Urban History, Landscape History, Spatial Humanities

Network: Spatially-embedded network of characters in the novels
Edge: flows of characters among places
Node: places mentioned in the novels

The Human Potential Movement in America and New Age Cultures in Soviet and Post Soviet Russia: A Comparative Analysis

- Who were the persons, groups, and organizations involved in the Soviet-American citizen diplomacy movement?
- Which ideologies, social networks, and discourses did the citizen diplomacy movement transfer to Soviet and Post-Soviet Russia?
- What are the specifics of Russian New Age?
- Which impact did the HPM have on Russian (Late and Post-Soviet) New Age?

Network Elements
- actors: facilitators, activists, (cultural) translators
- connections (direct, indirect): political allies
- groups, organizations, institutions
- exchange programs
- influences
- transfer of ideas, ideologies, discourses
Research Questions and Area

History of Science and Technology in the 20th century
history of mechanical gyroscopes
ca. 1930-1980

Research Questions and Theses

Technical objects – people – places

How are these interconnected?
Which role do these three entities play?
Which further information can their network(s) provide?

→ Further research with this network regarding the role of:
  - research and teaching at universities
  - other research institutes
  - state and politics
  - financing
  - industry
  - military use
  - civilian use
  - manufacturing
  - repair

... will be very fruitful and possible reveals interesting links and connections, such as:
  - teacher-pupil-connections
  - knowledge & technology transfer + research links
  - cooperation and competition
  - invisible hands
  - dual use
  - ...

Planned Network(s)

Network(s) with 3 entities: Objects – People – Places → How to bring these entities together?

3 possibilities:

Time issue → Timeline

→ Example at a certain time at a certain place (without further connections to other people, etc.)
Using Network Analysis to Investigate the History of Agricultural Meteorology

Giuditta Parolini, Fachgebiet Wissenschaftsgeschichte, TU Berlin, Germany
Sílvio Dahmen, Instituto de Física, UFRGS, Brazil
Sandra Prado, Instituto de Física, UFRGS, Brazil

CASE STUDY: Network Analysis of the IMO technical commission on agriculture

During the first half of the twentieth century, the International Meteorological Organization (IMO), which was the predecessor of today’s World Meteorological Organization, set up a technical commission to study the role of meteorology and climatology in agriculture. The commission was active for over three decades (1913-1947) and held eleven official meetings. In total, one-hundred and thirty-two people joined this commission. They were meteorologists and climatologists, agronomists and botanists, geographers and statisticians coming from almost forty different countries. A few were listed as members for several meetings of the commission, others only for one or two.

How did the membership of the commission evolve over time? Who were the key people? Can we identify continuities and discontinuities in the history of the commission? How did national participation change over time? We are working on a network analysis of the IMO Commission for Agricultural Meteorology to answer these questions. The network is built taking into account two factors: a) the role (president; secretary/vice-president; member) listed for each participant in the primary sources; b) the nationality (historically conceived) of each members of the commission. The role is relevant because presidents and secretaries managed the exchange of information in the commission and set its agenda. Our system of weights reproduces this relationship and also accounts for the closer connection that existed between members coming from the same nation. The IMO was an international organisation based on voluntary cooperation and its success depended on a positive interaction between its members. Yet, traditional historiographical accounts focus only on the IMO resolutions and not on its membership. Network analysis can contribute to fill this gap in the historical literature, because it pays attention to the actors and their mutual connections, and examines how these connections between actors facilitated knowledge transfer on an international scale.


Network nodes: The one-hundred and thirty-two members of the commission

Network edges: The people listed in the same members’ list are connected, but with different weights

Weights (w): Assigned according to the role in the commission (president; secretary/vice-president; member) and to the member’s nationality. President-Secretary, w = 4.0; President-Member, w = 3.0 (if same nationality 3.5); Secretary/Vice-President-Member, w = 2.0 (if same nationality 2.5); Member-Member, w = 0.5 (if same nationality 1.0).

Network measures: Eigenvector (joint) centrality; Conditional Centrality
Project Description and Goals for Study at Mainz

In a scant 15 months between 1245 and 1246, the Dominican inquisitors Bernard de Caux and Johan de Saint-Pierre conducted the largest known inquisition of the Middle Ages, occurring within 15 years of the debut of public inquisition (inquisitio hereticpe pravitatis). This “great inquisition”1 saw over 5,500 people – from lords to farmers to bakers – summoned from parishes across the fertile, wealthy lands between Toulouse and Carcassonne to be interrogated at the cloisters of Saint-Sernin (Toulouse) about heresy. In so doing, they left depositions – despite the heavy influence of inquisitorial formularies – rich with testimony about belief, customs, families, communities and quotidian thirteenth-century life. The registry of extant depositions from this “great inquisition” is contained in MS609 of the Bibliothèque municipale de Toulouse, a document which has been frequently cited but never edited. I am currently editing the manuscript as a native digital edition in TEI-XML, published at http://medieval-inquisition.huma-num.fr2, with an emphasis on the markup of people, places, dates, and other social data. MS609 sits at the intersection of the current Cathar debate over Catharism. Catharism is the theory that a dualist, organised heretical counter-Church existed in the lands of the count of Toulouse, as of the twelfth century, and eventually brought the Albigensian Crusade and inquisition to these lands. The question is whether or not any such Cathar Church, or its apparatus of heretical priests, deacons, and bishops, claimed by historians since the nineteenth century, ever existed3. The debate is acrimonious, and hinges greatly on the interpretation of the contents of a handful of early inquisition documents, among which MS609 is the largest and most “complete” (containing the depositions of hundreds of people from each village). MS609 has, for the most part, been considered “proof” of Catharism, with the thousands of people “confessing” to heresy as proof of Cathar “sociability”.

As I have progressed through editing MS609, I have produced case studies of villages to evaluate the claims of Catharism using network analysis. In a recent article, I established that MS609 does not contain an objective view of “Cathar heresy” (as historiography has claimed), but rather represents an inquisition that was specifically targeted at certain social classes based on criteria that had nothing to do with an individual’s attachment to any heresy4. This was established through a combination of (a) close reading of deposition contents and (b) macro-analysis founded on layers of statistics derived from network analysis (extracted from the native digital edition). One part of my argument is the idea that the networks of accusations I extracted from the registry lack the “standard” characteristics often found in networks purporting to represent “real-world social relations” (hubs, cliques, bridges, reciprocity, etc)5 - refuting the historiographic confusion between accusation and social relation or tie.

My goal at the workshop in Mainz is to penetrate deeper into network analysis methodologies in the search for falsifiable, testable premises (including negatives) for the quantitative evaluation of these heresy accusations. The macro-analysis above depends on how one “interprets” network data. Thus, the question is to what extent can we “test” historical networks for representation of social relations? Can we establish a “suite of tests” using network statistics, and expectations of social network rubrics, to argue for/against the above? What network analysis methods – statistical, empirical, visual – can be deployed to test and falsify conclusions for other villages in MS609?

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2 Hosted by Huma-Num and French universities established to develop infrastructure for the digital humanities.
4 Jean-Paul Rehr, Re-mapping the “Great Inquisition” of 1245-46: The Case of Mas-Saintes-Puelles and Saint-Martin-Lalande’, OLIJ (at press). This article will be made available to attendees well ahead of the workshop date. Raw, formatted data can be downloaded from http://medieval-inquisition.huma-num.fr/downloads.
5 See, for example, my graph of accusations at the village of Mas-Saintes-Puelles https://www.academia.edu/36940614/Selective_Memory_Inquisitors_and_Denonets_at_the_Great_Inquisition_at_Toulouse_1245-1246_on_the_panel_Memories_of_Heresy_and_Counter-Heresy_Il_Legal_Records_session_1628_at.IMC_Leeds.2018.
Accusation networks of Mas-Saintes-Puelles (graph: Gephi, directed ForceAtlas 2)
Node colour: Weighted in-degree (green to red = less to more)
Node size: Eigenvector centrality (larger = more important)

Accusation networks of Saint-Martin-Lalande (graph: Gephi, directed ForceAtlas 2)
Node colour: Weighted in-degree (green to red = less to more)
Node size: Eigenvector centrality (larger = more important)
working title and research focus

“Network Building and Negotiation Processes in European Alpine Transit Policy”
→ European Alpine Transit Policy relating to Austria and Switzerland, 1970s-2000s
→ relevance of networks within the EU’s multi-level governance

research questions

To what extent can network structures be identified in the negotiations on the EU’s transit policy with Austria and Switzerland starting in the 1970s, and to what extent did these affect the negotiations?

How were economic and environmental interests weighed by the various actors (i.e. institutions, bodies or individuals), how did they present their arguments and how was expert knowledge used?

historical network analysis

software: gephi

two-mode network:

The connection or rather the possibility of a connection between the individual actors will be made via their participation in different events (e.g. conferences, meetings…).

→ nodes = people – events
→ edges = participation

This dissertation is part of the DFG-DACH project “Issues with Europe. A Network analysis of the German-Speaking Alpine Conservation Movement (1975-2005)”.
Further information: https://www.uibk.ac.at/projects/issues-with-europe/
Network Methods and Tools for the Qualitative Analysis of Social Processes

Abstract to motivate participation in ‘Networks Across Time and Space’ workshop

Wouter Spekkink*† and Frank Boons*‡

Over the past years, we have been developing a methodology for the longitudinal analysis of social processes, making heavy use of graph-theoretical methods and techniques. Steps of the methodology include:

1. the collection of archival data (e.g., from news archives and other types of documents),
2. 2. the creation of event datasets, in which the data are recorded as chronologically ordered, time-stamped empirical descriptions of ‘things that happened’,
3. 3. the coding of the data to qualify (a) events, (b) relationships between events (e.g., which events occurred in response to others), and (c) relationships between actors (e.g., people, organisations, artefacts) that are enacted in events.
4. 4. the visualisation of the coded data in event graphs (nodes represent events and edges represent relationships between events) and network graphs (nodes represent actors and edges represent various types of relationships between actors), and
5. 5. the development of a synthesis narrative that summarises the analysis informed by the foregoing steps.

We have recently developed a dedicated, open source software suite that supports in the application of all steps of the methodology (not yet publicly released). Our methodology is first and foremost a qualitative methodology, in which we use the abstract representations of patterns in the graphs as support in our interpretations. We believe our methodology is very closely affiliated (and may even be considered a form of) historical network research. We therefore look forward to discussing these issues with, and learn from other workshop participants.
Research Question(s)

• What are the parameters of (Post-)Soviet astrological sub-cultures?
• How are they linked to other New Age milieus?

Elements of Networks

INDIVIDUALS & GROUPS | ASTROLOGICAL STRUCTURES & ELEMENTS | TRANSFERS WITHIN NEW AGE MILIEUS
The research project focuses on the political culture of the Prussian Rhine Province between 1815 and 1845. As an administrative sphere, the Rhine Province was artificially created at the Congress of Vienna and is analytically understood as a political space, which stood at the beginning of its process of formation.

This formation was related to translocal interconnections between a complex set of negotiation-processes between the administration-cities Aachen, Düsseldorf, Koblenz, Köln, and Trier and its political actors (entangled history) – thus ultimately leading to the special role of the Rhineland-Parliamentarians during the revolution of 1848/49.

Contrary to the conventional view of the transitional time until the revolution as a phase of political stagnation or regression, it is assumed that several groups as well as individuals were able to influence the contemporary politics under Prussian reign.

Especially in the regions on the left side of the Rhine the Napoleonic-Statesystem had offered professional advancements based on real estate, property and efficiency for both people of aristocratic as well as bourgeois background. Consequently a new extended elite was established during the 20 years of French government, which can be called society of notables.

These notables had gained important experiences in parliamentary practice, which they tried to defend against the widespread restrictions under the Prussian governance. After the abolition of the French committees, they were forced to find new spaces to discuss political topics. This indicates that social relations for example in associations and family circles became increasingly important developing new political strategies and forms of participation. In order to analyse in which way they interact to maintain their political influence, the study aims at reconstructing the multi-layered family connections of three generations and their presence in different associations and corporations.

Therefore, in the first half of the 19th century political networks were less characterised by political opinions and shared principles than by their strategic function as a way of successfully participating in politics.
Mapping Medievalism
Memory studies (figures of memory, digital memory)
Medievalism (19th and 20th century reception of the medieval past) Southeast European History (reception of medieval figures of memory)

Research question(s)
• What (new) insights does a network analysis of narratives and their underlying infrastructures provide?
• How does this form of network inform medievalism and memory studies? What is its potential for analysis and for presentation?
• Is this approach cost-effective? What is the most productive way of constructing a network behind memory production?

What are (or could be) the elements of the network?
1. Narratives: characters (nodes), events, places, notions, terminology
2. Carriers of memory and media (nodes): authors, publications and editions, institutions of affiliation, associates
3. Connections (edges): references, personal ties, professional ties, publishing/authorship