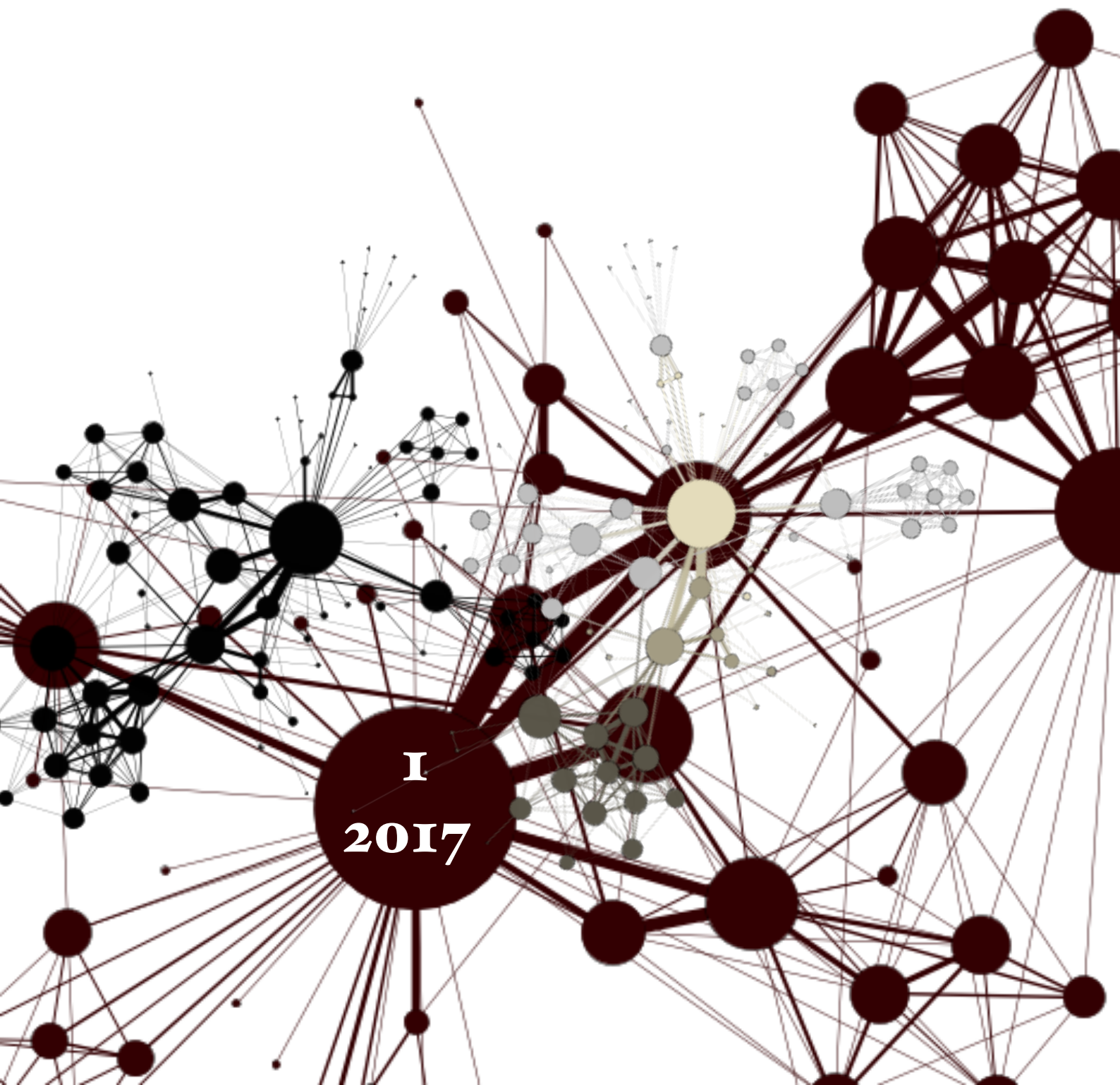


Journal of Historical Network Research





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**ROLLINGER, CHRISTIAN; DÜRING,
MARTEN; GRAMSCH-STEHFEST, ROBERT;
STARK, MARTIN**

Editors' Introduction

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1 *The Journal of Historical Network Research*

As the editors, we are very pleased to present the first volume of the *Journal of Historical Network Research*, a new publication dedicated to historical research based on the theories and methodologies developed in social network analysis and network science. In the broadest sense, the historical network research featured in this journal is concerned with the adaptation of theories and methods of social network analysis to historical disciplines—in other words, (social) network research based on historical sources and the relational data extracted from them. From this methodological point of view, historical network research is open to all historical and neighbouring disciplines that aim to explore past social relations or to develop and refine appropriate methods and theories for this vast field of study.¹ More specifically however, researchers in historical networks still have a number of practical questions to answer, not least how to encode historical sources in machine-readable formats. Epistemological questions also need to be considered, such as the potential surplus of knowledge generated by network visualisations and the appropriateness and benefits of quantitative measures such as centrality calculations within a historical narrative.

2 **History and complexity: towards a relational history**

The exploration of social relationships, whose complexities exceed the capacities of human imagination and hand-written notebooks, is one of the most frequently encountered challenges in the historical disciplines. Over the past decades, historians have developed a variety of strategies to reduce this complexity, for example by selecting a manageable set of interactions or by quantifying the objects of investigation and/or grouping them into categories with the aim of providing a statistical description of the investigated phenomena. The collection and evaluation of network data is another such strategy of complexity reduction. The principle of systematically investigating relationships between actors is applicable wherever these relationships are relevant and can be obtained from the sources in sufficient quality. As early as 1979, the German historian Wolfgang Reinhard proposed a new methodological approach to history which he called “entanglement analysis” (Verflechtungsanalyse).² He adopted his concept from a series of ideas on social

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- 1 Cf. Bonnie Erickson, Social Networks and History. A Review Essay, in: *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 30 (1997) 149–157; Roger V. Gould, Uses of Network Tools in Comparative Research, in: *Comparative Historical Analysis in the Social Sciences*, ed. James Mahoney & Dietrich Rueschemeyer, Cambridge 2003, 241–269.
 - 2 Wolfgang Reinhard, *Freunde und Kreaturen. “Verflechtung” als Konzept zur Erforschung historischer Führungsgruppen. Römische Oligarchie um 1600*, Augsburg 1979.

relationships and structures developed mostly in the social sciences, especially in English-speaking countries from the mid-20th century onwards. However, the limited possibilities of data processing for larger networks in his time, as well as an unfavourable and fragmentary source situation in his chosen research subjects, meant that the approach could never be fully implemented and was ultimately abandoned by Reinhard and his students.³ In a sense, historical network research is the second incarnation of this idea of taking social relationships seriously in historical research. We are confident that the idea of historical network research is here to stay this time. In the last few years, a number of interdisciplinary research initiatives in the field of historical network research have been developed, especially in the European context, so that the research field is now much broader in institutional and thematic terms.⁴

Whereas the last half-century has seen the emergence of a new relational paradigm in the social sciences, viewing social relationships and their patterns as the core features of social structures, historians have until recently continued to abide by relatively vague notions of “networks” in a metaphorical sense, as a convenient image for the sum of social interactions or as an expression of a rather diffuse notion of underlying social structures.⁵ But in the course of the past two decades, network analysis has begun to develop from a fringe theory into an established methodology in historical research that goes beyond this purely metaphorical use of the concept of networks.⁶ A substantial number of studies on different topics and periods have shown that network theories and formal network methods derived from other disciplines (e.g. sociology, economics and physics) can be effectively applied to select bodies of historical data.⁷ Since historical research is limited to the extraction of relational data from

3 Matthias Bixler, Die Wurzeln der Historischen Netzwerkforschung, in: *Handbuch Historische Netzwerkforschung. Grundlagen und Anwendungen*, eds. Marten Düring et al., Münster 2016, 47-54.

4 Relevant research initiatives in the field of historical network research are: *Historical Network Research* (<http://historicalnetworkresearch.org>); *The Connected Past* (<http://connectedpast.net>), *Topographies of Entanglement* (<https://oeaw.academia.edu/Topographies-ofEntanglements>); *Réseaux et Histoire* (<http://reshist.hypotheses.org>, all last accessed 11.10.2017).

5 Linton C. Freeman, *The Development of Social Network Analysis. A Study in the Sociology of Science*, Vancouver 2004.

6 In this sense, relational historical research is now on its way from metaphor to substance; cf. Barry Wellman, Structural analysis. From method and metaphor to theory and substance, in: *Social Structures. A Network Approach*, eds. Barry Wellman & Scott D. Berkowitz, Cambridge 1988, 19-61.

7 For instance Roger V. Gould, Multiple Networks and Mobilization in the Paris Commune, 1871, in: *American Sociological Review* 56 (1991) 716-729; John F. Padgett & Christopher K.

mostly fragmentary and often contradictory sources, these initial studies tended to be strongly influenced by concerns of data processing standards and epistemological paradigms. The paucity and difficulty of the source material, particularly when compared with the social sciences (which have a vast array of additional empirical tools such as interviews and questionnaires at their disposal), have long hampered the wholesale adoption and meaningful application of methods drawn from social network analysis. But despite these obstacles, the relational perspective of network analysis has enabled historical research to acquire an entirely new methodological and theoretical perspective, albeit one still beset with challenges. Furthermore, in many of these initial studies important methodological concerns regarding the underlying sources, the perennial problem of missing data, data standardisation and representation of networks in space and time were not adequately acknowledged and were sometimes even completely neglected. In recent years, though, historians, often in collaboration with scholars from other disciplines, have taken on these challenges and begun to address these methodological concerns, to adapt and refine formal network methods and network theory for historical research and thus to define a new and dynamic field of study within the historical disciplines: historical network research.⁸ The ongoing digitisation of large amounts of archival and cultural heritage data represents an additional current and future challenge. While 'traditional' historians may be more or less unaffected by this phenomenon (if they are affected, it is generally in a mostly positive fashion as a result of the new ease of access to vast amounts of information), in view of this proliferation of data it is necessary for scholars of historical networks to strengthen their own technical expertise and to enhance their efforts to foster interdisciplinary cooperation with other fields such as computer science, information studies and digital humanities.⁹

3 Why a new journal?

As a result of all these complexities, the emerging domain of historical network research is still in its formative phase and is consequently hard to view as a whole.¹⁰ While interdisciplinary research into the relational paradigm has

Ansell, Robust Action and the Rise of the Medici, 1400–1434, in: *American Journal of Sociology* 98 (1993) 1259–1319.

8 *Handbuch Historische Netzwerkforschung. Grundlagen und Anwendungen*, eds. Marten Düring et al., Münster 2016; Claire Lemerrier, Formal network methods in history: why and how? in: *Social Networks, Political Institutions, and Rural Societies*, ed. Georg Fertig, Turnhout 2015, 281–310.

9 Peter Bearman, Big Data and historical social science, in: *Big Data & Society* 2 (2015) 2.

10 For an attempt to give such an overview under methodological considerations, see Matthias Bixler, Historical Network Research – Taking Stock, in: *Debtors, Creditors, and their Networks*.

produced an impressive body of work across the social and political sciences and also, increasingly, among historians, there is currently no international publication medium devoted to the study of networks in their historical contexts. This has put scholars with an interest in historical network research—historians, historical sociologists and others—at a great disadvantage, and has meant that they have long been accustomed to publishing research papers in non-historical journals, thus hampering scholarly discussion of their ideas and hypotheses among historians. The situation for European historians interested in network research is further complicated by academic and cultural idiosyncrasies, since much of the groundbreaking and more recent research into historical networks in the English-speaking world has been undertaken by historical sociologists rather than social historians and has thus remained mostly outside the sphere of traditional academic history departments. This has naturally also influenced the way research is published in this area; preferred journals such as *Social Networks* and the *American Journal of Sociology* focus heavily on methodological and theoretical aspects. In the course of the years, a few special journal issues on historical networks have been published. This indicates a at least steady if not increasing need for a centralized possibility to publish such research.¹¹ In short, there are no international publications solely devoted to the study of networks (social or otherwise) from a specifically historical perspective.

This is the gap that the *Journal of Historical Network Research* is keen to fill. As the first periodical within the historical sciences dedicated to this area of research, it can make a useful contribution by consolidating the considerable progress that has been made in historical network research, showcasing cutting-edge research at international level, featuring reviews of recent publications within the field, and generally helping to expand this promising new field of interdisciplinary historical research. Its aim is to publish outstanding original contributions which apply the theories and methodologies of social network analysis to historical research, help advance the epistemological and theoretical understanding of social network analysis in the historical sciences and promote empirical research on historical social interactions. The journal will promote exchanges between different areas of historical research (in the broadest sense),

Social Dimensions of Monetary Dependence from the Seventeenth to the Twentieth Century, eds. Andreas Gestrich & Martin Stark, London 2015, 43-67.

- 11 For recent examples of such special issues, see *Análisis de redes e historia: herramientas, aproximaciones, problemas*, eds. Claire Lemerrier et al. (= REDES - Revista hispana para el análisis de redes sociales 21 [2011]); *Historische Netzwerkanalysen*, eds. Albert Müller & Wolfgang Neurath (= Österreichische Zeitschrift für Geschichtswissenschaften 23 [2012]); *The Connected Past: critical and innovative approaches to networks in archaeology*, eds. Anna Collar et al. (= *Journal of Archaeological Method and Theory* 22 [2015]).

the (digital) humanities, social and computer sciences, and different research traditions and disciplines, as well as strengthening the dialogue between network research and traditional historical research. It will serve as a meeting place for the traditional hermeneutics of historical research and its concomitant emphasis on contextualisation and historical source criticism (as present in traditional academic historical journals) on the one hand, and the theory-heavy and/or sometimes overly technical discussion of methodological and technological issues (which predominates in publications focused on “pure” or sociological network research) on the other.

4 The inaugural issue

This first issue of the Journal of Historical Network Research comprises five original research articles spanning the period from the 16th to the 20th century. The thematic focus of the volume is knowledge networks. Tom Brughmans and Matthew Peeples present an overview of major trends in archaeological network research through a bibliometric analysis of a large corpus of publications on the topic between 1965 and 2016. Ingeborg van Vugt demonstrates the importance of books as dynamic actors within the “Republic of Letters” in the 17th and 18th centuries by means of multi-layered visualisations of epistolary networks. Termeh Shafie et al. perform a centrality analysis of a directed hypergraph representing attacks by indigenous peoples from the Lesser Antilles on European colonial settlements between 1509 and 1700. Aline Deicke analyses the culture of intra-Protestant controversies that fundamentally advanced the formation of Lutheran identity and its central doctrine in the late 16th century from a network theoretical perspective. Finally, Ruedi Epple investigates and theorises about the escape of Austrian socialists after the annexation of Austria by Nazi Germany in 1938, the support given to refugees by the Zurich Refugee Centre and the shifting network relationships of refugees and supporters.

With a total of 150 pages, this first issue will act as the journal’s introduction to scholarly discourse. Future issues will see additional content and features introduced gradually, including review articles and summaries of recent scholarship, as well as other formats that will depart slightly from the traditional categories of articles and reviews traditionally associated with scientific journals. There is much to look forward to.

Acknowledgments

The idea for this journal was first developed and discussed by the editors in autumn 2015. The intervening years between inception and publication saw much work being undertaken by both the editorial team and a number of colleagues and friends, who acted in a variety of capacities and contributed to making this project possible. Thanks are due, then, to those who volunteered to act as part of our advisory board or as anonymous reviewers, and naturally also to the authors who submitted papers for the first issue of what, at the time of their writing, must have seemed a slightly risky proposition at best. Without the contributions, commitment and patience of these people, it would have been impossible to transform what sounded like a good idea at the time into a functioning, funded and—hopefully—intellectually stimulating venture. Now that the day of publication has finally come, we are grateful to be able to present this inaugural issue to them and to the online public at large, in the hope that it may prove to be as rewarding an experience for them as it has been for us.

The Editors

Trier, Luxembourg, Aachen & Jena

11 October 2017

BRUGHMANS, TOM

PEEPLES, MATTHEW A.

Trends in archaeological network research: a bibliometric analysis

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Keywords

archaeology, archaeological network research, bibliometrics,
co-authorship, gender

Abstract

This paper presents an overview of major trends in archaeological network research through a bibliometric analysis of a large corpus of publications on the topic between 1965 and 2016. This review is an effort to begin identifying the outlines of a burgeoning sub-discipline with its distinct traditions, including the diversity of research approaches and preferred publication venues. Network research in archaeology is at a similar stage of development to historical network research. We argue that archaeologists and historians alike interested in establishing network research as a key tool for exploring social change will have a greater chance for success to the extent that we actively collaborate, pool resources, engage in common community activities and publications, and learn from each other's successes and mistakes.



1 Introduction*

The communities of archaeological and historical network research have much in common. They are both relatively young sub-disciplines that aim to critically explore the use of network methods and models to both address disciplinary challenges and to contribute to broader interdisciplinary debates. Moreover, both fields are faced with similar methodological challenges and opportunities: How can network research enable a better understanding of change in social systems at different temporal scales? How can complex patterns of interaction be revealed through indirect and fragmented sources? We believe that these two communities have much to gain from closer collaboration in their pursuit of addressing such questions.

This paper aims to provide an introduction to archaeological network research for the community of historical network practitioners in this inaugural issue of the *Journal of Historical Network Research*. We do this by outlining a number of general trends in the publication behavior of archaeological network researchers. This is achieved through a bibliometric analysis of a large and comprehensive corpus of 222 archaeological network research publications spanning the period from 1965 through 2016. This corpus was compiled using Boolean keyword searches in online research databases for journals indexed in the Web of Science as well as additional journals and books indexed on Google Scholar. Additional publications were subsequently added based on the citations within the initial sample. These publications were then manually assessed to determine whether or not they met our selection criteria. Specifically, the corpus used here includes only those publications that apply, develop, or explicitly addresses formal network methods and models in an archaeological research context. We exclude many examples where networks are used as metaphorical (as opposed to formal) descriptions of interaction processes though we note that these two different areas of research have been mutually influential in archaeology and closely allied fields.¹ The corpus is openly accessible as a Zotero library and integrated within the Historical Network Research website.² We explore chronological trends in the number of

* **Corresponding authors:** Dr Tom Brughmans, Department of Archaeology, University of Oxford, e-mail: tom.brughmans@arch.ox.ac.uk & Dr Matthew Peeples, School of Human Evolution and Social Change, Arizona State University, e-mail: matthew.peeples@asu.edu

1 Hannah Knox, Mike Savage, and Penny Harvey, "Social Networks and the Study of Relations: Networks as Method, Metaphor and Form," *Economy and Society* 35, no. 1 (February 1, 2006): 113–40, doi:10.1080/03085140500465899.

2 Tom Brughmans and Matthew A. Peeples, "Archaeological Networks Zotero Bibliography," accessed February 15, 2017, <https://www.zotero.org/groups/archaeologicalnetworks/>; Historical

publications per year, research agendas and influences across different regions, co-authorship between archaeological network researchers, trends in the gender of these authors, and the publication venues for archaeological network research.

Of course, all of the patterns we document below are limited to the 222 publications compiled here. We have almost certainly missed other archaeological applications of network methods, perhaps more so in regions of the world where neither of us works. It is also important to note that this is a bibliometric analysis focused on a single area of research so it is more difficult to draw firm conclusions about how the trends we see here reflect broader disciplinary trends. We suggest that this is an area ripe for future research.

This paper is not designed to be a complete qualified literature review but rather aims to offer a quantified glimpse into a sub-discipline related to historical network research that shares some of its goals and is confronted with similar challenges. More in-depth reviews of archaeological network research are available that will provide further contextual and substantive information about the quantitative trends discussed in this paper.³

2 Chronological trends

Formal network science approaches have been applied in archaeological research since the late 1960s but have only recently become common. This trend is illustrated in figure 1, showing the counts of archaeological network research publications per year.

The early application of network methods was largely relegated to textbooks and methodological overviews focused on the use of mathematical techniques in archaeology.⁴ In such early publications, graph theoretical methods and visualization tools were suggested as a potentially useful method for representing and analyzing archaeological data. Perhaps the earliest

Network Research, "Historical Network Research Bibliography," accessed February 15, 2017, <http://historicalnetworkresearch.org/resources/bibliography/>.

- 3 Tom Brughmans, "Thinking Through Networks: A Review of Formal Network Methods in Archaeology," *Journal of Archaeological Method and Theory* 20 (April 2013): 623–62, doi:10.1007/s10816-012-9133-8; Anna Collar et al., "Networks in Archaeology: Phenomena, Abstraction, Representation," *Journal of Archaeological Method and Theory* 22, no. 1 (March 1, 2015): 1–32, doi:10.1007/s10816-014-9235-6.
- 4 E.g. D. L. Clarke, *Analytical Archaeology* (London: Methuen, 1968); J. E. Doran and F. R. Hodson, *Mathematics and Computers in Archaeology* (Edinburgh: Edinburgh University Press, 1975).

example of an application of network science techniques toward addressing a substantive archaeological question came in 1977 with John Terrell's use of Proximal Point Analysis, to model geographic networks and the most likely directions of inter-island movement in the Solomon Islands.⁵ This research was influential within Pacific archaeology early on and more recently similar methods have been applied in different regional contexts. For example, Cyprian Broodbank used a related approach to model interaction networks of Early Bronze Age Aegean island communities.⁶ Interestingly, Terrell and many other early archaeological adopters of network science were primarily influenced by geography and applications of graph theory and not by sociometry or the then emerging discipline of social network analysis.⁷ This reflects broader trends in archaeology in the 1960s and 70s, where a large number of formal methods found their way into the so-called 'new archaeology' by way of the 'new geography'.

Until the early 2000s, archaeological network research consisted almost exclusively of isolated applications. Very few authors published more than one paper using formal network methods and there certainly was no community of archaeological practitioners of network science. This can in part be explained by the limited availability of computing power and user-friendly network software, but this is not the sole explanation. Indeed, archaeologists were early adopters of Geographical Information Systems (GIS) which suffered from the same technical limitations in the early years. It is striking that the boom of GIS applications in archaeology in the early 1990s did not go hand-in-hand with a boom in network science applications. We believe the main reason for this sporadic application is the limited cross-fertilization between quantitative sociology (and in particular social network analysis) and archaeologists, and the latter's focus on quantitative work in geography which was less concerned with networks at the time of the initial GIS boom. There are isolated examples of anthropologists/archaeologists who were more integrated in the social network analysis community, especially Per Hage who wrote a number of books applying network methods to address Pacific archaeology research topics with the prominent graph theorist Frank Harary.⁸ However, the methodological

5 John E. Terrell, "Human Biogeography in the Solomon Islands," *Fieldiana Anthropology* 68, no. 1 (1977): 1-47.

6 C Broodbank, *An Island Archaeology of the Early Cyclades* (Cambridge: Cambridge University Press, 2000).

7 Terrell pers. comm.

8 Per Hage and Frank Harary, *Structural Models in Anthropology* (Cambridge: Cambridge University Press, 1983); P Hage and F Harary, *Exchange in Oceania: A Graph Theoretic Analysis* (Oxford: Clarendon Press, 1991); P Hage and F Harary, *Island Networks: Communication,*

aspects of Hage and Harary's work had limited influence on archaeological method and theory outside of that region.

The current boom in archaeological network research began to gather steam beginning in the early 2000s. Alexander Bentley and Herbert Maschner published a large number of studies on the topic and edited a volume titled "Complex Systems and Archaeology" in 2003, which mainly collected papers discussing or applying complex network methods in archaeological research contexts.⁹ This work by Bentley and Maschner illustrates a key explanation for the increase of archaeological network research since the early 2000s: the academic popularization of the topic by physicists. Two pairs of physicists, Watts and Strogatz, and Barabási and Albert, who published the 'small-world' and 'scale-free' network models respectively, claimed almost universal applicability of their models to real-world phenomena, which led to a surge in network science research and complexity science in general in a wide range of disciplines including archaeology.¹⁰ The 2003 book by Bentley and Maschner discusses these two influential models in detail and much of it is concerned with how they can be applied to address archaeological research questions.

The increased influence of physicists went hand-in-hand with a more widespread availability of computing power and user-friendly network analytical software. Combined with increasingly common practice of digitizing, standardizing, and compiling large archaeological datasets, representation of archaeological data as networks for visual or statistical exploration was increasingly straightforward and accessible by the 2000s. Much archaeological network research in the early 2000s, like in many other disciplines, was concerned with identifying power-law degree distributions and small-world structures in archaeological networks or with using these concepts as explanatory models. However, there was also a continuation of the older archaeological practice of exploring spatial phenomena like road and signaling networks through spatial network methods adopted from geography. These trends are apparent in the collection of papers published in 2007 deriving from

Kinship and Classification Structures in Oceania (Cambridge: Cambridge University Press, 1996).

9 R. A. Bentley and H. D. G. Maschner, *Complex Systems and Archaeology* (Salt Lake City: University of Utah Press, 2003).

10 D Watts and S Strogatz, "Collective Dynamics of 'small-World' Networks," *Nature* 393 (1998): 440–42; A.-L. Barabási and R Albert, "Emergence of Scaling in Random Networks," *Science* 286 (1999): 509–12.

a 2006 session on the topic at the “Computer Applications and Quantitative Methods in Archaeology” conference (CAA) in Fargo (USA).¹¹

In recent years we have begun to see archaeological network approaches start to go in a few distinct directions across different regional contexts. Complexity based network approaches influenced by physics and related fields have remained popular and have been particularly influential in Europe. While these methods have seen continued popularity in North America, archaeological network practitioners in this region have also increasingly begun to engage with sociology and social network analysis. This trend is perhaps driven by the formation of large research teams such as the group led by Barbara Mills centered on the University of Arizona. This interdisciplinary team includes several sociologists; among them Ronald Breiger who has been an influential practitioner of social network analyses and network theory in sociology since the early 1970s. Increasingly the North American literature involves collaborations between archaeologists and sociologists and network research directed toward sociological questions (for example, the relationship between network position and advantage for individuals and groups at various scales).¹² Based on our own positions in the burgeoning world of archaeological network research we surmise that we are likely to see the continued growth of both complex network and social network approaches in the coming years.

If we can write of the existence of a sub-discipline of ‘archaeological network science’, supported by an academic community of frequent practitioners with their preferred presentation and publication outlets, it is only from the 2010s onwards. Figure 1 shows a huge increase in the number of publications between 2012 and 2016. The bulk of these recent publications are symptomatic of an emerging sub-discipline: edited volumes and journal special issues dedicated to the theoretical and methodological discussion and application of network science in archaeology. These recent publications are not exclusively concerned with the discussion of network science methods for their own sake, however. Recent years have also seen a diversification in the archaeological regions, periods, and topics to which network methods have been applied. Alongside the continued interest in spatial networks and small-world / scale-free networks,

11 Gary Lock and John Pouncett, “Network Analysis in Archaeology Session Introduction: An Introduction to Network Analysis,” in *Digital Discovery: Exploring New Frontiers in Human Heritage*. Proceedings of the 34th CAA Conference, Fargo, 2006, ed. J. T. Clark and E. M. Hagenmeister (Budapest: Archaeolingua, 2007), 71–73.

12 Barbara J Mills et al., “Transformation of Social Networks in the Late Pre-Hispanic US Southwest,” *Proceedings of the National Academy of Sciences of the United States of America*, March 2013, 1–6, doi:10.1073/pnas.1219966110; Matthew A. Peeples and W. Randall Haas, “Brokerage and Social Capital in the Prehispanic U.S. Southwest,” *American Anthropologist* 115, no. 2 (June 1, 2013): 232–47, doi:10.1111/aman.12006.

we see an increase in the exploration of large archaeological datasets represented as networks, in agent-based, equation-based, statistical network models, and applications of sociological theories and methods to archaeological data. We also see evidence of an increase in the development of original models and methods designed to address archaeological research questions. Thus, archaeologists are no longer exclusively adopting network techniques from other disciplines but are now actively contributing to network science as a whole through the development of methods and through collaborations with computer scientists, physicists, sociologists, and others. Two typical aspects of archaeological research are proving to be particularly inspirational in the development of such original network techniques: the study of spatial phenomena and methods for exploring the network drivers of long-term change in social systems.

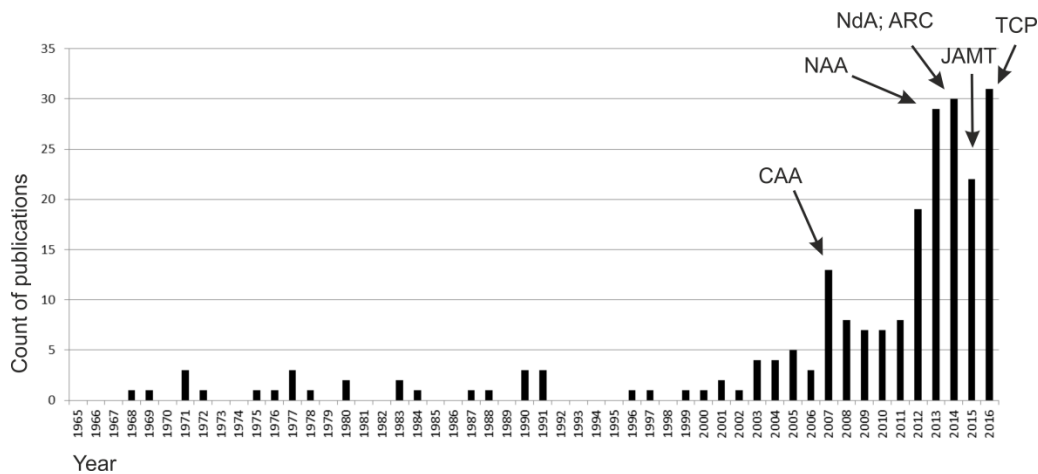


Figure 1. Frequencies of archaeological network research publications per year ($n=222$). Particularly high counts result from edited volumes or special issues on archaeological network research published in the proceedings of the 2007 “Computer Applications and Quantitative Methods in Archaeology” conference (CAA)¹³; a 2013 edited volume titled “Network Analysis in Archaeology” (NAA)¹⁴;

¹³ Lock and Pouncett, “Network Analysis in Archaeology Session Introduction: An Introduction to Network Analysis.”

¹⁴ Carl Knappett, *Network Analysis in Archaeology. New Approaches to Regional Interaction* (Oxford: Oxford University Press, 2013).

a 2014 special issue in “Nouvelles de l’Archéologie” (NdA)¹⁵; a 2014 special issue of the “Archaeological Review from Cambridge” (ARC)¹⁶; a 2015 special issue of the “Journal of Archaeological Method and Theory,” (JAMT)¹⁷; a 2016 edited volume titled “The Connected Past” (TCP)¹⁸.

3 Publication media and venues

The vast majority of archaeological network research is published in scholarly journals, but publication patterns have changed considerably through time (Table 1). Between 1965 and 2000 book sections and books were the dominant venues and only since the 2000s have journals taken the lead. This reflects publication trends in archaeology as a whole. Notable edited volumes and conference proceedings from the earlier years include pioneering publications in computational archaeology as a whole: “Mathematics in the Archaeological and Historical Sciences, Proceedings of the Anglo-Romanian conference, Mamaia 1970” and “Interpreting space: GIS and archaeology”.¹⁹

Table 1. Count of archaeological network research publications per publication medium (n=222).

Medium	Count of publications
Book	19
Book section	46
Conference paper	16
Journal article	133
Thesis	7
Webpage	1

- 15 Carl Knappett, *Analyse Des Réseaux Sociaux En Archéologie*. Special Issue of *Nouvelles de L’archéologie*, 135, 2014.
- 16 Sarah Evans and Kathrin Felder, *Social Network Perspectives in Archaeology*. A Special Issue of *Archaeological Review from Cambridge*, 2014.
- 17 Anna Collar et al., *The Connected Past: Critical and Innovative Approaches to Networks in Archaeology*. A Special Issue of the *Journal of Archaeological Method and Theory* 22 (1), 2015.
- 18 Tom Brughmans, Anna Collar, and Fiona Coward, *The Connected Past: Challenges to Network Studies in Archaeology and History* (Oxford: Oxford University Press, 2016).
- 19 F. R. Hodson, D. G. Kendall, and P. Tăutu, *Mathematics in the Archaeological and Historical Sciences, Proceedings of the Anglo-Romanian Conference, Mamaia 1970* (Edinburgh: Edinburgh University Press, 1971); Kathleen M S Allen, Stanton W Green, and Ezra B W Zubrow, *Interpreting Space : GIS and Archaeology* (London: Taylor & Francis, 1990).

The list of the most common publication venues shown in table 2 is heavily weighted toward recent publications and in particular the dedicated volumes and journal special issues shown in figure 1. The most common journals include five ranked in the top ten of Google Scholar's ranking of archaeology journals including broad disciplinary journals (e.g. *Antiquity*, *Journal of Anthropological Archaeology*, *American Antiquity*) as well as more methodologically focused venues (e.g. *Journal of Archaeological Science*, *Journal of Archaeological Method and Theory*). Perhaps not surprisingly, network science is not frequently published in journals dedicated to more specific sub-areas like cultural heritage studies, osteoarchaeology, and archaeobotany.

Table 2. Left table: Ranking of top publication venues for archaeological network research. Edited volumes and journals in which more than six archaeological network research papers are published (n=196). Right table: top ten in Google Scholar archaeology journal ranking (on 05/02/2017). Journals in bold are included in both the left and right columns.

Book/Journal ranking	Count of publications	Journal ranking "Archaeology" Google Scholar
1: Network analysis in archaeology. New approaches to regional interaction	15	1: Journal of Archaeological Science
2: Journal of Archaeological Method and Theory	14	2: Antiquity
3: Journal of Archaeological Science	13	3: Journal of Anthropological Archaeology
4: The Connected Past: challenges to network studies in archaeology and history	10	4: Journal of Cultural Heritage
5: Nouvelles de l'archéologie	9	5: International Journal of Osteoarchaeology
6: Journal of Anthropological Archaeology	8	6: Vegetation History and Archaeobotany
7: Archaeological Review from Cambridge	8	7: Journal of Archaeological Method and Theory
8: American Antiquity	7	8: American Antiquity
9: Digital discovery: exploring new frontiers in human heritage. Proceedings of the 34th CAA conference, Fargo, 2006	6	9: Radiocarbon
10: Antiquity	6	10: International Journal of Heritage Studies

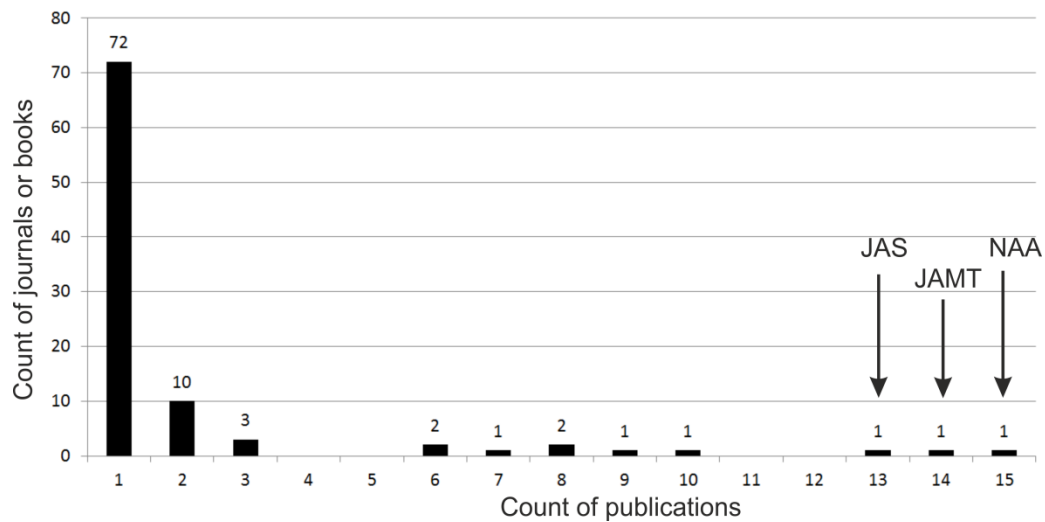


Figure 2. Frequency distribution of publication venues for archaeological network research: count of publications per journal/edited volume ($n=196$ publications). Top three venues: “Network Analysis in Archaeology” (NAA)²⁰; “Journal of Archaeological Method and Theory” (JAMT); “Journal of Archaeological Science” (JAS).

4 Co-authorship

A total of 230 authors were involved in producing the 222 publications studied here. A small number of authors, like the authors of this paper, have published many archaeological network studies, however, figure 3 shows that the vast majority of authors (162) (co-)authored only one paper included in this corpus (Table 3). Figure 4 further illustrates that this pattern is not simply a product of a few publications with extremely high numbers of authors. Co-authorship is common in archaeological network research, with 99 papers having more than one author and four representing large collaborations with 10 authors or more (publications of the “Southwest Social Networks project” by Mills and colleagues and a manifesto for “Mediterranean maritime networks”).²¹

²⁰ Knappett, *Network Analysis in Archaeology. New Approaches to Regional Interaction*.

²¹ Mills et al., “Transformation of Social Networks in the Late Pre-Hispanic US Southwest.”; Barbara J. Mills et al., “The Dynamics of Social Networks in the Late Prehispanic U.S. Southwest,” in *Network Analysis in Archaeology. New Approaches to Regional Interaction*, ed. Carl Knappett (Oxford: Oxford University Press, 2013), 181–202; Barbara J. Mills et al., *Social Networks in the Distant Past*, ed. Matthew A. Peeples, vol. 22, 2013; Justin Leidwanger et al., “A Manifesto for the Study of Ancient Mediterranean Maritime Networks,” *Antiquity+*, 2014, <http://journal.antiquity.ac.uk/projgall/leidwanger>.

The majority of publications are still single-authored papers. These trends suggest that for most archaeologists the use of network science is infrequent, tied to a particular aspect of their research and does not dominate their research output.

Table 3. Ten authors with the highest number of archaeological network research publication counts (n=222).

Author	Count of publications
Brughmans, Tom	19
Peeples, Matthew A.	13
Mills, Barbara J.	12
Knappett, Carl	10
Graham, Shawn	9
Collar, Anna	8
Clark, Jeffery J.	8
Evans, Tim S.	8
Rivers, Ray	8
Coward, Fiona	7

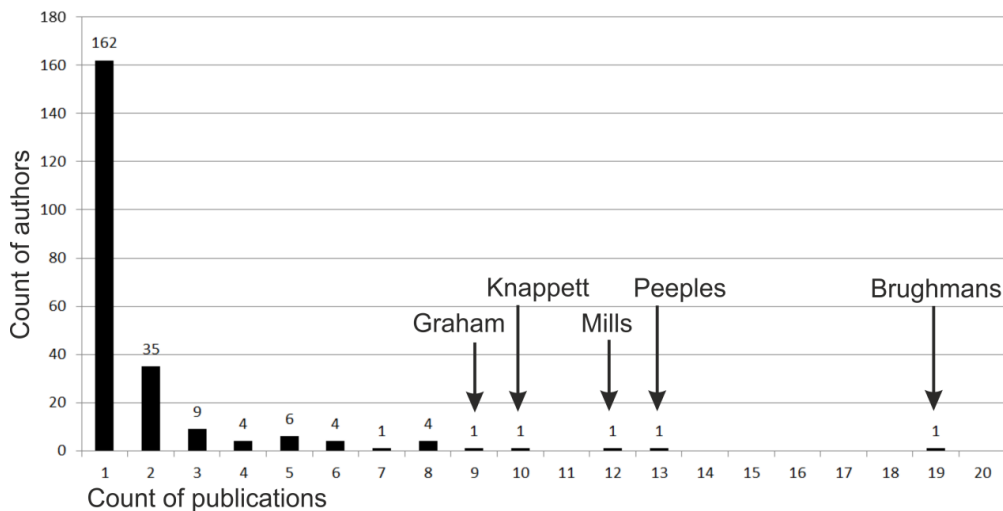


Figure 3. Count of publications per author (n=222).

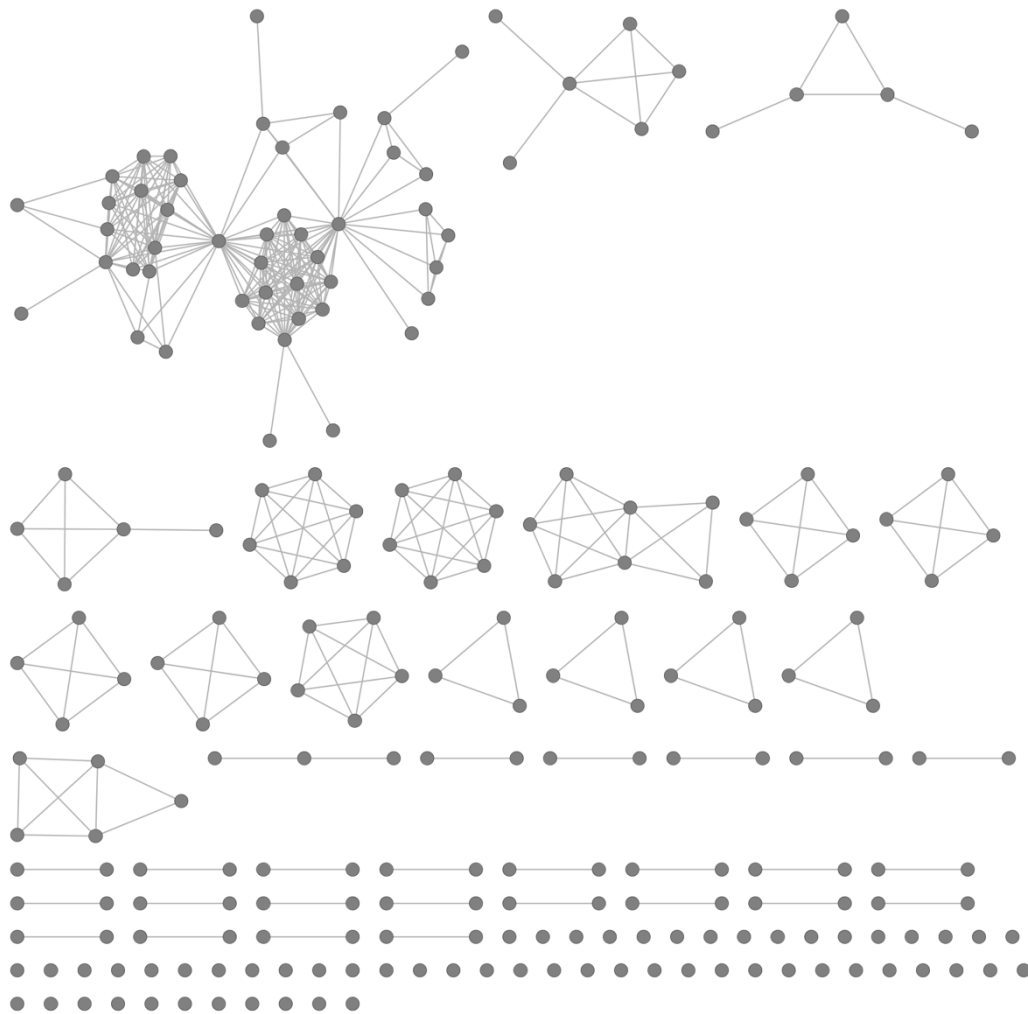


Figure 4. Co-authorship network of archaeological network research (n=222).

We can further explore the co-authorship in this corpus by representing it as a network where authors are represented as nodes with edges defined by co-authorship. The resulting co-authorship network is shown in figure 4, and it consists of a large number of components (101) because most papers have but one or two authors. This further illustrates that co-authorship is not the norm in archaeological network research. Furthermore, it adds further weight to our interpretation that the use of this particular formal method for most archaeologists is infrequent and problem-specific. Indeed, the largest connected component includes primarily those authors whose recent research output is dominated by formal network science (Table 3), as well as authors of papers with a very high number of authors (Figure 5). Figure 6 offers a closer look at this largest connected component. The use of the Louvain clustering method

enables us to identify groups of authors that have particularly dense co-authorship among themselves and less with authors in other groups. The two largest groups consist of the few papers mentioned above with a high number of co-authors, as well as papers co-authored by one of these authors. The other three groups represent a few papers that are co-authored with a bridging member of the bigger groups. These bridging members are identified by the betweenness centrality measure (represented as node size in Fig. 6). A few authors, in particular Barbara Mills and Tom Brughmans, are co-authors with members of different groups, giving them a high betweenness score. The handful of authors in this component with a higher betweenness score pursue a methodological interest in archaeological network research (alongside their other research interests), which leads them to co-author with a range of authors that share their methodological interest.

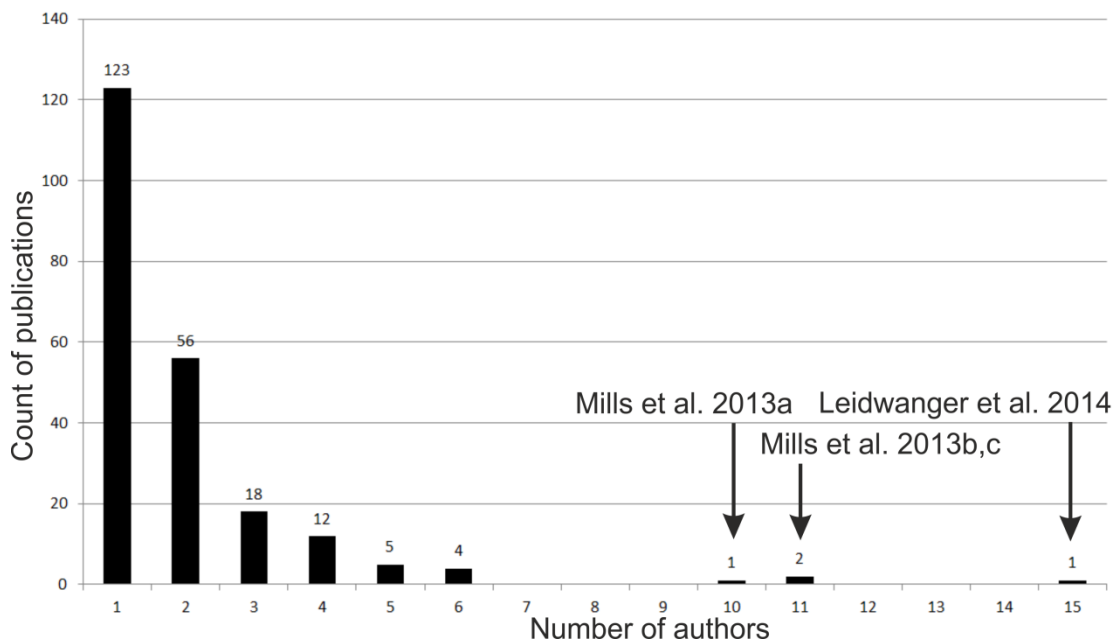


Figure 5. Count of publications per number of authors (n=222).

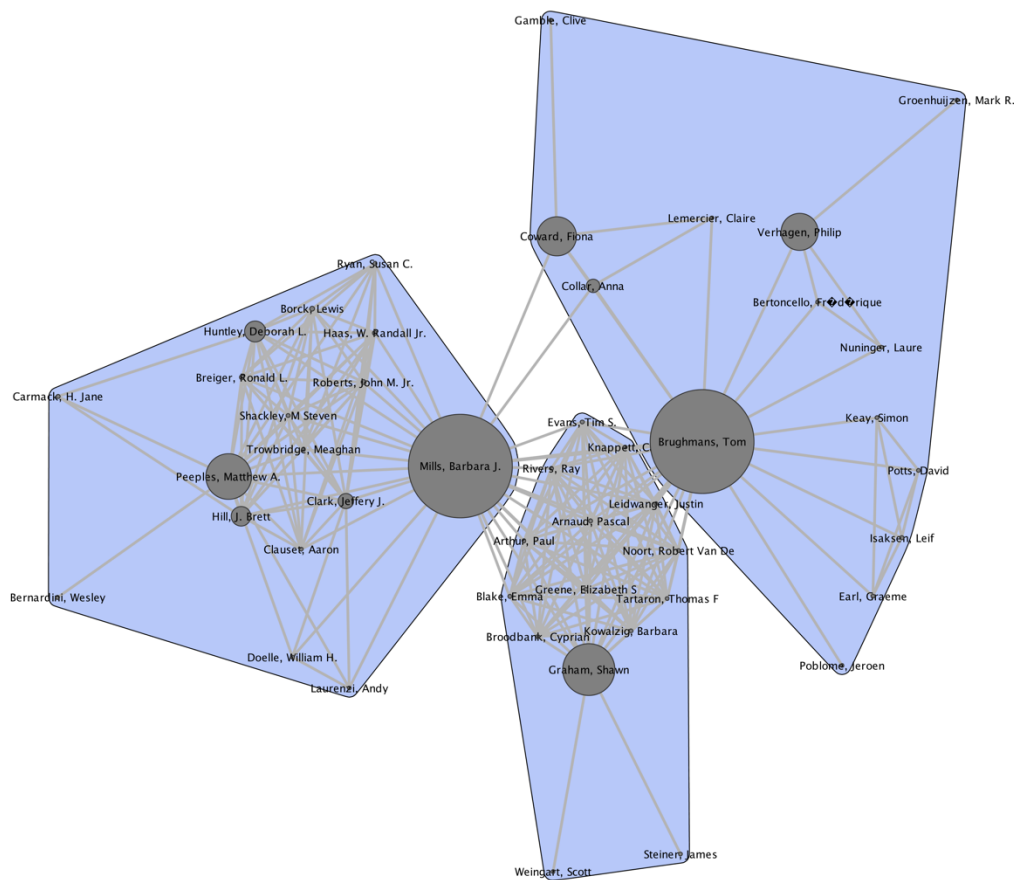


Figure 4. Largest connected component of co-authorship networks shown in figure 5. Node size represents betweenness centrality; nodes grouped following Louvain clustering algorithm.

5 Gender

There are more than three times as many male authors than there are female authors in this corpus of published archaeological network research (Fig. 7a). This is largely a product of the high number of single authored papers by male authors (Fig. 7b). Overall, there are almost five times as many papers that are authored by exclusively male authors than papers with only female authors, and the number of both male and female authored papers is equally low (Fig. 7b, grey bars). This pattern of limited co-authorship between male and female authors as compared to exclusively male authored papers is still very much present when we exclude all single authored papers (Fig. 7b, black bars): co-authored papers are still almost twice as often exclusively male authored whilst exclusively female co-authored papers are extremely rare. Figure 8 breaks this pattern down as a chronological trend. Between 1965 and 2005, published archaeological network research was almost exclusively male-authored. From

2005 onwards the number of papers (co-)authored by female researchers increased slowly in both absolute numbers and as a proportion of all papers per year. In 2015 and 2016 the number of papers with at least one female author outnumber papers with exclusively male authors, although the latter still account for almost 50%. These trends generally reflect broader trends in archaeology in that the increasing gender parity among archaeological professionals is not yet mirrored by parity in publication patterns.

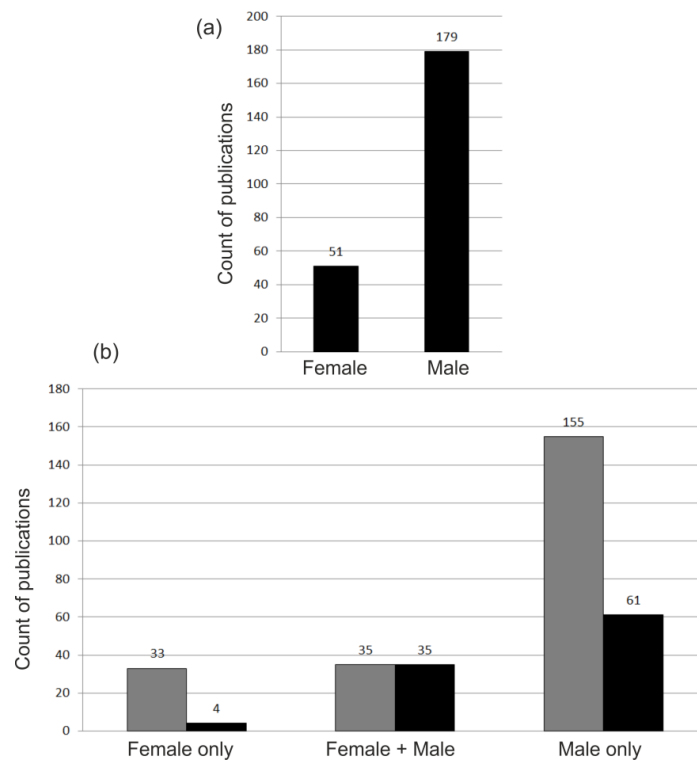


Figure 5. (a) Number of female and male authors in the corpus. (b) number of female only authored, mixed authored and male only authored papers in all papers (grey) and in multi-author papers only (black).

For example, in a recent critical assessment of gendered publication patterns in American archaeology, Bardolph compiled information from over 4,500 articles in 11 journals spanning the period from 1990 to 2013 and found that women accounted for 29% of published work in her sample.²² In our corpus, women account for 22% of archaeological network publications in the complete sample going back to 1964 and 28% of publications since 1990 suggesting that

22 Dana Bardolph, "A Critical Evaluation of Recent Gendered Publishing Trends in American Archaeology," *American Antiquity* 79, no. 3 (2014): 522–40.

gendered publication trends in archaeological networks closely mirror trends in at least American archaeology.

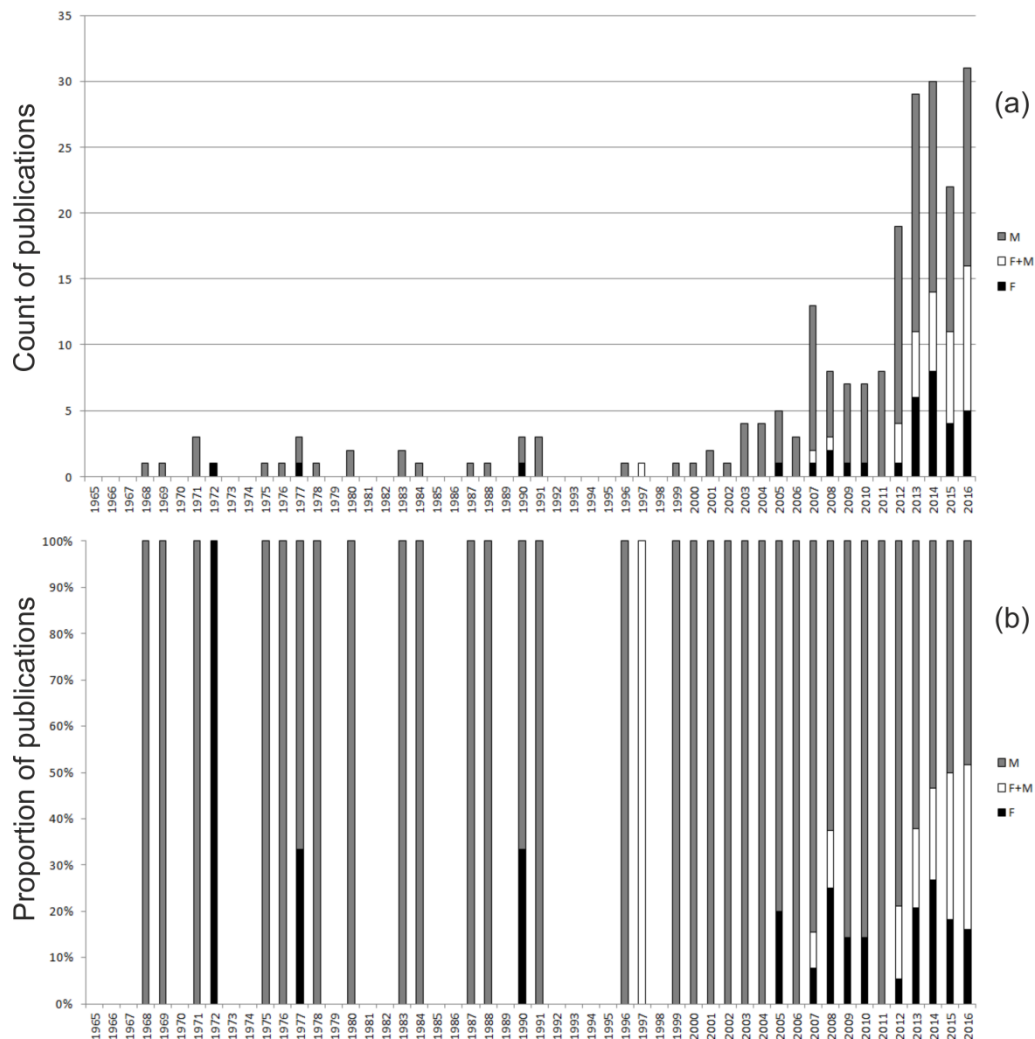


Figure 6. Count of male only, mixed and female only publications per year (a) and as a proportion of all publications each year (b).

6 Author-venue network

Finally, we explore the information discussed in the previous sections as a multi-modal network (Fig. 9). In this network, nodes represent both authors and publication venues and are color-coded by gender. Edges represent co-authorship for a pair of authors and publication by an author in a publication venue. This network allows us to expand our previous study of co-authorship

by highlighting further similarities between groups of authors in publication venues and gender.

This network is far less fragmented than the co-authorship network, consisting of 45 components as opposed to 101. This approach thus highlights similarities in the publication behavior of the authors in this corpus: very few researchers co-author their archaeological network work, but many publish in similar venues. Indeed, the largest connected component of the co-authorship network consisted of only 49 authors (Fig. 6), a mere 21% of all authors in the corpus. When we account for similarity based on publication venue the largest connected component shown in figure 10 includes 159 authors, or 69% of all authors in the corpus. This pattern can only in part be explained by the special issues and edited volumes dedicated to archaeological network research: the “Journal of Archaeological Science” and the “Journal of Anthropological Archaeology” are popular publication venues despite not having special issues on the topic. This result suggests that archaeological network practitioners might be a more tight-knit community than suggested by the co-authorship network and that publication in specific journals is a key feature of this community.

It is also interesting to note the relative prominence of female scholars in the largest connected component despite their numerical minority. The largest connected component includes 118 male and 41 female authors (Fig. 10). But the betweenness centrality ranking of this component reveals a particularly high score for a number of female authors (Table 4). We already discussed the prominence of Barbara Mills in the co-authorship network, which is reflected again in the current network. However, Jessica Munson has a particularly high betweenness score in this network because her work ties the papers and authors published in the “Journal of Anthropological Archaeology” and “PLOS ONE” into this largest connected component. A further difference between the author-journal network and the co-authorship network is the high betweenness score of Søren Sindbæk, who connects papers and authors published in the “European Journal of Archaeology”. These betweenness scores of the latter two authors in particular reveal how their work crosses different academic communities: they contribute to the methodological debates on archaeological network research as revealed through their publications in an edited volume on the topic, but co-author their other archaeological network research with scholars and publish it in venues that are most relevant for the substantive archaeological side of their research. Whereas the betweenness scores of some authors like Barbara Mills and Tom Brughmans are driven largely by their active involvement in methodological discussions on archaeological network research, the score of other authors like Jessica Munson and Søren Sindbæk reflect their roles in widening and diversifying archaeological network research.

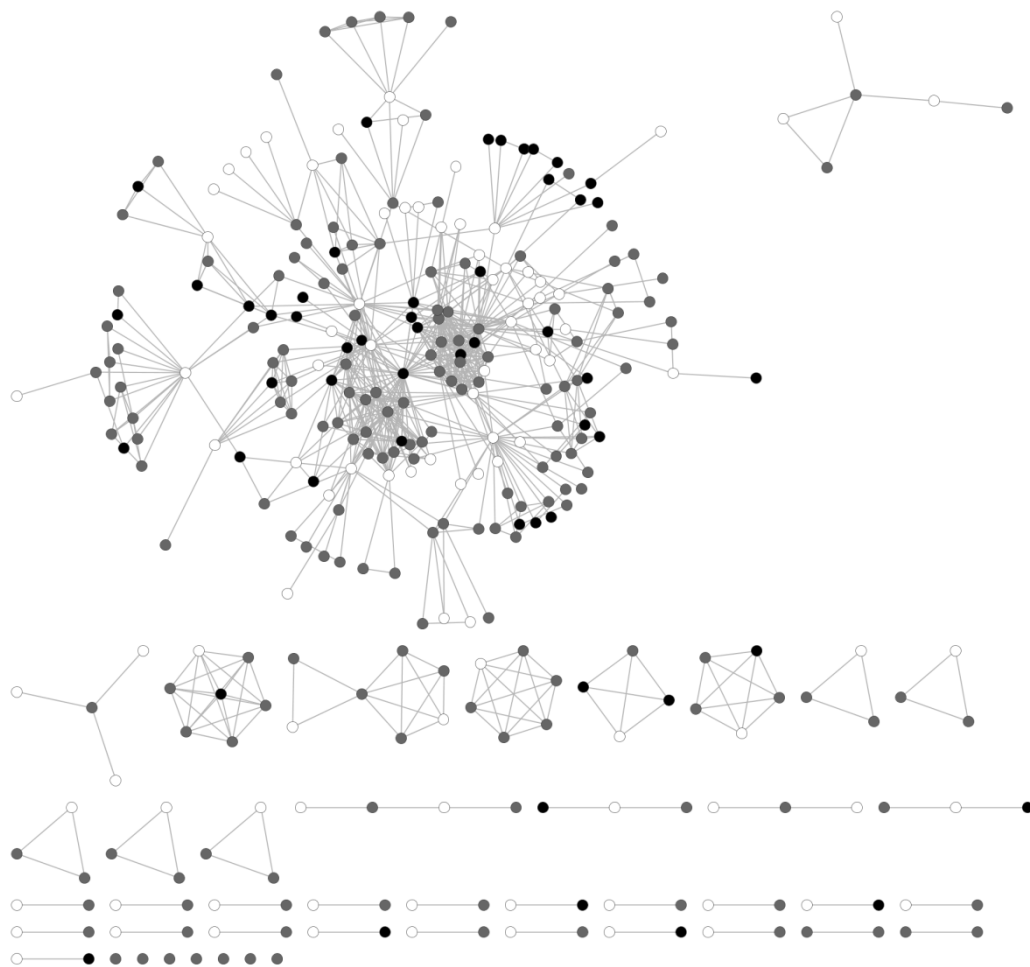


Figure 7. Author-venue network: nodes represent both authors (female = black; male = grey) and publication venues (white), edges represent both co-authorship of a pair of authors and publication by an author in a publication venue.

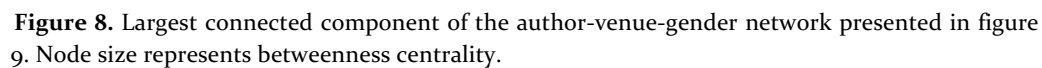


Table 4. The twenty highest ranked authors and publication venues according to betweenness centrality in the author-venue network shown in figure 10.

Ranking betweenness centrality author-venue network	
Ranking	Author or venue
1	Brughmans, Tom
2	Network analysis in archaeology. New approaches to regional interaction
3	Journal of Archaeological Method and Theory
4	Journal of Archaeological Science
5	Mills, Barbara J.
6	Journal of Anthropological Archaeology
7	Munson, Jessica L.
8	Sindbæk, S. M.
9	Peeples, Matthew A.
10	American Antiquity
11	Archaeological Review from Cambridge
12	Graham, Shawn
13	Antiquity
14	The Connected Past: challenges to network studies in archaeology and history
15	European Journal of Archaeology
16	Mol, Angus
17	Terrell, John Edward
18	Coward, Fiona
19	Macri, Martha J.
20	Roberts, John M. Jr.

7 Conclusion

Although network approaches in one form or another have a long history in archaeology, it is only recently that we can start to map the edges of this emerging sub-discipline. Archaeologists have long been ravenous consumers of methodological advances from other fields. Indeed, early applications of network and graph methods in archaeology largely came out of geography and mathematics, both fields that were influential in many areas of archaeological research in the mid-twentieth century. Since the early 2000s, the increasing prevalence of the interdisciplinary field of complexity science and work in physics and computer science has spurred on a new surge in archaeological network research. Advances in software and the increasing availability of large databases have certainly played a role in the current boom in archaeological

network research (and these explanations have often been invoked) but this review suggests that these were not the only factors.

Perhaps a sign of a maturing sub-discipline, we are also starting to see distinct traditions of network research emerge within archaeology. While research in the vein of complexity science remains popular, many researchers and teams are increasingly relying on models and methods from sociology and social network analyses to address both disciplinary questions but also to engage in broader debates in the social sciences using archaeological data. Although this direction is perhaps currently more common among North American network practitioners, we see some indications that such approaches are spreading throughout the field. In a young sub-discipline like this, we see such divergent approaches in a positive light as potential sources of innovation. Combining the efforts of archaeologists and historians will no doubt lead to further diversification and innovation.

The bibliometric study presented here paints a picture of a field driven forward by several different complementary processes. Indeed, much of the recent surge in archaeological network publications can be attributed to journal special issues and edited volumes, many of which have been published in widely read and highly cited venues. This suggests that archaeological network practitioners have captured the attention of the broader field. The co-authorship analysis further demonstrates that a small number of researchers and teams have dedicated substantial effort toward developing and applying network scientific approaches to archaeology, but there are also many researchers whose work involves only a minor network component. This brings to mind similar trends in applications of GIS in archaeology in the 1990s and early 2000s, we expect that increasingly network methods will become another “tool in the toolbox” for all archaeologists even as specialists continue to further develop the sub-discipline. Further, our exploration of gendered publication patterns reflects broader trends in archaeology: that is to say, despite increasing gender parity among archaeologists, gender parity in archaeological network publication practices has lagged. We argue that it is important to document such trends as the field moves forward and suggest that historical network practitioners might benefit from a similar study.

As we stated in our introduction archaeological and historical network applications have much in common and there is certainly much to be gained by connecting the trajectories of both fields. On the methodological side, archaeologists and historians are grappling with many of the same challenges in using fragmentary and partial textual and material data to reveal complex and nuanced patterns of interaction in the past. There has been considerable effort and numerous publications focused on the development of new methods and alteration of existing methods for different kinds of data in both fields. Beyond this, while in both archaeology and history, network methods and

models have primarily been applied to address important ongoing disciplinary debates, both fields also have the potential to provide new insights for network science in general. In particular the historical perspective provided by both fields could contribute to current areas of growth in network science including the exploration of dynamic networks, network evolution, and long-term drivers of social change.

As two practitioners of archaeological network science who have spent much of our recent research efforts on network topics, we argue that archaeologists and historians are natural partners and should work to coordinate in our efforts to expand into new areas of research. One major way to facilitate such coordination is the production of resources that will help us all stay abreast of developments in such a diverse field. A major step in this direction is the publication of the Historical Network Research bibliography.²³ The archaeological section was compiled by the authors for the bibliometric analyses presented above but this bibliography also contains references compiled by others for many areas of historical network research. Importantly, this resource has been placed online in an open source format as a Zotero group so that the entire community of archaeological and historical network practitioners can contribute to it. We invite you to explore the bibliography and join the collaborative groups. This bibliography will no doubt become an essential resources for the archaeological and historical network communities and further has the potential to expand the audience and reach for such research.

Archaeological and historical network approaches are at a similar stage of development. Both are young fields facing similar challenges for methodological advancement, disciplinary acceptance, and both are poised to make contributions to the broader realm of network research in general. We argue that archaeologists and historians alike interested in establishing network research as a key tool for exploring social change will have a greater chance for success to the extent that we actively collaborate, pool resources (like the HNR bibliography), engage in common community activities and publications (conferences, journal special issues, books), and learn from each other's mistakes. We hope this new journal spurs some of that conversation.

23 Historical Network Research, "Historical Network Research Bibliography." <http://historical-networkresearch.org/resources/bibliography/> (accessed 20 September 2017).

References

- Allen, Kathleen M. S., Stanton W Green, and Ezra B. W. Zubrow, *Interpreting Space : GIS and Archaeology*, London 1990.
- Barabási, A.-L., and R Alber, Emergence of Scaling in Random Networks, in: *Science* 286 (1999), 509–12.
- Bardolph, Dana, A Critical Evaluation of Recent Gendered Publishing Trends in American Archaeology, in: *American Antiquity* 79, no. 3 (2014), 522–40.
- Bentley, R. A., and H. D. G. Maschner, *Complex Systems and Archaeology*, Salt Lake City 2003.
- Broodbank, C, *An Island Archaeology of the Early Cyclades*, Cambridge 2000.
- Brughmans, Tom, Thinking Through Networks: A Review of Formal Network Methods in Archaeology, in: *Journal of Archaeological Method and Theory* 20 (April 2013), 623–62. doi:10.1007/s10816-012-9133-8.
- Brughmans, Tom, Anna Collar, and Fiona Coward, *The Connected Past: Challenges to Network Studies in Archaeology and History*, Oxford 2016.
- Brughmans, Tom, and Matthew A. Peeples, Archaeological Networks Zotero Bibliography, accessed February 15, 2017. <https://www.zotero.org/groups/archaeologicalnetworks/>.
- Clarke, D. L., *Analytical Archaeology*, London 1968.
- Collar, Anna, Fiona Coward, Tom Brughmans, and Barbara Mills, *The Connected Past: Critical and Innovative Approaches to Networks in Archaeology. A Special Issue of the Journal of Archaeological Method and Theory* 22 (1), 2015.
- Collar, Anna, Fiona Coward, Tom Brughmans, and Barbara J. Mills, Networks in Archaeology: Phenomena, Abstraction, Representation, *Journal of Archaeological Method and Theory* 22, no. 1 (March 1, 2015), 1–32. doi:10.1007/s10816-014-9235-6.
- Doran, J. E., and F. R. Hodson, *Mathematics and Computers in Archaeology*, Edinburgh 1975.
- Evans, Sarah, and Kathrin Felder, *Social Network Perspectives in Archaeology. A Special Issue of Archaeological Review from Cambridge*, 2014.
- Hage, P, and F. Harary, *Exchange in Oceania: A Graph Theoretic Analysis*, Oxford 1991.
- , *Island Networks: Communication, Kinship and Classification Structures in Oceania*, Cambridge 1996.
- , *Structural Models in Anthropology*, Cambridge 1983.
- Historical Network Research, Historical Network Research Bibliography, accessed February 15, 2017. <http://historicalnetworkresearch.org/resources/bibliography/>.
- Hodson, F. R., D. G. Kendall, and P. Tăutu, *Mathematics in the Archaeological and Historical Sciences, Proceedings of the Anglo-Romanian Conference, Mamaia 1970*, Edinburgh 1971.

- Knappett, Carl, *Analyse Des Réseaux Sociaux En Archéologie. Special Issue of Nouvelles de L'archéologie*, 135, 2014.
- . *Network Analysis in Archaeology. New Approaches to Regional Interaction*, Oxford 2013.
- Knox, Hannah, Mike Savage, and Penny Harvey, Social Networks and the Study of Relations: Networks as Method, Metaphor and Form, in: *Economy and Society* 35, no. 1 (February 1, 2006), 113–40.
doi:10.1080/03085140500465899.
- Leidwanger, Justin, Carl Knappett, Pascal Arnaud, Paul Arthur, Emma Blake, Cyprian Broodbank, Tom Brughmans, et al., A Manifesto for the Study of Ancient Mediterranean Maritime Networks, in: *Antiquity+*, 2014,
<http://journal.antiquity.ac.uk/projgall/leidwanger>.
- Lock, Gary, and John Pouncett, Network Analysis in Archaeology Session Introduction: An Introduction to Network Analysis, in: *Digital Discovery: Exploring New Frontiers in Human Heritage. Proceedings of the 34th CAA Conference, Fargo, 2006*, edited by J. T. Clark and E. M. Hagenmeister, 71–73, Budapest 2007.
- Mills, Barbara J., Jeffery J. Clark, Matthew A. Peeples, W. R. Haas, John M. Roberts, J. Brett Hill, Deborah L. Huntley, et al., Transformation of Social Networks in the Late Pre-Hispanic US Southwest, in: *Proceedings of the National Academy of Sciences of the United States of America*, March 2013, 1–6. doi:10.1073/pnas.1219966110.
- Mills, Barbara J., Jeffery J. Clark, Matthew A. Peeples, W. Randall Jr. Haas, John M. Jr. Roberts, J. Brett Hill, Deborah L. Huntley, et al., *Social Networks in the Distant Past*. Edited by Matthew A. Peeples, vol. 22, 2013.
- Mills, Barbara J., John M. Roberts, Jeffery J. Clark, William R. Haas Jr., Deborah Huntley, Matthew A. Peeples, Lewis Borck, Susan C. Ryan, Meaghan Trowbridge, and Ronald L. Breiger, The Dynamics of Social Networks in the Late Prehispanic U.S. Southwest, in: *Network Analysis in Archaeology. New Approaches to Regional Interaction*, edited by Carl Knappett, 181–202, Oxford 2013.
- Peeples, Matthew A., and W. Randall Haas, Brokerage and Social Capital in the Prehispanic U.S. Southwest, in: *American Anthropologist* 115, no. 2 (June 1, 2013), 232–47. doi:10.1111/aman.12006.
- Terrell, John E., Human Biogeography in the Solomon Islands, in: *Fieldiana Anthropology* 68, no. 1 (1977), 1–47.
- Watts, D., and S. Strogatz, Collective Dynamics of ‘small-World’ Networks, in: *Nature* 393 (1998), 440–42.

VAN VUGT, INGEBORG

Using Multi-Layered Networks to Disclose Books in the Republic of Letters

Journal of Historical Network Research
1 (2017) 25-51.

Keywords

Republic of letters, circulation of knowledge, multi-layered networks, visualizing books, disclose reading

Abstract

This paper highlights the importance of books as dynamic actors within the Republic of Letters by means of multi-layered visualizations of epistolary networks. In the past decade, it has become increasingly common to make use of networks to study shifts in early modern scholarly exchange. Originally, almost all of these studies employed a single-layered network where one node of the graph represents a correspondent, and an edge between a pair of nodes corresponds to a letter exchanged between them. However, reducing the complex society of the Republic of Letters to a network in which actors are connected by one single type suggests a static uniformity that barely takes into account the multi-faced dynamics of epistolary exchange. In addition to letters, the Republic of Letters was tied together primarily by means of books. Therefore, this paper intends to discuss an approach that integrates both letters and books in a unified, dynamic multi-layered network representation. To this end, the epistolary network of the Dutch philologist Nicolaas Heinsius (1620-1680) with the Florentine Medici court, focusing in particular on the correspondence of the librarian Antonio Magliabechi (1633-1714), serves as a case study to illustrate the applicability of multi-layered networks in historical network research.



1 Introduction*

Many authors have stressed the importance of books as an integral part of the Republic of Letters.¹ Books held the scholarly network together for they fostered the advancement of learning – the ideal aim of the Republic of Letters. This is especially true considering the fact that books were an important medium for the circulation of knowledge as well as the output *par excellence* of scholarly collaboration. Franz Mauelshagen stated that ‘an exchange of objects was directly associated with the interactive potential of correspondence networks. Even though many objects of exchange did not belong to letters or to the text of a letter, they have to be looked upon as an essential part of correspondence.’² Mauelshagen pointed out that objects functioned as a medium through which social relationships were sustained and mutual trust was built. Books, for example, were often sent as gifts that could encourage reciprocity in the form of a response or a counter-gift. In this respect, the communication through objects is reciprocal, like is also the exchange of letters. In addition, most of the letters we now only encounter as sheets of paper in the archive, were actually packaging notes to parcels – of books, drawings, poems, natural specimina, and other letters. Similar theses are adopted by Dirk van Miert who made clear that ‘a letter should never be studied in isolation, but always as part of a larger apparatus of sources:

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Corresponding author: Ingeborg van Vugt, Scuola Normale Superiore di Pisa, Piazza dei Cavalieri 7, 56126, Pisa (Italy), email: ingeborg.vanvugt@sns.it.

- 1 The Republic of Letter was, simply, a learned community of corresponding scholars. The term was already in use in the early sixteenth century and it remained active until the nineteenth century. The term was used by early modern scholars to represent an ideal of a intellectual community that transcended religious and political beliefs. On the Republic of Letters see Constance M. Furey, Erasmus, Contarini and the Religious Republic of Letters (Cambridge: Cambridge University Press, 2008); Christiane Berkvens-Stevelinck, Hans Bots, and Jens Häsel, eds., *Les grands intermédiaires culturels de la république des lettres: études des réseaux de correspondances du XVIe aux XVIIIe siècles* (Paris: Honoré Champion, 2005); Francisco Bethencourt and Florike van Egmond, eds., *Communication and Cultural Exchange in Europe, 1400–1700*, vol. 3, *Cultural Exchange in Early Modern Europe* (Cambridge: Cambridge University Press, 2007); Hans Bots and Françoise Waquet, eds., *La république des lettres* (Paris: Belin-De Boeck, 1997).
- 2 Franz Mauelshagen, "Networks of Trust and Imagined Community of the Learned," *The Medieval History Journal* 6:1 (2003): 18.

notebooks, drawings, commonplace books and printed treatises’³ and Anthony Grafton, who illustrated that the Republic of Letters ‘existed, first and foremost, as a palimpsest of people, books, and objects in motion’.⁴ Without letters, and the accompanying reciprocal exchange of books and other gifts, there would be little to hold such an extensive, geographically separated society together.

So, books and letters cannot be studied and analyzed separately from each other. Nevertheless, as Daniel Stolzenberg has pointed out, recent studies concerning early modern communication tend to minimize the importance of printed books.⁵ In his article, he discusses the importance of books as a medium of communication in the scholarly network of the Jesuit scholar Athanasius Kircher (1602-1680). He concludes:

“Correspondence lends itself to social network analysis in a way that books complicate. (...) A correspondence network can be converted into a database and then analyzed and visualized by existing methods and software. To create an analogous map that would capture how information was disseminated through printed books would be vastly more complicated and imprecise, if indeed it is even possible.”⁶

Stolzenberg presents here an evident gap in digital scholarship but not any practical implementation of filling it. Therefore, this article takes up Stolzenberg’s challenge, offering insights in the practical possibilities for representing books within the early modern scholarly network. As we will see in the next paragraph, almost all of the studies to date are based on a single-layered view of the Republic of Letters, where a node represents a correspondent and its incoming and outgoing edges correspond to the exchange of letters. However, in addition to looking at the Republic of Letters as if it was a single entity, I propose a different approach that integrates both books and letters in a unified, dynamic multi-layered network representation. By doing so, I intend to show how books played a decisive part in building, continuing and influencing relationships through networks. In this article the

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- 3 Dirk van Miert, “Concluding observations,” in *Communicating Observations in Early Modern Letters (1500-1675): Epistolography and Epistemology in the Age of the Scientific Revolution*, ed. Dirk van Miert (London/Turin: The Warburg Institute-Nino Aragno Editore, 2013), 243.
 - 4 Anthony Grafton, “A Sketch Map of a Lost Continent: The Republic of Letters,” *Republic of Letters: A Journal for the Study of Knowledge, Politics, and the Arts* 1 (2009): 12.
 - 5 Daniel Stolzenberg, “A Spanner and his Works: Books, Letters, and Scholarly Communication Networks in Early Modern Europe,” in *For the Sake of Learning: Essays in Honor of Anthony Grafton*, ed. Ann Blair et al (Leiden: Brill, 2016).
 - 6 Stolzenberg, “A Spanner and his Works: Books, Letters, and Scholarly Communication Networks in Early Modern Europe”, 171.

emphasis will not be on a quantitative analysis, but on a qualitative approach that allows us to explore and create datasets and visualize and interact with them in various network configurations.

To illustrate the pitfalls of studying early modern correspondence in isolation from print, I will use the example of the lively epistolary exchange between the Dutch protestant scholar Nicolaas Heinsius (1620-1681) and the Florentine Medici court. In particular, the correspondence of Nicolaas Heinsius will shed light on the activities of the Florentine librarian Antonio Magliabechi (1633-1714), who maintained an extensive correspondence network in the Dutch Republic.

The cases of Heinsius and Magliabechi will be used to give a concrete example of how books in correspondence networks can be analyzed in more complex visualizations, without compromising the legibility and transparency of the graphs. In addition, it shows how the approach of distant reading, which is complementary to close reading of the detailed content of each letter, helps to better describe and understand the circulation of knowledge in the Republic of Letters.

The article is organized as follows: in the first paragraph a general overview of the field will be given, highlighting the many projects and studies that have started to interpret relations among early modern scholars using digital technology and social network analysis. Studies of this sort, which rely mostly on single-layered representations, only cover a subset of all the possible networks in the Republic of Letters. This article, then, proposes an alternative method to single-layered networks that allows us to integrate both print and correspondence into the same network: multi-layered networks. In the second paragraph, I will discuss the creation of a multi-layered network structure and the various advantages and constraints for that structure. This discussion is followed by a case study of the epistolary networks of Nicolaas Heinsius and Antonio Magliabechi in order to explore its potential in the wider context of historical network research.

2 Mapping the Republic of Letters: a single-layered approach

This paragraph provides a basic overview of the field, notwithstanding the novelties and innovations that this relatively new domain has brought about, there are still many points of continuity and improvement. In the past decade, early modern historiography has seen a proliferation of digital network projects that have started to map sections of the Republic of Letters. Within this relatively small field, the best-known projects – including *Six Degrees of Francis Bacon* of the Carnegie Mellon University, *Mapping the Republic of Letters* of Stanford University, *Circulation of Knowledge/ePistolarium* of the Huygens Institute in Amsterdam and *Cultures of Knowledge* of Oxford University – all

focus on connections between early modern scholars. Typically, these projects employ a single-layered network, a formula that has presented us already with stimulating new insights in historical research. It has highlighted, for instance, the crucial role of information-brokers. Such people, despite publishing little or nothing, kept the community together by putting scholars in contact, furnishing them with material for their research and communicating the latest literary news. Moreover, the *ePistolarium* tool enables the user to visualize not only the traditional correspondence networks, but also co-citation networks. In this, they build further on the work of Yves Gingras who demonstrated the importance of co-citations to map the evolution of cited persons in correspondence networks. Co-citations appear when two persons are mentioned together in the same letter; if the number of these co-citations is high, that is if they are cited together in many letters, it suggests that there is a strong link between these persons.⁷ This method provides, according to Gingras, ‘a global representation of the evolving conversation going on in the Republic of Letters and in intellectual and scientific fields’.⁸ Building on this definition, an even more detailed picture can be provided if, in addition to cited persons, also cited books are aggregated in epistolary networks. This allows, for example, for an analysis of co-citational pairs of person and books. That means that if certain persons are often referred to together with certain publications (whether they contributed to them or not), this may provide evidence that there is a link between these as well. In addition, as highly cited individuals give us a clue about the actors involved, their emergence and disappearance over time, highly cited books can indicate the themes of interest of scholars, the number of books involved and their dissemination over time. This, however, will be the subject of analysis in the next paragraphs.

Another significant research that draws from social network analysis has been conducted by Mark Granovetter who has discussed “the strength of weak ties” in connecting distant scholarly communities. According to this pioneer of network analysis, weak ties function as bridges between distinct tightly-knit communities for a faster distribution of ideas across the entire network.⁹ When two scholars have a strong tie they generally know the same people and have access to the same information. Weak ties, on the other hand, move in different circles and are thus a greater source of new ideas and information. Consequently, a network that has more weak ties is more likely to be dynamic

7 Yves Gingras, “Mapping the Structure of the Intellectual Field using Citation and Co-citation Analysis of Correspondences,” *History of European Ideas* 36 (2010). See also Marcus Gmür, “Co-citation analysis and the search for invisible colleges: A Methodological Evaluation,” *Scientometrics* 57:1 (2003).

8 Gingras, “Mapping the Structure of the Intellectual Field”, 330.

9 Mark S. Granovetter, “The Strength of Weak Ties,” *American Journal of Sociology* 78:6 (1973).

and innovative. Granovetter's concept of weak ties has been very successful in both the social sciences and in historical studies. An example of this success is given by David Lux and Harold Cook who have claimed that 'the success of the natural philosophy in the Dutch Republic depended on the proliferation of weak ties'.¹⁰ They suggested that the nature of the weak ties indicates why scholars in the Dutch Republic were capable of doing excellent natural philosophy without having to be formally associated to a scientific society. While societies were characterized by its strong and robust ties between individuals – a closed circle – weak ties opened up the network to strangers, which required a minimal level of personal relationship. Without weak ties holding the network together, the network would dissolve and disappear.¹¹ In this respect, it is worth mentioning the article of Ruth and Sebastian Ahnert. By means of network visualizations, they were able to understand why, despite the systematic executions of protestants during the reign of Queen 'bloody' Mary I of England (1516-1558), it was impossible to restore the catholic faith. The protestant religion persisted for the disappearance of key figures did not affect and fragment the protestant network, whose infrastructural backbone was held together by few well-connected figures that continued the flow of ideas.¹²

Many of these networks only partially cover the exchanges of knowledge that are attributed to the Republic of Letters. In the Republic of Letters knowledge was not just transferred by letters, but by a variety of objects, mainly books. A step in this direction is provided by Dan Edelstein and Glauco Mantegari, who, in the context of the project *Mapping the Republic of Letters* of Stanford University, visualized the places of Voltaire's publications – including data on false, fictitious, and unknown imprints – on a geographical map.¹³ By comparing data on publications that were illegally published with networks observed in letters, they could notice, for example, to what extent Voltaire's correspondence was related to complications in the printing of his editions. Although a geo-spatial representation of objects presents itself as a promising tool, it does not say anything about the distribution and circulation of the books themselves.

10 David L. Lux and Harold Cook, "Closed circles or open networks? Communicating at a distance during the scientific revolution," *History of Science* 36:112 (1998).

11 See also Daniel Margócsy, "A Long History of Breakdowns: A Historiographic Review" (abstract for Breaking Scientific Networks Conference, Davis, April 25, 2014, accessed January 5, 2017, <http://www.breakingscientificnetworks.info>).

12 Ruth Ahnert and Sebastian E. Ahnert, "Protestant Letter Networks in the Reign of Mary I: A Quantitative Approach," *ELH* 82: 1 (2015).

13 "Voltaire's places of publication (1712-1800), accessed December 28, 2016, <http://republicofletters.stanford.edu/case-studies/voltairepub.html>.

If we want to consider books as active participants in the scholarly network, an approach that consists of multiple overlapping networks may be a valuable aid. In this, I build further on the concept of “deep networks” as proposed by Charles van den Heuvel who, inspired by the term “deep maps” coined by David Bodenhamer, introduced the concept of “deep networks” to discuss the potential of hybrid combinations of networks.¹⁴ In the next paragraph, we look at the advantages and limitations of these deep networks, examining how they function and what kind of questions can be addressed with them.

3 From one-layered networks to multi-layered networks

Complex multi-layered structures have received much attention from the community of sociologists, but in historical research the implementation of multi-layered networks is relatively unexplored.¹⁵ The reason why multi-layered networks are predominantly used in social sciences is because it presents a more accurate description of real systems. The complexity reached by the society calls for an approach that takes into account a whole series of different networks in order to understand the bigger picture of its functioning. Research based on single-layered networks would, on the other hand, entail a simplification of the real-world, ignoring the evolving complexity of present-day society. This, of course, applies to both past and present; the only difference is that the past presents us with more fragmentary and uncertain data. Consequently, historical sources render full data integration impossible. The question, then, is how we can reconcile the incompleteness and complexity of historical sources with the required precision of digital technologies.

The use of multi-layered networks is a powerful tool to tackle both complexity and fragmentation in historical data. When creating networks using relational data, we are often confronted with situations where we lack information about the details of their multi-layered structure. In such situations, an approach that allows us to integrate and combine data from

14 Charles van den Heuvel, “Mapping Knowledge Exchange in Early Modern Europe Intellectual and Technological geographies and Network Representations,” *International Journal of Humanities and Arts Computing* 9:1 (2015): 95. See also Scott Weingart, Nils Spelt and Charles van den Heuvel, “Circles of Confidence in Correspondence: Modeling Confidentiality and Secrecy in Knowledge Exchange Networks of Letters and Drawings in the Early Modern Period,” *Nuncius* 31:1 (2016).

15 See, for instance, Antonios Garas, ed., *Interconnected Networks* (London: Springer, 2016); Mika Kivelä et al., “Multilayer networks,” *Journal of Complex Networks* 2 (2014); Stefano Boccaletti, “The Structure and Dynamics of Multilayer networks,” *Elsevier Physics Reports* 544:1 (2014).

different sources may offer a more complete picture of the network in question. When the name of a book is mentioned in a letter, for example, it is the underlying data that makes the citation interesting. This is especially true in times of censorship where scholars had to be careful when sharing detailed information with others. With regard to these troubled times, questions that book-citations in letters might raise are: What was the religious conviction of the author of the book? Was the book enlisted on the Index of Prohibited Books? Is it a theological treatise on faith or rather a book on natural history?

In answering these questions, we have to look at how different types of nodes work together in the network. Single-layered networks can only support one type of node per network. This means that we can either connect books to other books, the sender and the receiver and persons that are co-cited together, but it is difficult to connect senders and books in the same network, let alone connect the author to a book that is cited in a letter. An explorative approach that assists the step-by-step creation of multi-layered networks might constitute an important step to understand these more complex relations between different node types.¹⁶

The creation of multi-layered visualisations will become clear in the following visualizations, which are created by means of the tool *nodegoat*.¹⁷ Starting from a single-layered network, a letter exchange between two correspondents can be visualized as follows. In fig. 1, the yellow node represents the sender, the purple node the receiver and the light-blue nodes represent four letters exchanges between 1673 and 1674. Although these kinds of representations present us with a clear picture of the structure of the scholarly network – by highlighting the volume and intensity of the correspondence – it still hinders a more systematic exploration of the content of these letters. Letters constitute often a rich array of node types: mentioned people and books all connect to each other via a complex network (fig. 2).

16 On the complications of k-partite networks see Shawn Graham, Ian Milligan and Scott Weingart, *Exploring Big Historical Data: the Historian's Macroscopic* (London: Imperial College Press, 2016), 208–211.

17 The tool *nodegoat*, developed by LAB1100, is a web-based data management, network analysis and visualization environment (<http://nodegoat.net> from LAB1100, <http://lab1100.com>). On the possibilities of this tool, see Pim van Bree and Geert Kessels, "Trailblazing Metadata: a diachronic and spatial research platform for object-oriented analysis and visualisations" (paper presented at the conference Cultural Research in the Context of Digital Humanities, St Petersburg, October 3–5, 2013).

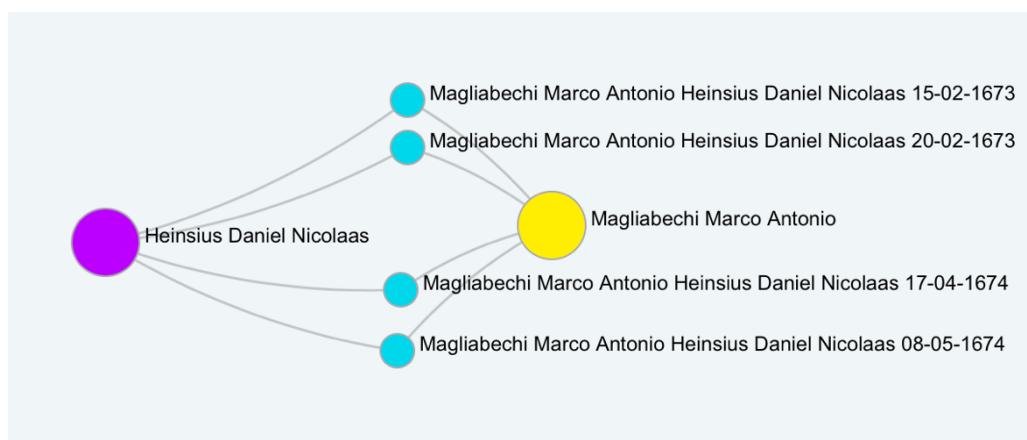


Figure 1. Epistolary Network Magliabechi-Heinsius. Sender: yellow; receiver: purple; letters: light-blue.

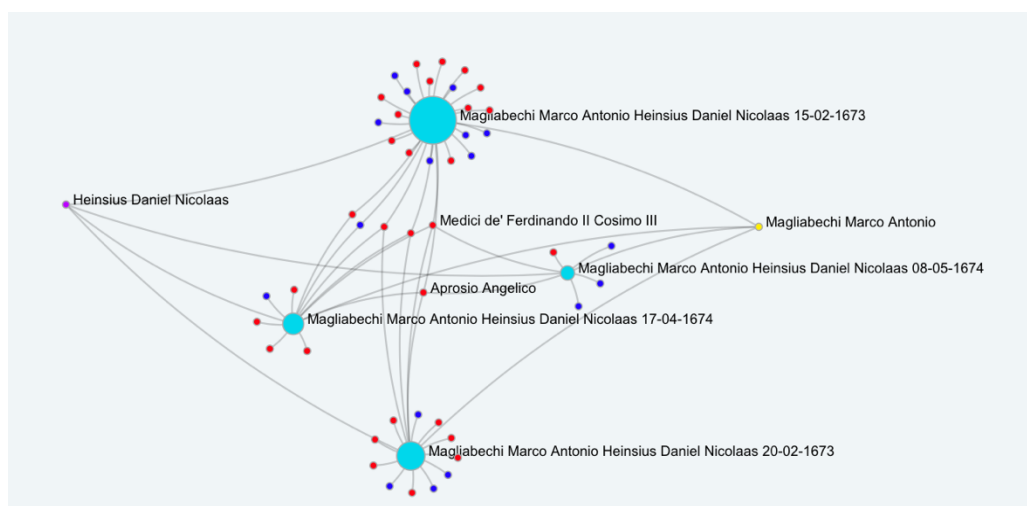


Figure 2. Epistolary network Magliabechi-Heinsius. Sender: yellow; receiver: purple; letters: light-blue; cited books: dark-blue; cited persons: red.

Fig. 2 is generated from the same network as the previous representation, only now enriched by data on books (dark blue) and persons (red) that are cited in these letters. Overlap in data shows us books and persons that are mentioned repeatedly in more than one letter and the amount of them mentioned per letter. To reveal more information about the network, every node in the network is defined by its biography or, in the case of books, by its publication history. As such, a cited book in a letter is related to information about the printer, the author, the subject and whether the book was enlisted on the Index. This information enriches the network for it does not necessarily derive from the content of the letter, but from the intrinsic network of the content itself. These data are registered as attributes or metadata of the nodes, providing pieces of contextual information that complete the network.

So, the cited books, for their part, can lead to a range of different kinds of nodes and edges that all play a fundamental role in its circulation. When new data are added the overlap of the multi-layered network changes, resulting potentially in new answers and other questions (fig. 3):

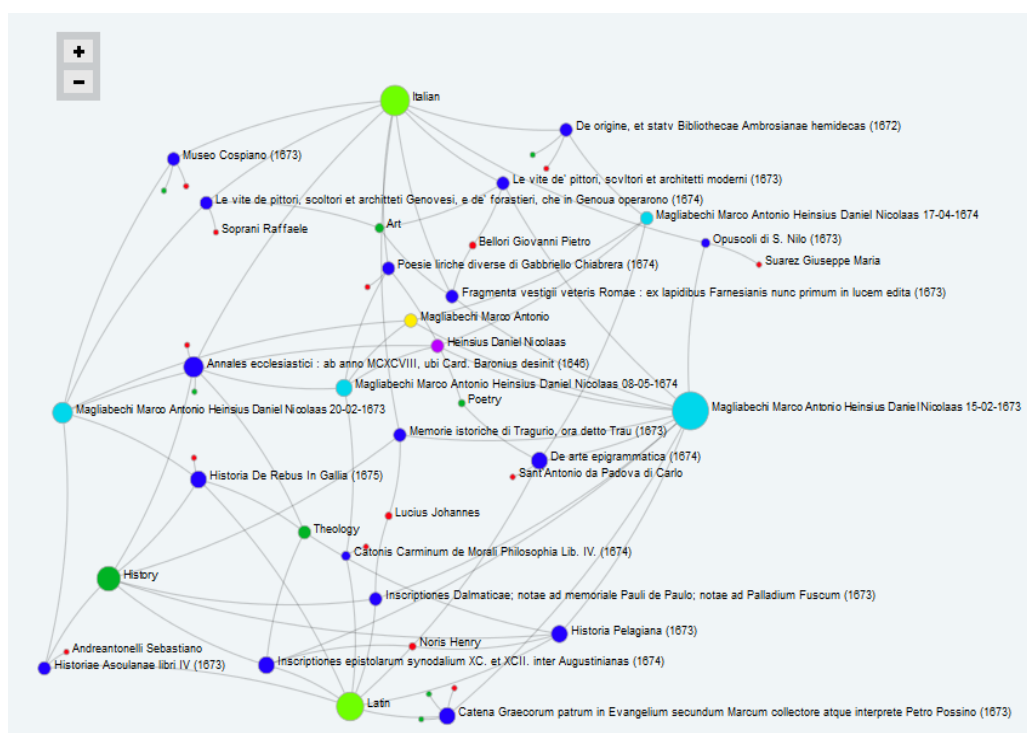


Figure 3. Epistolary network Magliabechi-Heinsius. Sender: yellow; receiver: purple; letters: light-blue; cited books: dark-blue; authors: red; subject: dark-green; language: light-green.

Figure 3 shows a complex, multi-layered network that consist of layers of several networks combined together in one interface, in which nodes appear in at least one of these layers. Within each layer, the nodes are instances of the same type, while the networks correspond to different categorical connections between those nodes, which are represented by different colors. As such, the sender (yellow) and the receiver (purple) form the first network as they wrote letters to each other (light-blue) in which books are mentioned (dark-blue) written in a language (light-green) by an author (red) on a certain subject (green). The multi-layered network enables to analyze these configurations at the same moment and how its interaction on different layers change over time. Consequently, the multi-layered network constitutes a dynamic network in which nodes appear and dissappear along the timeline.

It can be debated whether complexity should be added to a network that in the first place is intended to simplify our perception of society. When the network graph grows in its complexity, it becomes more difficult to analyze the network in terms of network metrics. In explaining the usability of bimodal networks, Scott Weingart pointed out that ‘more categories lead to a richer understanding of the diversity of human experience, but are incredibly unhelpful when you want to count things’.¹⁸ In other words, by creating a dataset with a large variety of nodes, it becomes harder to capture the meaning and the structure of the graph. Nevertheless, an approach that allows us to explore a dataset in various, overlapping configurations enhances the legibility of the network. Nodegoat is designed to propose interactive visualizations, rather than to assist statistical analysis. Instead of focusing on algorithms, it functions as a navigational tool with which we can add, remove, filter and visualize historical data in various configurations in order to explore more complex questions.

In multi-layered networks each different layer represents an isolated, but, interconnected network from the set of networks that describe the whole set of correspondence. This implies that every layer can be analyzed separately, or in hybrid combinations with other networks, making it possible to add, edit and to remove data where needed. This continuous process of interaction with data allows for more critical readings and levels of interpretation. Consequently, this approach stands close to methods of “digital hermeneutics”. Digital hermeneutics, understood as the encounter between classic hermeneutics and digital technology, has challenged the way we interpret historical sources, and, on some level, also ourselves. On facing this challenge, Capurro writes:

“The task of hermeneutics in the digital age is twofold, namely to think digital and at the same time to be addressed by it. The first task leads to the questions about the impact of the digital code on all kind of processes, in particular societal ones. (...) The second task refers to the challenge of the digital with regard to the self-interpretation of human beings in all their existential dimensions, particularly (...) their understanding of history, their imagination, their conception of science, their religious beliefs.”¹⁹

18 Scott Weingart, “Networks Demystified 9: Bimodal Networks,” *The Scottbot Irregular*, January 21, 2015, <https://scottbot.net/networks-demystified-9-modality/>.

19 Rafael Capurro, “Digital Hermeneutics: an Outline,” *All & Society* 25:1 (2010). Accessed January 14, 2017, <http://www.capurro.de/digitalhermeneutics.html>. See also Geoffrey Rockwell and Stéfán Sinclair, *Hermeneutica. Computer-Assisted Interpretation in the Humanities* (Cambridge/London: The MIT Press, 2016).

An approach that allows the researcher to combine multiple networks of data in a continuous process of interaction, self-awareness and interpretation, may bring these tasks closer.

As multi-layering brings classic hermeneutics and digital technology together, the same applies for close and distant reading. Because multi-layering helps us to curate data step by step it allows us to move easily between close and distant reading, mixing traditional historical research with network analysis. The approach of distant reading aims to visualize or map the structure of more letters by applying digital tools. Close reading, on the other hand, is the in-depth reading of the content of the letter, which is also known as the equivalent of traditional research methods.²⁰ Both methods have their strengths and weaknesses; with close reading one often tries to hypothesize overarching theories from a very limited sample of letters while with distant reading one may identify overlapping data based on a larger set of letters, but it often results in a loss of the contextual information that a close reading can reveal. Ideally, historical research should switch smoothly between distant and close reading that are complementary, rather than contradictory:

“The important next step is combining the distant and the close reading, mixing traditional historical research with the newer quantitative studies. The combination holds the promise of a new historical synthesis, a *longue durée* history more firmly grounded in the sea of as-yet-disconnected micro- and meso-histories we often find ourselves trudging through”.²¹

Thus, both readings should interact to strengthen historical interpretations. I would like to call this combination “disclose reading” whose implementation will become central in the next paragraph on the role of books in the epistolary network of Nicolaas Heinsius.

4 Networks of Books in the Correspondence of Nicolaas Heinsius

In this paragraph the life and career of Nicolaas Heinsius (1620-1682), and the way his Italian network of contacts and books functioned, will be discussed. Nicolaas Heinsius is predominantly remembered for his magnificent library and his philological studies of editions of Ovid, Claudian, Flaccus and Virgil. He was the son of the famous poet and Leiden classicist Daniel Heinsius (1580-1655) whose name guaranteed, to a large extent, the fortune and respectability of Nicolaas in the scholarly community. Heinsius

20 Franco Moretti, *Close Reading* (London/New York, Verso, 2013).

21 Scott Weingart, “The Networked Structure of Scientific Growth,” *The Scottbot Irregular*, February 22, 2012, <http://www.scottbot.net/HIAL/index.html?p=12050.html>, 29.

profited from the recommendations made by his father and his circle of friends throughout his stays in Italy, securing him admission to libraries, private collections and courts.

In 1646, Heinsius went for the first time in Italy to collate ancient manuscripts of Roman texts in the most prominent libraries of Florence and Rome. Like his two predecessors, the Dutch philologists Johannes Fredericus Gronovius (1611-1671) and Isaac Vossius (1618-1689), who were subsequently in Florence in 1641 and 1643, Heinsius preferred Florence to other Italian cities. In Florence, he visited the *Biblioteca Medicea Laurenziana* where he consulted important manuscripts of, amongst others, Flaccus, Virgil and Ovid, which appear to have been implicitly used in his later revised editions. During the summer of 1652 Heinsius returned to Italy, this time in the service of Queen Christina of Sweden (1626-1689), to find and buy rare manuscripts for Christina's private library.²²

During his stays in Florence, Heinsius took part in the intellectual life of the city, expanding his elaborate network of learned and literary contacts all over Italy. He was made member of the famous *Accademia della Crusca* by prince Leopoldo de' Medici (1617-1675) and was elected president of the *Accademia degli Apatisti*, both literary academies in Florence where he was responsible for proposing linguistic problems for discussion.²³ After his visits, Heinsius continued to correspond with most of the learned men he had met, becoming, in Gregorio Leti's (1630-1701) words, "one of the most prominent men of letters of the Universe".²⁴

Through these exchanges, Heinsius kept abreast of the latest scholarly publications, works in progress, controversies and discoveries in Italy. This information about books, also called "news of the Republic of Letters", often amounted to bibliographical reports containing detailed lists of publications which had recently appeared from the press. Despite the circulation of literary journals, which began to appear in Europe at the beginning of the seventeenth century, the circulation of these letters remained by far the most important medium of access to literary knowledge. Heinsius used this information

22 On Heinsius role as book scout for Queen Christina of Sweden, see Frans F. Blok, Nicolaas Heinsius in dienst van Christina van Zweden (Delft: Ursulapers, 1949): 127-184. Remarkably, however, apart from this study, no other major study has so far been devoted to his varied scholarly and cultural activities.

23 Henk Th. Van Veen and Andrew P. McCormick, *Tuscany and the Low Countries; an introduction to the sources and an inventory of four Florentine libraries* (Florence: Centro Di, 1985): 29-30.

24 Gregorio Leti to Nicolaas Heinsius, n.d., Leiden University Library (UBL), Special Collections, Bur F 7: "Uno de' maggiori letterati dell'Univero".

primarily to gather material for his own studies, as is illustrated by a letter the Florentine scholar Lorenzo Panciatichi (1635-1676), wrote to him in 1674:

“I take the opportunity to send you a brief rapport about a newly discovered sepulcher in Rome, knowing that you will appreciate this literary news for it is correlated with your edition of Ovid, which is so eruditely commented upon by Your Illustrious Lordship for the benefit of the entire Republic of Letters”.²⁵

More important, as can be also read from this passage, Heinsius’ books were conceived as precious contributions to the Republic of Letters. Consequently, the fame of his editions often guaranteed him an entrée in a new correspondence network. This is corroborated by a letter the librarian of the Medici family, Antonio Magliabechi, wrote to Heinsius in 1671:

“Many years I have nurtured the desire to dedicate myself to be a servant of the pen, which deep in my heart I have always been. From being a little child, I don’t know how, I was fortunate to have your beautiful Latin poetry at hand. I was never tired of reading them, always discovering new beauties within them”²⁶

These passages alone attest the important role of books in the correspondence of Nicolaas Heinsius. Likewise, a representation of his network should take this into account. In the following visualisation, both books and letters are integrated in a unified, temporal network. The reconstructing of this network required a combination of archival work and computational methods. The 159 letters that form the basis of this visualisation are all extant in the University Library of Leiden. The letters are written by 23 Florentine scholars between 1648 and 1675. In fig. 4, cited books in the letters (light-blue) written by Heinsius’ Florentine correspondents (red) are shown in dark-blue and Heinsius’ publications are shown as black nodes. What emerges from this data is a large network that consists of 437 nodes and 701 edges.

25 Panciatichi to Heinsius, April 18, 1674, UBL, BUR F 7, f. 3: “Piglio ardine d’inviarle una breve relazione d’un nuovo sepolcro scoperto adesso a Roma, sapendo quanto le siano grate queste nuove letterarie in correlazione col suo Ovidio che con sì gran beneficio di tutta la Republica Letteraria è stato da V.S.Ill.ma così eruditamente illustrato”.

26 Magliabechi to Heinsius, October 9, 1671, UBL, BUR F 7: “Che sono molti anni che nuttivo un ardentissimo desiderio di dedicarmele servidore con la penna, come le sono stato sempre col cuore, da quel tempo, che essendo piccol fanciullo, per mia buona sorte, mi capitavano non so come alle mani, le sue bellissime, e Latinissime Poesie, le quali non mi sazziauo di leggere, scoprendo sempre in esse nuove bellezze”.

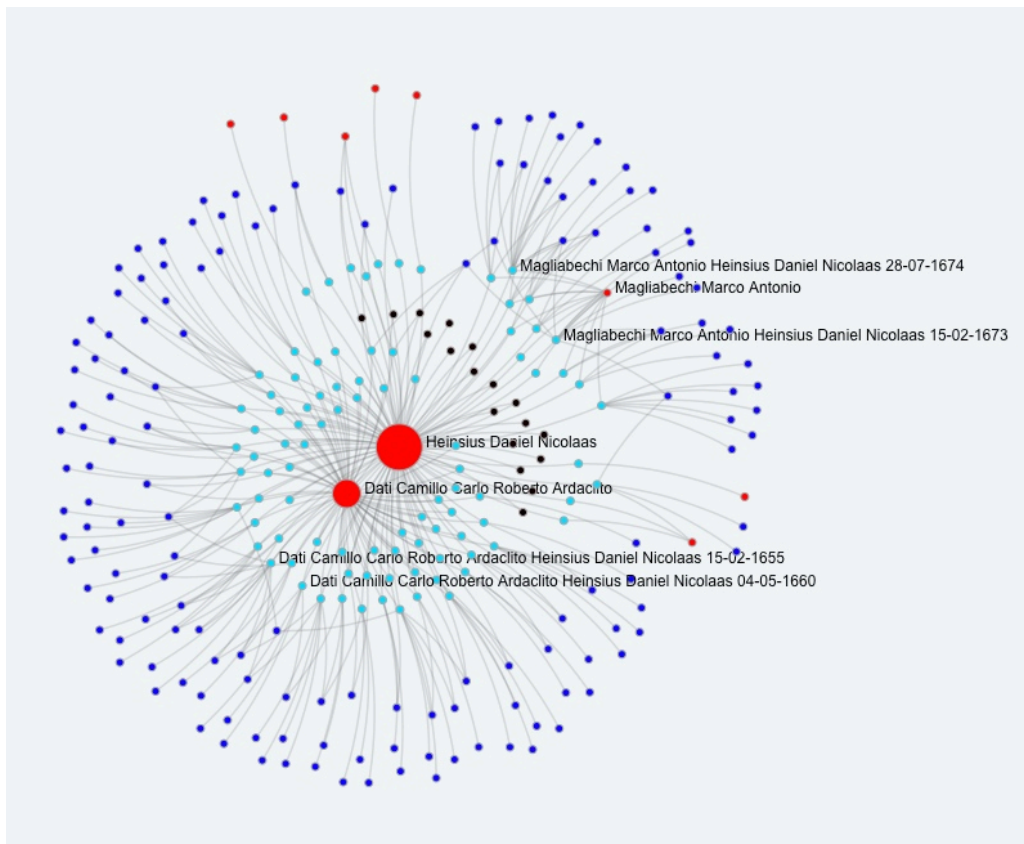


Figure 4. Eistolary Network of Heinsius and his Florentine contacts (1648-1675). In these years, Heinsius received letters (represented in light-blue) from 9 contacts which are shown in red. In these letters, books were mentioned which are shown in dark-blue. The visualisation is dominated by the books mentioned in the correspondences from Dati and Magliabechi.

The visualisation immediately reveals an apparent structure: Heinsius relied mainly on the intermediation of two Florentine scholars, Carlo Dati (1619-1676) and Antonio Magliabechi to receive books and news about the latest publications from Italy. Covering a period of about 30 years, the consecutive correspondence of Dati and Magliabechi sheds light on almost the entire career of Heinsius.

Enriching this network with Heinsius' publications, which were retrieved automatically from the Short Title Catalogue of the Netherlands, reveals Heinsius' *modus operandi* in gathering information and material for his publications.²⁷ The temporal dimension of the network shows when the books relevant for the research of Heinsius were mentioned in relation to his own publications (fig. 5).

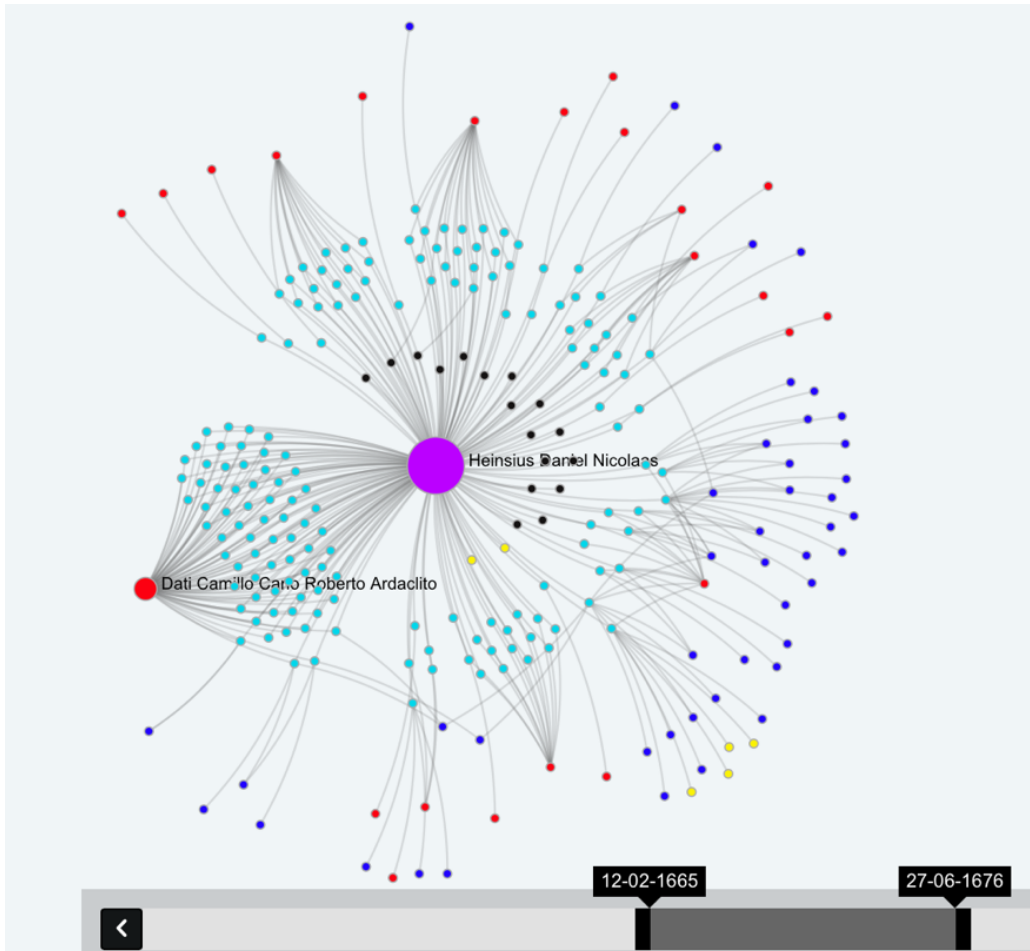


Figure 5. Epistolary Network Heinsius-Magliabechi-Dati. Sender: red; receiver: purple; letters: light-blue; cited books: dark-blue; Heinsius' publications: black; Editions Flaccus: yellow

27 The Short Title Catalogue of the Netherlands (STCN) is the Dutch bibliography for the period 1540-1800. "Short Title Catalogue of the Netherlands," accessed January 14, 2017, <http://picarta.nl/DB=3.11/>. Data from the STCN can be retrieved using SPARQL ("Virtuoso Sparql Query Editor," accessed January 14, 2007, <http://openvirtuoso.kbresearch.nl/sparql>).

Consider Heinsius' editions of Flaccus, for example, which were published in 1680 and, posthumously, in 1702. Figure 5 shows that, besides these two editions (the two yellow nodes in the center), four other editions were previously mentioned in a letter written by Magliabechi (four yellow nodes at the bottom of the visualisation). This highlights that Heinsius started to collect his material many years before its publication. While a temporal multi-layered visualisation in which both letters and books are combined highlights these connections, a close reading of the letter in question corroborates this:

"Concerning Valerio Flacco, commented by Batista Pio, Your Illustrious Lordship does not have to search for it anymore, because I have it among my books. I will definitely send the book to you, not only because you need it, but also because you preserve it forever in your library, begging you to thank me for receiving this gift."²⁸

5 The Decline of the Italian Book Network

The study of Heinsius' network can help us gain a better understanding of the rise and fall of Italy's publishing industry in the late seventeenth century. Towards the 1670s, Florence gradually lost the central position, both culturally and politically, it had occupied in the previous centuries. When Leopoldo de' Medici, founder of the scientific *Accademia del Cimento* and above all, a great collector of books, left Florence for Rome in 1667, the cultural and intellectual life of Florence went downhill. Moreover, the death of important scholars, also correspondents of Heinsius, as Carlo Dati, Andrea Cavalcanti (1610-1673) and Lorenzo Panciatichi, contributed to the cultural decline of the Grand Duchy of Tuscany in the second half of the seventeenth century.

Heinsius' Florentine correspondents lamented continuously the scarcity of books that circulated in Florence. All Dati, who once provided Heinsius with numerous lists of books and discoveries, could say was that "in Florence one does little, even nothing".²⁹ The same expression can be found in Magliabechi's letter to Heinsius, dated 28 July 1674:

"To fill this paper, I will notify some literary news from our Italy, which, however, I write to you with more tears than ink. They are of little consideration

28 Magliabechi to Heinsius, January, 5, 1671, UBL, BUR F 8, f. 1: "Circa al Valerio Flacco col Comento di Batista Pio, V.S.Ill.ma non ne cerchi più, poiché io l'ho tra miei Libri, onde lo manderò infallibilmente non perché ella se ne serva solamente, mà perche in eterno lo conservi nella sua Libreria supplicandola vivamente a farmi grazzia di riceverlo in dono".

29 Dati to Heinsius, October 13, 1674, UBL, BUR F 7, f. 58: "Qui in Firenze si fa poco, o niente".

because, as Your Illustrious Lordship knows well, nobody studies here on the true path.”³⁰

The correspondence network between Heinsius, Dati and Magliabechi confirms this: the thriving network of books (dark-blue) and letters (light-blue) that characterised the earlier years of Heinsius’ career drastically declined after the 1660s, and disappeared almost altogether after the death of Carlo Dati in 1676 (fig. 6):

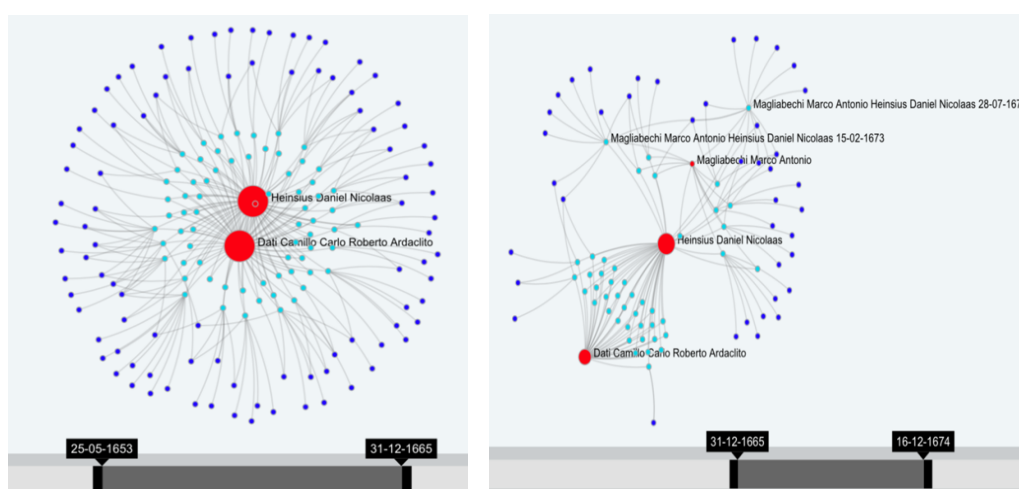


Figure 6. Epistolary Network Heinsius-Dati-(Magliabechi) 1653-1665 (left). Correspondents: red; letters: light-blue; cited books: dark-blue.

What remained of the once abundant flow of news from Italy, was a series of letters written by Magliabechi who tried to uphold the position of Florence in the Republic of Letters. While the librarian did not write anything himself, he served the scholarly community by circulating literary news, ideas and books. In the next paragraph we will take a closer look at Magliabechi’s role as an ‘information-broker’ to have a better understanding of his significance for Heinsius and the Dutch scholarly community.

30 Magliabechi to Heinsius, July 28, 1674, UBL, BUR F 8: “Per empier questo foglio, le avviserò qualche notizia Letteraria della nostra Italia. Per lo più saranno cose di pochissima considerazione, poiché come V.S.Ill.ma sa, il che scrivo più con le lacrime, che con l’inchiostro, qua non ci è sì può dire alcuno che studi per la vera strada”.

6 The Power to Command Knowledge

Despite the many difficulties in the Grand Duchy of Tuscany, Magliabechi continued to distribute as much as news and books he could because he had firmly embedded himself in a vast epistolary network throughout Europe. Rather than depending on the local Florentine and Italian market to obtain books, Magliabechi received and circulated news from the far corners of the European Republic of Letters. His correspondence, amounting to over 22.000 surviving letters in the National Library of Florence, took off in Paris in 1652, when he started to exchange letters on a regular basis with the French scholars Gilles Ménage (1613-1692) and Emery Bigot (1626-1689). They introduced him to other scholars in France, Germany and the Dutch Republic. Consequently, his network grew in importance as more scholars joined the network, and around 1675 his network began to evolve even more rapidly, until reaching its maximum extension around the 1690s. At that date, his network spanned 12 different countries, including more than 250 correspondents, most of which were residing in Paris and in Amsterdam.

By receiving, storing, and circulating recent knowledge of books and including in his network experts in different fields and from different countries to whom he could turn for help, Magliabechi was able to provide answers to many questions from scholars very quickly. Consequently, scholars from all over Italy sent their publications to Magliabechi who was able to inform other scholars about their work. This key role of Magliabechi, as an information broker between Tuscany and the Dutch Republic, becomes clear from the following visualisation (fig 7).

Fig. 7 consists of 264 letters (light-blue) written by Magliabechi to his Dutch correspondents between 1652 and 1714 (left). These letters are all extant in various libraries in the Netherlands (Leiden University, Royal Library of the Hague, Amsterdam University, City Archive Utrecht, Utrecht University). In addition, this visualisation contains the already discussed 159 letters written to Heinsius from his Florentine correspondents (right). The 12 letters between Magliabechi and Heinsius, written between 1671 and 1675, are represented in the center of this representation.

At a glance, fig. 7 reveals that many of the cited books (dark-blue) in the network have few, or even only one or two edges. In other words, Magliabechi rarely spoke of the same book in more letters and to different scholars. Consequently, each letter is a unique source of literary news. This clear pattern suggests that the spreading of literary news was a very organized, well-connected system. The letters of Magliabechi were often

read by more than one person, and sometimes even published in a scholarly journal.³¹ Dutch scholars forwarded Magliabechi's letters to fellow scholars all over the Dutch Republic.

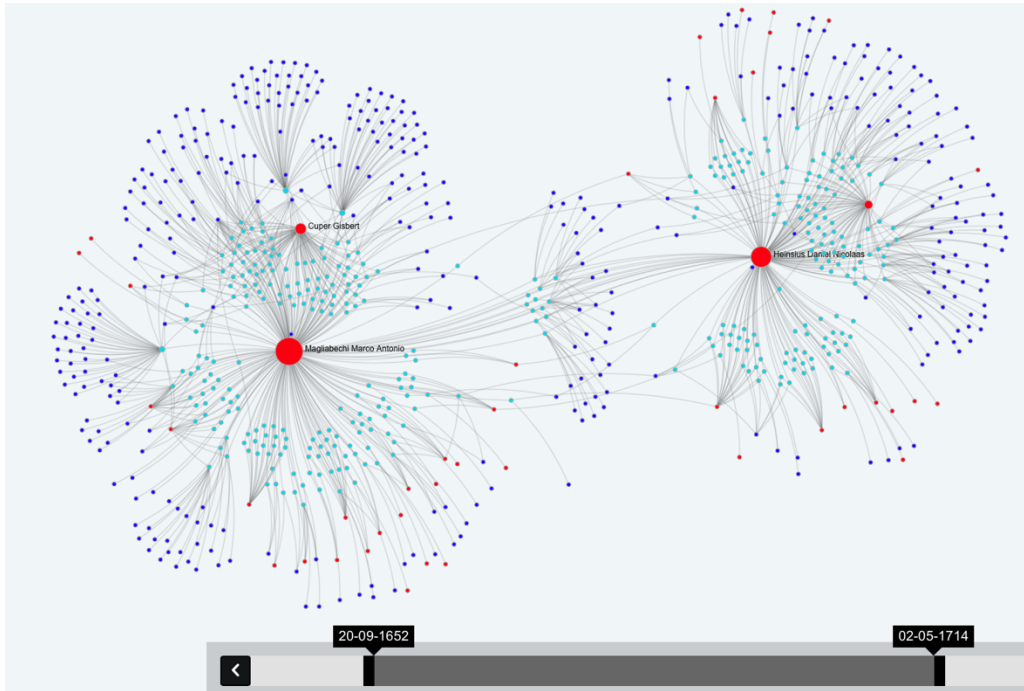


Figure 7. Epistolary Networks of Magliabechi (left) and Heinsius (right). Correspondents: red; letters: light-blue; cited books: dark-blue.

Consequently, they took note of Magliabechi communications with great interest. This becomes apparent from a letter Magliabechi wrote to a colleague of Heinsius, the historian Gisbert Cuper (1644-1716):

“Knowing that Spanhemio [Ezechiel Spanheim (1629-1710)] and Your Illustrious Lordship are good friends, I have included here a letter for him. I leave the letter

31 Pieter Rabus published Magliabechi's letters to Leeuwenhoek as 'Italiaansch Boeknieuws' (Italian Book News) in the Boekzaal van Europe in 1695, which was the first scientific journal published in the Dutch Republic (Matilde van Rijnberk, "De briefwisseling tusschen Leeuwenhoek en Magliabechi," in *Nederlands Tijdschrift voor Geneeskunde* 81 (1937).

open, because the literary news are identical to those I wrote to Your Illustrious Lordship.”³²

If we pay attention to Magliabechi’s overall communication strategy, including data on the subject of the books, one notices that Magliabechi adjusted his literary reports to each of his correspondents (fig. 8). To the scientist Antonie van Leeuwenhoek (1632-1723), for example, he communicated only about books on the natural sciences (shown as yellow nodes) while to Nicolaas Heinsius he discussed merely ancient poetry, philological and historical works (shown as dark-blue nodes). Fig. 8 underlines Magliabechi’s knowledge on every possible subject, ranging from latin and greek literature to astronomy and mathematics, again highlighting the success of Magliabechi as an important information broker in the Republic of Letters.

That books could lead to the creation of an epistolary network, is highlighted by means of the following visualisation (fig. 9) that provides a more detailed picture of the correspondence between Magliabechi and Heinsius. In fig. 9, multiple layers provide information on the authors (red), subjects (green) and dedicatees (pink) of all the cited books (dark-blue) in the letters (light-blue) between Heinsius and Magliabechi in the years 1671-1674. It appears that two of the 37 books that Magliabechi mentioned in his letters were dedicated to him: the *Inscriptiones epistolarum synodaliū* from the Medici’s theologian Henry Noris (1631-1704) and the *Prolusionum et epistolarum III* written by the archeologist Ottavio Ferrari (1607-1682).

Authors, even unfamiliar with Magliabechi, praised his name in the dedications and acknowledgments of their publications. Consequently, Magliabechi enlisted the names of the book in his literary reports, and occasionally sent the books when requested by his correspondents, that were read by a large part of the Dutch scholarly community, including Heinsius:

32 Magliabechi to Cuper, October 5, 1704, Royal Library of the Netherlands (KB), The Hague, Bijzondere Collecties, KW 72 D 12, ff. 68-70: “Sapendo che tra V.S.Ill.ma e il signore Spanhemio, passa grande amicizia, mi ardisco ad inviarle l'inclusa mia Letterina, per esso. La mando aperta, benché le novità Letteraria, sieno le medesime, che scrivo in questa mia, a V.S.Ill.ma”.

“Mr. Ferrari has brought to light the third part of his Prolusioni, e Lettere. The following is the title of the Book: Octavij Ferrarij Prolusionum et Epistolarum Pars tertia. Accessit Panegyricus Ludovico Magno Francorum Regi dictus. Editio secunda. Patavij typis Petri Mariae Frambotti 1674. in 4. Although I do not know this mr. Ferrati at all, I was surprised to see my name mentioned on page 148, and with much praise.”³³

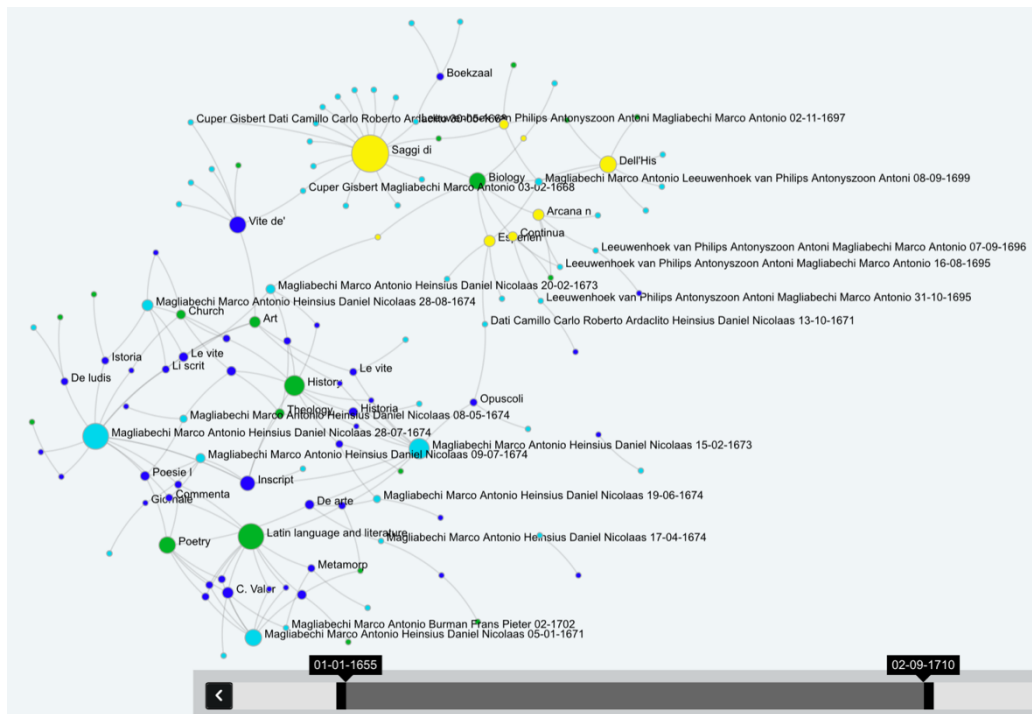


Figure 8. Epistolary network Magliabechi-Heinsius and Magliabechi-Leeuwenhoek. Letters: light-blue; cited books: dark-blue; subject: green/yellow.

- 33 Magliabechi to Heinsius, June 19, 1674, UBL, BUR F 8, f. 5: “Il Signor Ferrari ha data in luce la terza parte delle sue Prolusioni, e Lettere. Il seguente è il titolo del Libro. Ocatvij Ferrarij Prolusionum et Epistolarum Pars tertia. Accessit Panegyricus Ludovico Magno Francorum Regi dictus. Editio secunda. Patavij typis Petri Mariae Frambotti 1674. in 4. Io non conosco niente il detto Signor Ferrari, onde son restato non poco maravigliato, nell’avermi da esso veduto a carte 148 nominato, e con gran lodi.”

In this way, Magliabechi opened a window to Italy, connecting Dutch and Italian scholars through the books in his literary reports. Vice versa, it were not only Italians who dedicated their books to Magliabechi. In 1695, the Dutch scientist Antonie van Leeuwenhoek dedicated his Latin version of the *Arcana Naturae Detecta* to Magliabechi “in order that scholars both in Italy and elsewhere may become acquainted with my trifling labours”.³⁴ The practice of book dedication clearly illustrates a general habit of scholars to get admitted into an epistolary network: Leeuwenhoek started a correspondence with Magliabechi after his dedication.

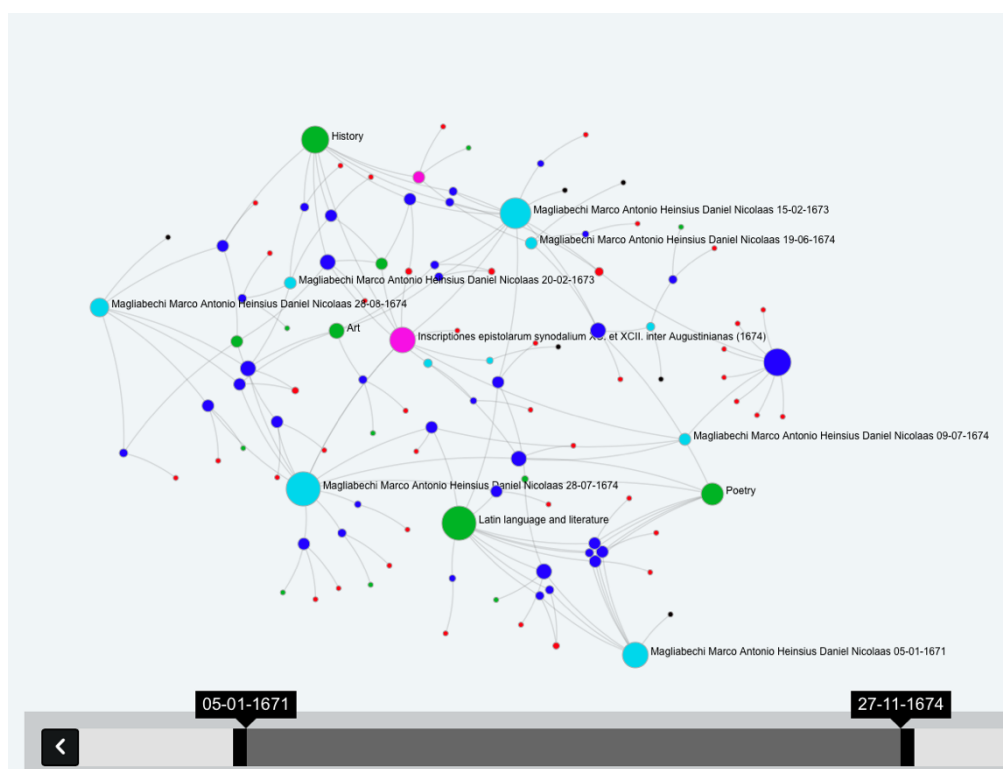


Figure 9. Multi-layered network Magliabechi-Heinsius. Letters: light-blue; cited books: dark-blue; subject: green; authors: red; dedications to Magliabechi: purple, prohibited books: black.

34 Leeuwenhoek to Magliabechi, August 16, 1695, in Lodewijk C. Palm, ed., *Alle de brieven van Antoni van Leeuwenhoek*. The collected letters of Antoni van Leeuwenhoek, XI, (1695-1696), Lisse: N.V. Swets & Zeitlinger, 1983, accessed January 12, 2017: http://www.dbnl.org/tekst/leeu027allen_01/leeu027allen_01_0007.php: “Quum autem reliquae a me scriptae epistolae nunc etiam Latino idiomate sint impressae (ut Viri Docti, cum in Italia, tum alibi, participes reddantur vilium meorum laborum, qui in exteris regionibus pluris fiunt, quam sperare unquam sustinueram) mihique visum fuerit eas Celeberrimo Tuo nomini inscribere.”

Vice versa, books could endanger the epistolary network when placed on the *Index Librorum Prohibitorum*. In fig. 9 prohibited books are shown as black nodes. Magliabechi often asked his correspondents not to share the contents of the letter with others, especially if the contents contained delicate information on books that were not allowed to circulate. There is, for example, a letter of 1699, in which Magliabechi asked his correspondent to print a profane work of one of his friends. To keep this secret, he had to “tear up this letter immediately after reading it, because no single soul, at any time, may ever see this letter, as I write to you in extreme secrecy and confidentiality.”³⁵ So, prohibited books could ostacolate and endanger the relationship between correspondents. For example, The *Sant’Ufficio* could take advantage of this information and hinder the circulation between the correspondents. In addition, unauthorized circulation may betray the confidence of the sender, resulting in the break-up of their network. The representation of prohibited books may highlight these dynamics. For now, this is still in its early stages, but further research may (or may not) confirm this.

7 Conclusion

Because of the hybrid nature of epistolary networks and the lack of earlier studies that are undertaken to represent this complexity, this article proposed an interactive approach to deal with multiple kinds of data. In studying the networks that held the Republic of Letters together, we are often confronted with situations in which multilayering can be useful. The Republic of Letters was not a single community that merely consisted of corresponding scholars but constituted a dynamic society in which all kinds of objects were exchanged.

Amongst these objects, early modern scholarly correspondence revolved mostly around books. Books dominated the content of letters in the shape of literary reports – or “news from the Republic of Letters” – that informed scholars about the most recent publications, debates and works-in-progress. These literary reports, for their part, shaped and influenced new publications. We saw, for example, how Heinsius used his correspondence with Magliabechi as a means to collect material for his latin editions. This was possible because multilayering allowed us to integrate both letters, cited books and Heinsius’ own publications in the same network, identifying as such the possible sources and ideas Heinsius used in preparing his own work.

Books were not only a source of information, but they have to be considered as active nodes in the network for they could both establish and

35 Magliabechi to Huguetan, 1699, UBL, Pap 15.

impede relations between correspondents. We saw, for instance, that dedications and the fame of one's publications could often guarantee an entrée in a network. A case in point was illustrated by one of the first letters Magliabechi wrote to Heinsius in which he expressed his admiration for Heinsius' latin poetry, speaking of how he would be honoured to become his "servant of the pen". Another example included Leeuwenhoek's dedication of the *Arcana Naturae Detecta* to Magliabechi which resulted in a regular correspondence between the two shortly after the dedication.

In a similar fashion, books could impede and endanger networks when, for example, placed on the Index of Prohibited Books. The mentioning of a prohibited book in a letter may result in a conflict between correspondents when discovered by influential authorities as the *Sant'uffizio*. Multi-layered networks, which can include both data and metadata about publications, can highlight how dangerous publications interact with letters over time. I have left the exact outcome open for now but further research may provide a precise answer to these dissolving networks.

The visualizations and observations in this article, taken together, aimed to show not only what we can discover about the epistolary networks of Nicolaas Heinsius and Antonio Magliabechi but also, more generally, how multi-layered networks can transform the way we interact with historical data. Multi-layering enhances the interoperability of data, allowing the user to explore the network from multiple configurations and changing perspectives. This interactive building of hybrid networks mediates between traditional hermeneutics and digital technology, between close and distant reading.

The two methods for distant and close reading are in continuous interaction with each other. While distant reading will uncover how relations are represented and constructed, sometimes reinforced and sometimes transformed, close reading focuses on the specific features that have influenced those dynamics. Vice versa, one could identify several interesting angles for in-depth research and comparison of processes occurring in societal developments directed by a richer version of the properties of the networks (for instance, which names and objects are co-cited in letters). In other words, distant reading makes it possible to find the right places where to close-read. This brings us back to the title of this article – Mapping the book: using multi-layered networks to *disclose* the Republic of Letters – which silently underlines the paramount importance of this combined methodology in historical research: disclose reading.

References

- Ahnert, Ruth and Sebastian E. Ahnert, Protestant Letter Networks in the Reign of Mary I: A Quantitative Approach, in: *ELH* 82(1), 1-33.
- Berkvens-Stevelinck, Christian, Hans Bots, and Jens Häsel, *Les grands intermédiaires culturels de la république des lettres: études des réseaux de correspondances du XVIe aux XVIIIe siècles*, Paris 2005..
- Bethencourt, Francisco and Florike van Egmond, *Communication and Cultural Exchange in Europe, 1400–1700, vol. 3, Cultural Exchange in Early Modern Europe*, Cambridge 2007.
- Blok, Frans F., *Nicolaas Heinsius in dienst van Christina van Zweden*, Delft 1949.
- Boccaletti, Stefano, The Structure and Dynamics of Multilayer networks, in: *Elsevier Physics Reports* 544(1) (2014), 1-122.
- Bots, Hans and Françoise Waquet, *La république des lettres*, Paris 1997.
- Bree, Pim van and Geert Kessels, Trailblazing Metadata: a diachronic and spatial research platform for object-oriented analysis and visualisations, Paper presented at the conference Cultural Research in the Context of Digital Humanities, St Petersburg, October 3-5, 2013.
- Capurro, Rafael, Digital Hermeneutics: an Outline, in: *All & Society* 25(1) (2010): 35-42. <http://www.capurro.de/digitalhermeneutics.html>.
- Furey, Constance M., *Contarini and the Religious Republic of Letters*, Cambridge 2008.
- Garas, Antonios, *Interconnected Networks London*, London 2016,
- Gingras, Yves, Mapping the Structure of the Intellectual Field using Citation and Co-citation Analysis of Correspondences, in: *History of European Ideas* 36 (2003), 330-339.
- Gmür, Marcus, Co-citation analysis and the search for invisible colleges: A Methodological Evaluation, in: *Scientometrics* 57(1) (2003), 27-57.
- Grafton, Anthony, A Sketch Map of a Lost Continent: The Republic of Letters, in: *Republic of Letters: A Journal for the Study of Knowledge, Politics, and the Arts* 1 (2009), 1-18.
- Graham, Shawn, Ian Milligan and Scott Weingart, *Exploring Big Historical Data, the Historian's Macroscopic*, London 2016.
- Granovetter, Mark S., The Strength of Weak Ties, in: *American Journal of Sociology* 78(6) (1973), 1360-1380.
- Heuvel, Charles van., Mapping Knowledge Exchange in Early Modern Europe Intellectual and Technological Geographies and Network Representations, in: *International Journal of Humanities and Arts Computing* 9(1) (2015), 96-114.
- Kivelä, Mika et al., Multilayer networks, *Journal of Complex Networks* 2: (2014), 203–271.
- Lux, David L. and Harold Cook, Closed circles or open networks? Communicating at a distance during the scientific revolution, in: *History of Science* 36(112) (1998), 179-211.

- Margócsy, Daniel, *A Long History of Breakdowns: A Historiographic Review*, Abstract for Breaking Scientific Networks Conference, Davis, April 25, 2014. Accessed January 5, 2017. www.breakingscientificnetworks.info.
- Mauelshagen, Franz, Networks of Trust and Imagined Community of the Learned, in: *The Medieval History Journal* 6(1) (2003), 1-32.
- Miert, Dirk van, Concluding Observations on Communicating Observations, in: *Communicating Observations in Early Modern Letters (1500-1675): Epistolography and Epistemology in the Age of the Scientific Revolution*, edited by Dirk van Miert, London 2013, 223-247.
- Moretti, Franco, *Close Reading*, London/New York 2013.
- Rijnberk, Matilde van, De briefwisseling tusschen Leeuwenhoeck en Magliabechi, in: *Nederlands Tijdschrift voor Geneeskunde* 81 (1937), 3146-3159.
- Republic of Letters Stanford, *Voltaire's places of publication (1712-1800)*, Accessed December 28, 2016. <http://republicofletters.stanford.edu/case-studies/voltairepub.html>.
- Rockwell, Geoffrey and Stéfan Sinclair, *Hermeneutica. Computer-Assisted Interpretation in the Humanities*, Cambridge/London 2016.
- Stolzenberg, Daniel, A Spanner and his Works: Books, Letters, and Scholarly Communication Networks in Early Modern Europe, in: *For the Sake of Learning: Essays in Honor of Anthony Grafton*, edited by Ann Blair et al., Leiden 2016, 157 – 172.
- Veen, Henk Th. van and Andrew P. McCormick, *Toscany and the Low Countries: an Introduction to the Sources and an Inventory of Four Florentine Libraries*, Florence 1985.
- Weingart, Scott, Nils Spelt and Charles van den Heuvel, Circles of Confidence in Correspondence: Modeling Confidentiality and Secrecy in Knowledge Exchange Networks of Letters and Drawings in the Early Modern Period, in: *Nuncius* 31(1) (2016), 78-106.
- Weingart, Scott,. Networks Demystified 9: Bimodal Networks, in: *The Scottbot Irregular* (2015). <https://scottbot.net/networks-demystified>.
- Weingart, Scott, *The Networked Structure of Scientific Growth*. <http://www.scottbot.net/HIAL/index.html?p=12050.html>.

**SHAFIE, TERMEH; SCHOCH, DAVID; MANS,
JIMMY; HOFMAN, CORINNE; BRANDES,
ULRIK**

Hypergraph Representations: A Study of Carib Attacks on Colonial Forces (1509-1700)

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network analysis, directed hypergraph, centrality, colonization,
Caribbean ethnohistory

Abstract

Network data consisting of recorded historical events can be represented as hypergraphs where the ties or events can connect any number of nodes or event related attributes. In this paper, we perform a centrality analysis of a directed hypergraph representing attacks by indigenous peoples from the Lesser Antilles on European colonial settlements, 1509-1700. The results of central attacks with respect to attacked colonial force, member of attack alliances, and year and location of attack are discussed and compared to a qualitative analysis of the data. This comparison points to the importance of a mixed methods approach to enhance the analysis and to obtain a complementary understanding of a historical network study.



1 Introduction*

The study of networks commonly involves a set of actors or nodes, where ties are defined on the so called dyadic domain consisting of all possible pairs of nodes. These networks are represented by undirected or directed graphs, depending on whether the ties have a direction or not. There are however situations where supra-dyadic relations involving more than just two nodes need to be represented. For example, in the study of a collaboration network, the cooperation between actors may comprise of more than pairs. Analyzing this network as a simple graph would require the transformation of ties into two-way collaborations, thus losing information on the joint effort by multiple actors. Networks defined on the supra-dyadic domain can instead be represented as a hypergraph, which generalizes the notion of graphs. In a hypergraph, the ties, or the so called hyperedges, comprise of more than just two nodes that are potentially of different kinds. Put differently, a tie in a simple graph connects pairs of nodes, whereas a hyperedge connects a non-empty subset of nodes. Following the example on collaborations, a hyperedge can connect more than two nodes as part of a team. Other examples of applications include co-authorship networks (Han et al. 2009) and food webs represented as competition hypergraphs (Sonntag and Teichert 2004).

Historical data with complex event structures can be represented as hypergraphs in order to construct a narrative based on correct sequencing of events (Bearman, Moody and Faris 2002; Bearman 2015). In this paper, we use a hypergraph representation to analyze post-colonial attack data from the Caribbean interpreted by Holdren in the 1990s. Studying the history of the indigenous Caribbean from a network perspective has previously been employed in Hofman and Hoogland (2012); Mol and Mans (2013); Mol (2013); Hofman et al. (2014); Mol, Hoogland and Hofman (2015). The use of hypergraphs in this context is less established with the exception of the work by Bonacich, Holdren and Johnston (2004) where a notion of centrality for undirected hypergraphs is introduced and applied to attack data on colonial settlements Holdren (1998). Bonacich, Holdren and Johnston (2004) refer to their data as doubly supra-dyadic since more than two islands can be involved in an attack and each attack involved a year. With respect to these attributes, they aim to find the most central attacks. In this paper, we extend this analysis and use directed hypergraphs in order to distinguish between attack source

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Corresponding author: Dr Termeh Shafie, Department of Computer & Information Science, University of Konstanz, 78457 Konstanz, Germany, e-mail: termeh.shafie@uni-konstanz.de

(alliances) and target (colonial settlement) given year and location of attack. We further explore the meaningfulness of the centrality results to shed light on the intense colonization period in the Lesser Antilles.

The organization of this paper is as follows. In Section 2 we present some historical background on the region of study and the data acquisition. Hypergraph representation of the data is introduced and shown in Section 3 followed by a centrality analysis in Section 4. The centrality results are compared to a more qualitative analysis of the data in Section 5 and in the final section we discuss limitations and extensions of the presented approach.

2 Data on Carib Attacks

The *Carib*¹, alleged migrants from the South American mainland, inhabited many islands of the Lesser Antilles when Europeans first navigated to the New World. The Spanish conquest of the Greater Antilles started an over 400 year period of colonization in the Caribbean with effects that still remain apparent today (Hofman and Hoogland 2012). This conquest had a more devastating impact on the economic, social and political organization of the indigenous societies there than what followed in the Lesser Antilles. The factors underlying this difference in repelling European colonists included strategic military responses taking place over a longer period of time in the Lesser Antilles and are further discussed and compared in Wilson (1993; 1997) and Beckles (2008).

European encounters in the Greater Antilles commenced with Columbus arrival in 1492 where the main focus was on Hispaniola, which was deemed as spawning more gold, followed by other islands including Puerto Rico. When Puerto Rico was conquered in the first decade of the 16th century, Carib encounters with the Spanish became more frequent in the Lesser Antilles. These encounters included reciprocal raids between Puerto Rico and Carib from the northern Lesser Antillean islands, and two unsuccessful attempts by the Spanish to colonize Guadeloupe. The following century reflected a strong Carib resistance against Spanish attacks and it was not until the first decades of the 1600 that more persistent and direct pressure came from the English, French, and Dutch initiating their colonies. These colonies were different than those of the Spanish in the Greater Antilles, the Europeans were now better supplied, less dependent on the indigenous people and more interested in

¹ The term Carib connects to the terminology used in the historical sources. Note however that we are aware of the complexity and the historical bias of the term used; the descendants of whom currently refer to themselves with the autonym Kalinago in Dominica and as either Kalinago or Garifuna on St Vincent (see Hulme and Whitehead, 1992,)

forcing the locals off their land to use it for crops (Wilson 1997). For example, the English established settlements on St Kitts (1623), Barbados (1627) and Antigua, Nevis and Montserrat (by 1635), while the French occupied part of St Kitts (1625), Dominica (1632), Martinique and Guadeloupe (1635). By mid 1700, the relations held between the English and the French with the indigenous populations were however very different. While the French integrated with the Carib society and achieved a closer relationship with the Caribs, the interest of the English was merely to exploit the lands for sugarcane plantations (Fraser 2014).

As the European colonization of the islands in the Lesser Antilles progressed, the indigenous peoples joined in alliances to resist the colonizing forces and to regain their independence. These alliances were also tainted by European rivalry and at times European factions allied with the indigenous population for strategic purposes. Holdren (1998) uses network analysis to model social exchange in Carib alliance networks after the European colonization. For this reason, she focused explicitly on Carib attacks on the European colonists, and therefore not including attacks the European colonists made on the indigenous inhabitants for which the latter in most cases simply retaliated. Her analysis shows that alliances between the Eastern Caribbean islands became more centralized as the European colonization progressed.

Bonacich, Holdren and Johnston (2004) developed a special network approach and applied it to data recorded in Holdren (1998) to assess centrality of attacks made by aggressive alliances, where alliances are defined as at least two islands or Amerindian groups joining against Europeans or other Amerindians. These two references are the core of the analysis in this paper. The 56 attacks recorded in Holdren (1998) and used in Bonacich, Holdren and Johnston (2004) are for our purposes further augmented and made less ambiguous. Augmentation is done by including more data points from Holdren (1998) listed as attacks on European colonists (that is, we do not only consider the aggressive alliance data) and by including attacks on Tobago as mentioned in Boomert (2002; 2016). The ambiguity is reduced by checking the source reference from where the data was originally recorded. For instance, in some situations the attack location is not given or the general term *Caribs* is used as part of an alliance but without indicating the island they are from. When going through source references, we clarified these kinds of question marks concerning the data. This clarification was done with the aim to have all observations comparable. Thus, we only included them in our data set if the following attributes of the attacks (of which we know the specific islands) are given: attacker, attacked colonial force, location of attack, and year of attack. These source references include de Rochefort (1666); Southey (1827); Barome (1966); Whitehead (1988), see Holdren (1998) for the complete list.

The augmented data resulted in 95 observations on attacks on five European settlement groups (French, English, Spanish, Dutch, and Courish) between 1509-1700. We do however note that the attacks that happened in the 16th century are underrepresented in the present data (see e.g. Murga Sanz 1971; Alegría 1981; Moreau 1992; Sued Badillo 1995; Huerga 2006). The region of study is depicted in Figure 1 where islands part of an attack coalition or location are labeled, and can thus be used as a visual reference for the forthcoming narrative in Section 5. The members of alliances are shown in a network in Figure 2. A tie is present if two islands were part of the same alliance and the strength of ties represent the number of co-occurrences. As seen from Figure 2, Dominica and St Vincent appeared most often in a coalition together. We return to this observation for our analysis in Section 4 and 5.



Figure 1. A map over the Lesser Antilles where the labeled islands are part of the data.

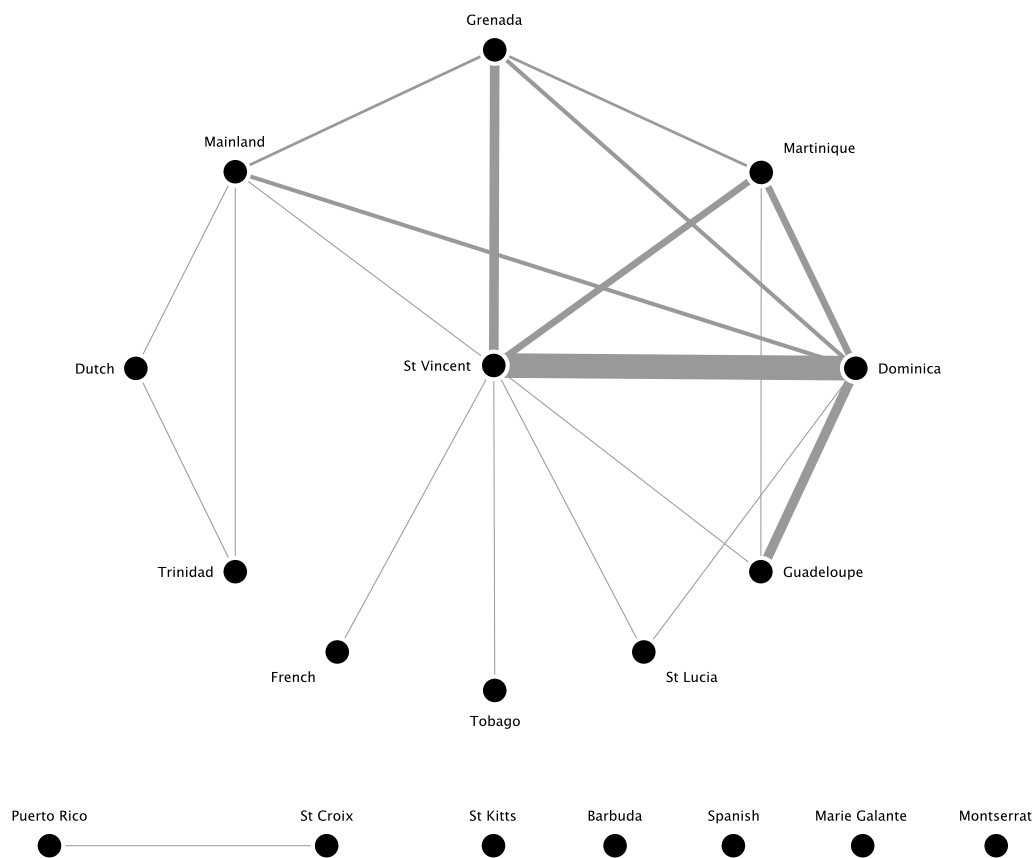


Figure 2. Alliance network where the strength of a tie indicates frequency of co-appearances in a coalition.

Following the approach of Bonacich, Holdren and Johnston (2004), we use the presented data to perform a centrality analysis of attacks on colonial settlements. This is done by using a directed hypergraph representation of the attack network data introduced.

3 Networks on Dyadic and Supra-Dyadic Domain

Networks are commonly represented by undirected or directed graphs consisting of a set of actors or nodes, with ties connecting pairs of nodes. These pairs of nodes are the dyads and the variables under study when analyzing network structural properties. Network data structures with a supra-dyadic property can instead be represented as a hypergraph where the ties, or hyperedges, represent an event under study. The hyperedges can connect any number of nodes, where each node corresponds to a situational attribute to the

event. These attributes may for example be location and time for where and when the observed hyperedge took place, and important to consider for obtaining a richer descriptive picture regarding formulated research questions. These questions may for instance concern detecting the central events or central attributes of the event.

In Figure 3, two attacks from the data described in Section 2 are represented as an undirected and directed hypergraph. In the undirected representation, the two hyperedges include time of attack and the islands involved, where no distinction is made between the source and target island of attack. The directed hypergraph, however, does take this distinction into account. Here the directed hyperedges indicate who the attackers and attacked colonial forces are, while also considering coalition members together with location and year of attack.

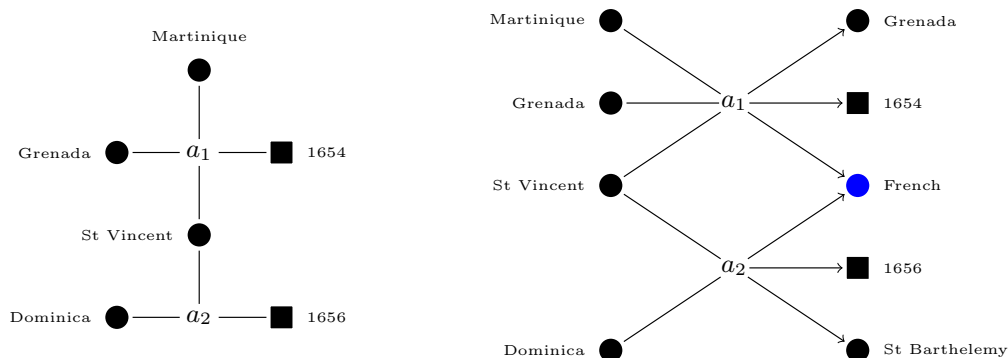


Figure 3. Two attacks (a_1 and a_2) from the Carib data represented as undirected hyperedges considering attack location and year of attack (left), and as directed hyperedges considering source of attack (alliance), target of attack (the French), and location and year of when and where the attack took place.

For a dyadic binary network with n nodes and m ties, an $n \times n$ adjacency matrix is a common representation form, where two nodes are called adjacent if they are connected by a tie. An alternative way is to use an $m \times n$ incidence matrix, where two ties are called incident if they share a node. The rows of an incidence matrix for a dyadic network only has two non-zero entries since ties only have two nodes at each end. For an undirected network, these non-zero entries take on value 1 to indicate a tie, while for a directed network, these entries are either -1 or 1 to distinguish between the source and target of a tie.

An incidence matrix can also be used to represent hypergraphs. For the undirected case, each row has at least two non-zero entries since multiple nodes can be assigned to a hyperedge. The incidence matrix for the undirected hypergraph in Figure 3 is denoted E and given by

$$E = \begin{array}{c|cc} & \text{islands} & \text{years} \\ \hline & \begin{array}{cccc} 1 & 1 & 1 & 0 \end{array} & \begin{array}{cc} 1 & 0 \end{array} \\ \begin{array}{c} a_1 \\ a_2 \\ \vdots \end{array} & \begin{array}{cccc} 0 & 0 & 1 & 1 \end{array} \dots & \begin{array}{cc} 0 & 1 \end{array} \dots \\ & \vdots & \vdots \end{array}$$

where the rows correspond to attacks a_1 and a_2 , the first group of columns indicates the islands involved in the attack, and the following group of columns refers to year of attack. The incidence matrix for the directed hypergraphs in Figure 3 is denoted E_d and given by

$$E_d = \begin{array}{c|cccc|cc|cc|ccccc} & \text{islands} & & \text{locations} & & \text{years} & & \text{attacked} \\ \hline & \begin{array}{cccc} -1 & -1 & -1 & 0 \end{array} & & \begin{array}{cc} 1 & 0 \end{array} & & \begin{array}{cc} 1 & 0 \end{array} & & \begin{array}{ccccc} 1 & 0 & 0 & 0 & 0 \end{array} \\ \begin{array}{c} a_1 \\ a_2 \\ \vdots \end{array} & \begin{array}{cccc} 0 & 0 & -1 & -1 \end{array} \dots & & \begin{array}{cc} 0 & 1 \end{array} \dots & & \begin{array}{cc} 0 & 1 \end{array} \dots & & \begin{array}{ccccc} 1 & 0 & 0 & 0 & 0 \end{array} \\ & \vdots & & \vdots & & \vdots & & \vdots \end{array}$$

where the rows correspond to attacks a_1 and a_2 , the first columns are members of alliances initiating the attack as indicated by entries -1, followed by columns representing the location where the attack took place (Grenada and St Barthelemy), followed by columns for year of attack (1654 and 1656), and finally, followed by columns for the colonial force under attack (French, English, Spanish, Dutch, and Courish). Note that the islands in the first set of columns may be repeated in the location columns to circumvent hyper-loops which occur when the same island involved in the attack also represents the attack location.

An incidence matrix can be converted into an adjacency matrix by multiplying the incidence matrix by its transpose, which is called a one-mode projection. This is commonly done for affiliation or two-mode networks in order to obtain one adjacency matrix for the actors, and one for the groups that the actors are affiliated with.

In the next section we present the centrality approach of Bonacich, Holdren and Johnston (2004) which is based on incidence matrix E shown above, and its corresponding adjacency matrices obtained via one-mode projections EE^T and E^TE . Further, we extend this approach for calculating centrality scores in directed hypergraph using incidence matrix E_d .

4 Centrality Analysis

Bonacich, Holdren and Johnston (2004) show how the concept of network centrality can be adapted to supra-dyadic networks using the incidence matrix E . In particular, they show how to conceptualize eigenvector centrality in hypergraphs. Eigenvector centrality of a node is defined as a linear combination of the centralities that the node is connected to. This recursive characterization can be solved by means of eigenvector decomposition of the symmetric square matrices EE^T and E^TE . Formally, this is given by

$$EE^T = X\Lambda X^T \quad (1)$$

$$E^TE = Y\Lambda'Y^T \quad (2)$$

where X and Y are matrices with columns representing eigenvectors, and Λ and Λ' are diagonal matrices with eigenvalues. In the application of Bonacich, Holdren and Johnston (2004), the first column of X corresponds to centrality scores for attacks, and the first column of Y corresponds to scores for islands and years. More technical details can be found in Bonacich (1991) and Bonacich, Holdren and Johnston (2004).

In the application to Caribe attacks, Bonacich, Holdren and Johnston (2004) consider 56 attacks on colonial settlements involving 22 islands and during 29 years between 1509 to 1700. Thus, the incidence matrix E has the form shown in the previous section. They obtain the centrality scores for attacks, islands involved and years by using the eigenvectors corresponding to the largest eigenvalues of EE^T and E^TE . Their results can be summarized as follows. The most central islands involved in attacks were Dominica and St Vincent, and the most central years of attack are around 1650. Regarding island centrality, the authors do however note that the most active islands were the ones colonized in the later time periods. For both cases the authors additionally note that centrality scores are positively correlated with the frequencies of islands involved in attacks, and the years that the attacks took place. For instance, Dominica was involved in 39 of the 56 attacks, thus being the most active island in the data set. Moreover, the greatest number of attacks took place between 1640 and 1652. These observations show that the need for a sophisticated centrality concept is not given in the present context since simple degree based measures would yield the same results.

As an extension to the work by Bonacich, Holdren and Johnston (2004), we illustrate how to calculate centrality scores for the augmented data described in Section 2. This data set includes more attribute variables connected to the attacks, while also accounting for the direction of hyper-edges to separate islands that are the source of attacks and the islands that are the target location of attacks. We perform a singular value decomposition (SVD) directly on the incidence matrix E_d which is typically much sparser than its one-mode projections. The centrality scores for attacks are given by the first left-singular

vector and for attack attributes by the first right-singular vector, respectively. Put more formally,

$$E_d = UDV^T$$

where the columns of U are the left-singular vectors, V are the right-singular vectors, and D is a diagonal matrix of singular values. The singular vectors actually are the eigenvectors of the one-mode projections in Equation (1) and (2), that is

$$\begin{aligned} EE^T &= X\Lambda X^T = UD^2U^T \\ E^TE &= Y\Lambda'Y^T = VD^2V^T. \end{aligned}$$

The calculated centrality scores for each of the four attack attributes are shown in Figure 4 and the following is noted. The most central colonial force under attack were the French, closely followed by the English. The two most central locations where attacks took place were Antigua and Grenada. The two most central islands who were members of a coalition were Dominica and St Vincent. Finally, the most central year of attack is 1654 which is shortly before 1660 when the English and French signed a treaty leaving the islands neutral and in control of the indigenous inhabitants (Honeychurch 2000). Both of these results are consistent with those of Bonacich, Holdren and Johnston (2004), but our analysis can distinguish between source (alliance members) and target (location and attacked colonial force) of attacks.

As already noted by Bonacich, Holdren and Johnston (2004) and mentioned above, centrality scores are positively correlated with observation frequencies. The greater the number of observations for an attack attribute, the higher its centrality will be. This phenomena is also apparent in our results. Figure 5 illustrates this correlation for the four different scores measured. As seen, a strong positive linear correlation is present in all cases. The smallest error terms are seen for the top right figure showing members of coalitions and indicating that centrality here is strongly determined by how active participants are in forming attack coalitions. If an island participates in many alliances, it will receive a high centrality score. On the contrary, the highest deviations from the fitted lines in Figure 5 is noted for the two bottom cases. This can also be interpreted as centrality having a stronger explanatory power for attack year and attack location since observational frequencies are not as influential in determining centrality here. In other words, there is more confidence in interpreting 1654 and Antigua as the most central attack year and attack location, than it is to interpret the French as the most central colonial force under attack and Dominica-St Vincent as the most central alliance.

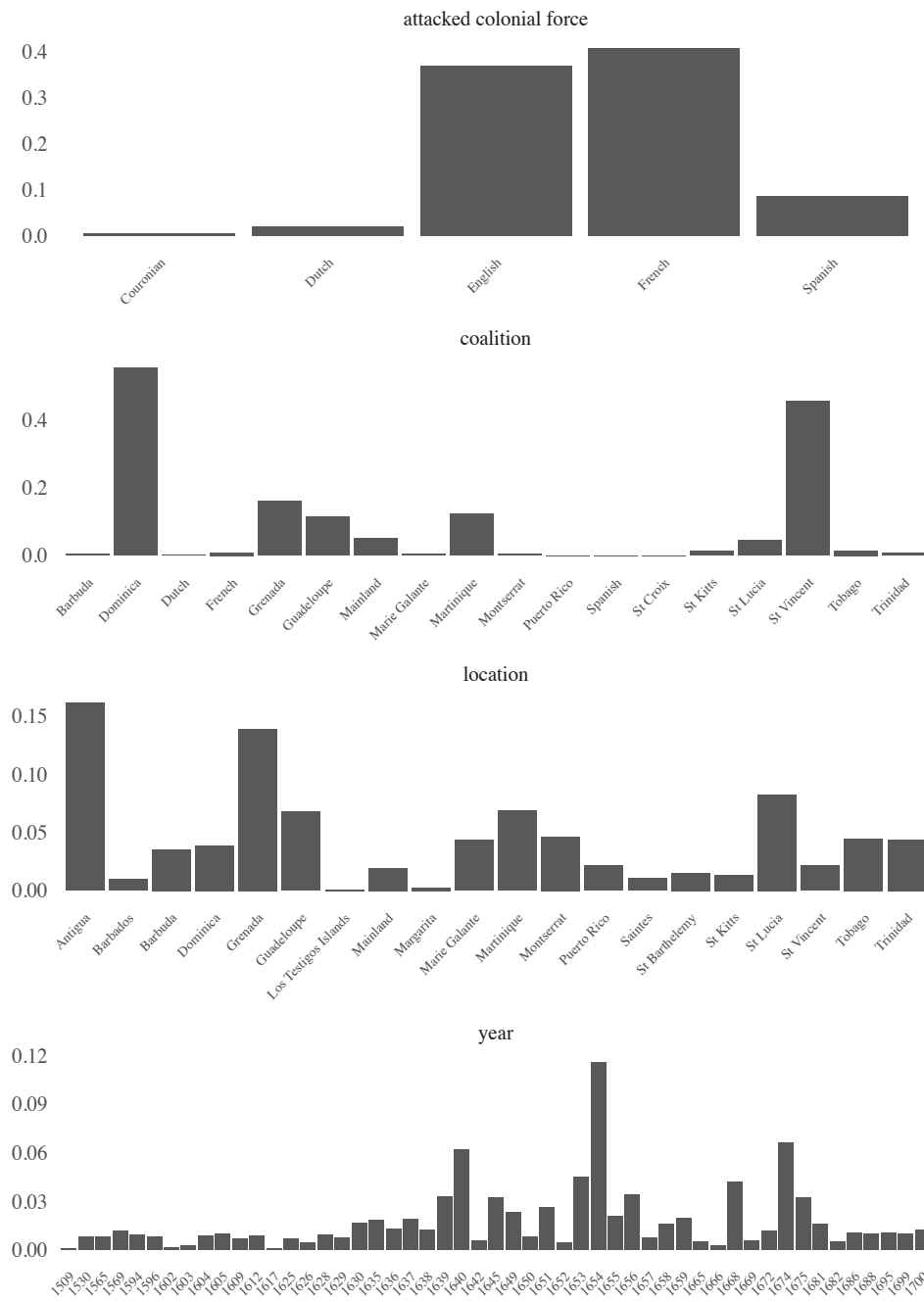


Figure 4. Centrality scores for attacked colonial settlements, attack alliance members, locations of attacks, and years of attacks.

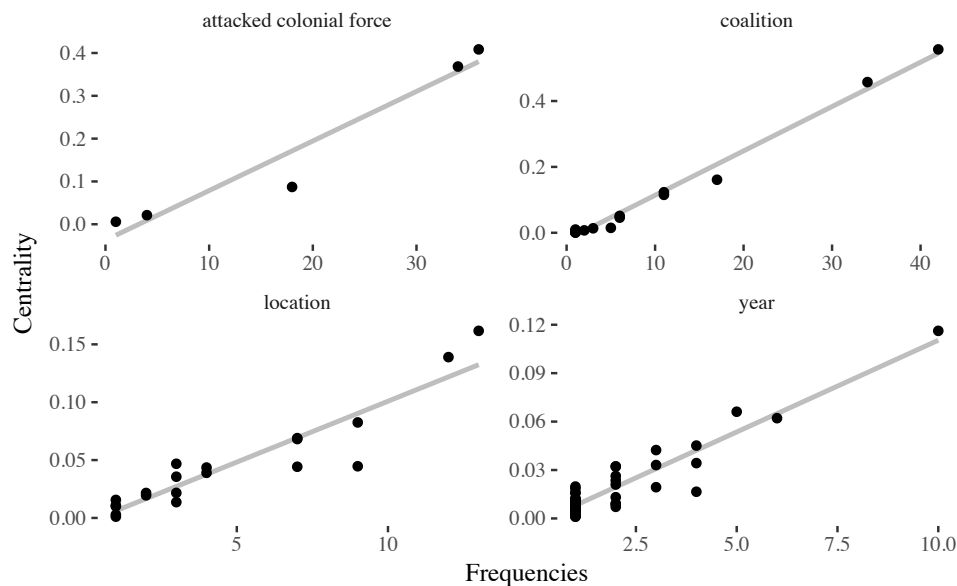


Figure 5. The linear correlation between centrality and frequencies of occurrences.

5 Further Exploration of the Data

In this section, we move away from the network perspective and treat attacks as individual events. The data is explored to find patterns that point to underlying processes which can explain the events.

Figure 6 shows the data in its entirety as an amalgamation of time lines split by source and target of an attack, and with marginal frequency plots. Dots on vertical time slices represent participation in attacks and the color of the dot indicates the attacked colonial force. Note that the islands are ordered top-down based on their geographical location north-south. Several trends consistent with historical facts are visible in Figure 6, some of which are mentioned in the following. As seen in Figure 6, we can roughly divide the time line into three periods 1500-1620, 1620-1660, and 1660-1700, with attacked colonial forces during these periods being the Spanish, the English and French, and the latter again in post-treaty context.

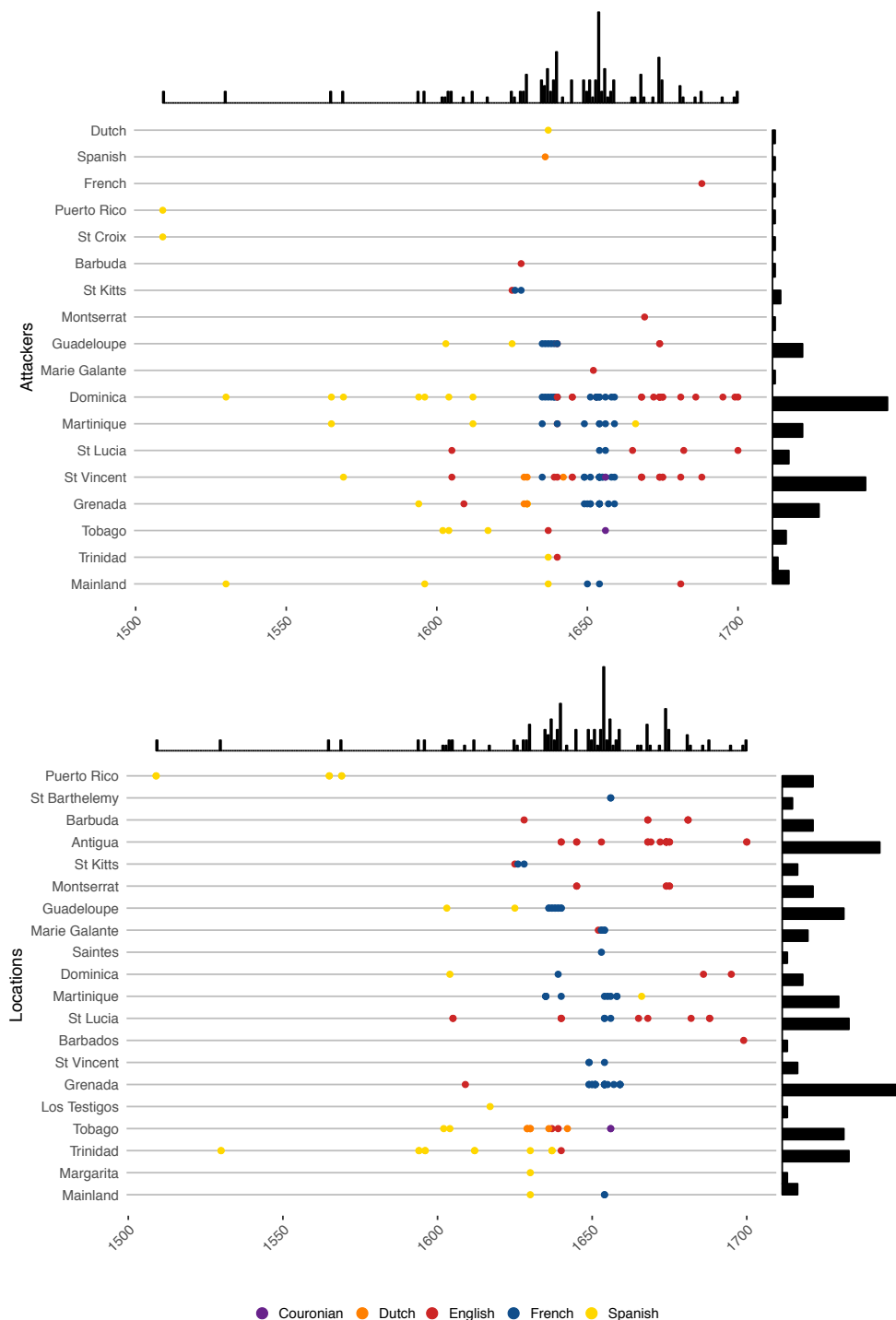


Figure 6. Time line of attacks by alliance members (top) and attack location (bottom) with marginal frequency distributions. Each dot represents an attack on a colonial force.

The first period reflects the presence of the Spanish as the sole main colonial force in the Lesser Antilles. Although they sporadically made efforts to gain ground in the east, the Spanish forces were more focused on the Greater Antilles; partly because they found the indigenous people there easier to subdue, and partly because they assumed the land to hold more gold and plantation prospects. Around the 1550s, the interest of French and English was increasing. English activity increased around 1580s with the goal of attacking the Spanish. They made landfalls in the Lesser Antilles with the main purpose of restocking and preparing for attacks in the Greater Antilles and the mainland coasts. Around 24 such landfalls are recorded between 1580-1600 (Wilson 1993; see also Moreau 1992). There were however unsuccessful attempts made by the English to establish permanent settlements in the Lesser Antilles, a few of which are visible in Figure 6. In 1605 the English attempted to colonize St Lucia but were swiftly repelled by Caribs living there and those arriving from St Vincent to counter attack. Similar resistance was met when the English aimed to colonize Grenada in 1609 (Wilson 1993). By 1610, the largest unconquered indigenous population inhabited also the largest of the Windward islands (Guadeloupe, Dominica, Martinique, St Lucia and St Vincent). They would participate in most of the resistance attacks to come in the following decades.

In the 1620s, the Dutch, French, and English became more successful in their colonizing missions and a battle intensive second period followed. As done against the Spanish in the 1500s, the indigenous population organized counter strategies to repel the Europeans. This organization included resettlement of Carib communities which the colonists took advantage of. The decreasing number of the indigenous population in parts of the Leeward islands, which already had experienced severe damage during the previous century, made them easy targets (Beckles 2008).

The more permanent English and French colonization began simultaneously on St Kitts where the two colonial forces split the island amongst themselves in 1625. The English part of St Kitts was used as a base for English colonization of the neighboring islands Antigua and Montserrat shortly after. In 1639, an English expedition to St Lucia was repelled and the year after the Caribs attacked English settlements in Antigua. The French part of St Kitts was used as a base to colonize the much larger Guadeloupe and Martinique in 1635, and St Martin and St Barthelemy in 1648. From Martinique the French colonized St Lucia in 1643 and Grenada in 1649, but failed to gain effective control in Marie Galante.

The third period 1660-1700 starts shortly after the peak seen in the bar charts on top of each plot in Figure 6. This peak reflects the increased intensity of the English and French colonizations giving rise to the highest number of counter attacks by the Caribs in 1654. When Carib women in Dominica got

molested by the French in 1653, and a year later a French trader in Saint Vincent misbehaved too, complete Carib outrage was reached. The latter event triggered a series of attacks in which the Vincentian Caribs went first in attacking the French on several islands, the counter attacks by the French adding oil to the fire. After the English in the 1640s had secured Antigua in the north, now predominantly the French started to close in on Carib territory by taking possession of the Carib islands of Marie-Galante, Saint Lucia, the Grenadines and Grenada, a strategic Carib location in movements towards the mainland. The French aggression, their ways to the North and South being blocked, and their strongholds of Dominica and Saint Vincent now being under threat too, seem to be the main reasons for the many Carib attack events for this specific year (du Tertre 1667; Boucher 1992). This was already noted in the centrality analysis of previous section with 1654 being the most central year. A decline of number of attacks followed after the French and English signed a peace treaty to leave Dominica and St Vincent to the Caribs as neutral territory (Boucher 1992; Honeychurch 2000).

Although a decline of attacks towards the French is seen in Figure 6 after the signing of the treaty, the number of attacks towards the English continues with Antigua being the most frequent attack location. The French had a closer relationship with the indigenous people, living among them, trading with them and providing them with military training (Fraser 2014). The English on the other hand focused on black slavery and sugar cultivation. This antagonistic relationship continued far into the 18th century.

As mentioned in Section 2 and also noted in Figure 2, European groups allied with the Caribs to prevent colonization attempts made by other nations. For example, in 1637 the Dutch allied with the Caribs on Trinidad to attack the Spanish, and in 1688 the French joined forces with the indigenous people to attack the English. This interaction did however come to end by the 18th century when the Caribs were forced into reserves on St Vincent and Dominica (Wilson 1997).

From the order of the alliance members and locations, we also see that the first period mainly involved islands in the north and south, with the islands in the center are involved in attacks during the later two periods. This is a noticeable feature prevalent in the data and not captured by the centrality analysis of the previous section. This north-south division reflects the Windward and Leeward Islands based on the prevailing trade winds blowing east to west. The center and more rugged islands were initially left 'neutral' because the larger part of the indigenous population of the Lesser Antilles was living there (and fleeing to), but potentially also because the lands were deemed less suitable for agricultural plantations. Dominica, however, despite being 'neutral' and one of the latest to be colonized, was the main place for

colonists to refresh after their transatlantic journeys because of favorable currents and winds bringing them there (Moreau 1992; Honeychurch 2000).

In summary and consistent with results from the centrality analysis, the most frequent members of alliances are Dominica and St Vincent, and the most frequent attack locations are Grenada and Antigua, as seen from the peaks in the frequency bar charts on the right of each plot. The nomadic nature of the Caribs resulted in St Vincent and Dominica being two of the more heavily populated islands. Since the European colonization mainly focused on the islands in the peripheral parts of Leeward and Windward, the surviving indigenous population moved towards the center. Moreover, from an organizational perspective and given the geographic location of these two islands, it is logical to hypothesize that Dominica and St Vincent worked as central hubs in the alliance network. However, in order to test this hypothesis, an approach needs to be taken in which centrality over time is not treated homogeneously. This and related topics are briefly discussed in the next section.

6 Discussion

We use a hypergraph representation to analyze Carib attacks on European colonialists, 1509-1700. The major advantage of this approach is to keep the data in its original shape, without transforming it to a more convenient form which may imply information loss. We extend the work of Bonacich, Holdren and Johnston (2004) to calculate centrality in directed hypergraphs and apply it on a more detailed data set of attacks. However, we show that for this data set, observational frequencies are positively correlated with centrality scores. This means that we do not get further insight by only relying on the centrality results and need to consider alternative methods for detecting apparent trends in the data. To that end, we compare the centrality results to a descriptive analysis of the attack data. For our particular data set, these descriptives give more insight to the underlying historical trends. For example, the different European forces become more evident and the pattern of the European conquests not only provides insight into the changing Carib reactions to European intrusion, but also makes patterns of the European conquests more visually pronounced.

This points to the importance of not only relying on network analytic methods, but to also consider non-relational analysis of the data in order to find the most suitable approach. Moreover, this comparison also indicates the relevance of a mixed methods approach for analyzing network data (Domínguez and Hollstein 2014; Bellotti 2014). Combining quantitative and qualitative methods in empirical research can provide a more thorough understanding of the contexts where the networks are created, and emphasizes the social reality in which networks are placed.

The attack data considered in our study is more heterogeneous than what the applied quantitative method in Section 4 allows for. The diversity in the alliance data is mainly temporal, but there are also strategic and opportunistic factors in how alliances formed over time. A static reading of the network over the whole period considered is therefore inadequate and a qualitative approach identifying these dynamics is needed. In Section 5, three time periods were distinguished and a further direction of the analysis could be to investigate the alliance network and calculate centrality scores with respect to these periods. In order to adapt the quantitative analysis to the trends apparent from the holistic reading of the data, more attack attributes can be included that account for the opportunistic and strategic factors underlying the formation of alliances and may thus also reflect the cost and benefit of an attack. Such factors could be represented by geographical distance between the islands, number of troops or ships, number of casualties and the structural balance of actors ("the enemy of my enemy is my friend"). This is but one suggestion for future research.

References

- Alegría, Ricardo E., *Las Primeras Noticias Sobre los Indios Caribes*. Editorial Universidad de Puerto Rico, en colaboración con el Centro de Estudios Avanzados de Puerto Rico y el Caribe 1981.
- Barome, Joseph. Spain and Dominica 1493-1647, in: *Caribbean Quarterly* 12, no. 4 (1966), 30-46.
- Bearman, Peter, Big Data and historical social science, in: *Big Data & Society* 2, no. 2 (2015). DOI: 10.1177/2053951715612497.
- Bearman, Peter, James Moody, and Robert Faris, Networks and history, in: *Complexity* 8, no. 1 (2002), 61-71. DOI: 10.1002/cplx.10054.
- Beckles, Hilary McD., Kalinago (Carib) resistance to European colonisation of the Caribbean, in: *Caribbean Quarterly* 38, no. 2-3 (1992), 1-124. DOI: 10.1080/00086495.1992.11671757.
- Bellotti, Elisa, *Qualitative networks: Mixed Methods in Sociological Research*, New York 2014.
- Bonacich, Phillip, Simultaneous group and individual centralities, in: *Social Networks* 13, no. 2 (1991), 155-168. DOI: 10.1016/0378-8733(91)90018-O.
- Bonacich, Phillip, Annie Cody Holdren, and Michael Johnston, Hyper-edges and multidimensional centrality, *Social Networks* 26, no. 3 (2004), 189-203. DOI: 10.1016/j.socnet.2004.01.001.
- Boomert, Arie, Amerindian-European Encounters on and around Tobago (1498–ca. 1810), in: *Antropológica* 97, no. 98 (2002), 71-207.
- Boomert, Arie, *The Indigenous People of Trinidad and Tobago from First Settlers until Today*, Sidestone 2016.
- Boucher, Philip, *Cannibal Encounters: Europeans and Island Caribs, 1492-1763*, Baltimore 1992.

- de Rochefort, Charles, *The History of the Caribby-Islands*, translated by John Davie, London 1666.
- du Tetre, Jean Baptiste, *Histoire Generale des Antilles*. 4 vols. Paris 1667.
- Domínguez, Silvia, and Betina Hollstein, eds., *Mixed Methods Social Networks Research: Design and Applications*. Vol. 36, New York 2014.
- Fraser, Adrian, Revisiting the Carib Story." *Caribbean Quarterly* 60, no. 2 (2014), 53-64. DOI: 10.1080/00086495.2014.11671888.
- Han, Yi, Bin Zhou, Jian Pei, and Yan Jia, Understanding importance of collaborations in co-authorship networks: A supportiveness analysis approach, in: *Proceedings of the 2009 SIAM International Conference on Data Mining*, Society for Industrial and Applied Mathematics, 2009, pp. 1112-1123.
- Hofman, Corinne, and Menno Hoogland, Caribbean encounters: rescue excavations at the early colonial Island Carib site of Argyle, St. Vincent, in: *Analecta Praehistorica Leidensia* 43, no. 44 (2012): 63-76.
- Hofman, Corinne, Angus Mol, Menno Hoogland, and Roberto Valcárcel Rojas, Stage of encounters: migration, mobility and interaction in the pre-colonial and early colonial Caribbean, in: *World Archaeology* 46, no. 4 (2014), 590-609. DOI: 10.1080/00438243.2014.925820.
- Holdren, Ann Cody, *Raiders and Traders: Caraiibe Social and Political Networks at the Time of European Contact and Colonization in the Eastern Caribbean*, PhD diss., Los Angeles 1998.
- Honeychurch, Lennox, *Carib to Creole: A History of Contact and Cultural Exchange*, Dominica Institute 2000.
- Huerga, Alvaro, *Ataques de los Caribes a Puerto Rico en el siglo XVI*. Academia Puertorriqueña de la Historia, Centro de Estudios Avanzados de Puerto Rico y el Caribe; Fundación Puertorriqueña de las Humanidades, 2006.
- Hulme, Peter, and Neil L. Whitehead, eds. *Wild Majesty, Encounters with Caribs from Columbus to The Present Day: An Anthology*, USA 1992.
- Mol, Angus. Studying Pre-Columbian Interaction Networks: Mobility and Exchange,, in: *The Oxford Handbook of Caribbean Archaeology*, edited by Keegan, William F., Corinne L. Hofman, and Reniel Rodríguez Ramos, New York 2013, 329-346.
- Mol, Angus and Jimmy Mans, Old boy networks in the indigenous Caribbean, in: *Network Analysis in Archaeology: New Approaches to Regional Interaction*, edited by Carl Knappet, Oxford 2013, 307-333.
- Mol, Angus, Menno Hoogland, and Corinne Hofman, Remotely local: Ego-networks of late pre-colonial (AD 1000–1450) Saba, north-eastern Caribbean, in: *Journal of Archaeological Method and Theory* 22, no. 1 (2015), 275-305. DOI: 10.0.3.239/s10816-014-9234-7.
- Moreau, Jean-Pierre, *Les Petites Antilles de Christophe Colomb à Richelieu: 1493-163*, KARTHALA 1992.
- Murga Sanz, Vicente, *Juan Ponce de León, fundador y primer gobernador del Pueblo Puertorriqueño, descubridor de la Florida y del estrecho de Bahamas*, San Juan 1971.

- Sonntag, Martin, and Hanns-Martin Teichert, Competition hypergraphs, in: *Discrete Applied Mathematics* 143, no. 1 (2004), 324-329. DOI: 10.1016/j.dam.2004.02.010.
- Southey, Capt. Thomas, *Chronological History of The West Indies*, London 1827.
- Sued Badillo, Jalil. The Island Caribs: New approaches to the question of ethnicity in the early colonial Caribbean, in: *Wolves from the Sea*, edited by Neil L. Whitehead, 61-90, Leiden 1995.
- Whitehead, Neil L. Lords of The Tiger Spirit, a History of the Caribs in Colonial Venezuela and Guyana, 1498-1820, No. 10, o.O. 1988.
- Wilson, Samuel M., The cultural mosaic of the indigenous Caribbean, in: *Proceedings of the British Academy*, vol. 81, Oxford, 1993, 37-66.
- Wilson, Samuel M., Surviving European conquest in the Caribbean, in: *Revista de Arqueología Americana* (1997), 141-160.

DEICKE, ALINE J.E.

Networks of Conflict: Analyzing the “Culture of Controversy” in Polemical Pamphlets of Intra-Protestant Disputes (1548-1580)

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Historical network research, Protestant controversies, Reformation, polemical pamphlets

Abstract

Following the Augsburg Interim ordered at the Augsburg Diet of 1548, the late 16th century witnessed a number of intra-Protestant controversies that fundamentally advanced the formation of Lutheran identity and its central doctrine. They were fought through the medium of polemical pamphlets, which were regularly addressed against specific opponents. While their intention aimed less at the conviction of their respondent than at the formulation and definition of theological issues, they were instrumental in the search for doctrinal truth that found a preliminary conclusion in the publication of the Formula of Concord in 1580. The paper analyzes this culture of controversy from a network theoretical perspective. Building on the relationship between authors and the theologians they directed their polemics against, it focuses on the characteristic attributes of a communication built on antagonistic relationships. Main aspects that are examined consist of the particular structure of conflict-based networks, the reciprocity of relations, and the degree to which historical processes reflect in the graph. In addition, two particular subtypes of controversies and their contribution to the structure of the complete network are examined in closer detail: spheres of conflict related to the views of one particular person, and those revolving around specific issues.



1 Introduction*

1.1 Intra-protestant controversies between the Augsburg Interim and the Formula of Concord (1548–1580)

The history of the Lutheran Reformation and the consolidation of its central doctrine is closely linked to a “culture of controversy” that developed during the 16th century in the territory of the Holy Roman Empire. Strongly influenced by the practice of academic disputations, several debates unfolded in the wake of political events such as the Augsburg Diet of 1548 that could at times exhibit a decidedly antagonistic nature. Not only Luther, who often launched very personal attacks on theological opponents,¹ but also many of his contemporaries and followers engaged in ardent debates on central theological questions.

One period of such conflict commenced after the Augsburg Interim had been ordered at the Augsburg Diet of 1548. The decisions of the Diet were widely rejected among secular as well as religious leaders, and led to conflicts with and among both groups. On the theological side, it heralded vigorous disputes among Protestants themselves. Though alliances changed depending on the point of contention, two main factions are usually identified in contemporary research: Philipp Melancthon and his disciples, commonly named Philippists after their leader, and Matthias Flacius and his followers, the so-called Flacians, Lutherans, or Gnesio-Lutherans, as they are known today, who claimed to represent the true spirit of Luther’s doctrine.² Apart

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Corresponding author: Aline J. E. Deicke, Academy of Sciences and Literature | Mainz, Geschwister-Scholl-Str. 2, 55131 Mainz, e-mail: Aline.Deicke@adwmainz.de

¹ Bebermeyer, “Schmähschrift,” 670.

² Rudolf Keller, “Gnesiolutheraner,” in *Gesellschaft/Gesellschaft und Christentum V – Gottesbeweise*, ed. Horst Robert Balz et al. Vol. 13 of *Theologische Realenzyklopädie* (Berlin and New York: Walter de Gruyter, 1985), 512–519. – Dingel, “Historische Einleitung” (2008), 4–5. – For a more detailed overview, see Irene Dingel, “The Culture of Conflict in the Controversies Leading to the Formula of Concord (1548-1580),” in *Lutheran Ecclesiastical Culture, 1550-1675*, ed. Robert Kolb. Vol. 11 of *Brill’s Companions to the Christian Tradition* (Leiden: Brill, 2008). – It should be emphasized, that these are modern attributions that were not perceived as such at the time of the Reformation. While Melancthon and Flacius were undoubtedly highly influential figures and shaped many of the controversies discussed here, as mentioned above coalitions among Reformers were not monolithic and subject to frequent change. Therefore, in concordance with Dingel, in this paper the termini “Philippists” and “Gnesio-Lutherans” are used rather in the sense of helpful scientific constructs characterizing

from smaller topics, they argued about several fundamental issues that would contribute to form the basis of the later Lutheran confession, such as the question of *adiaphora*³ or conflicts centered around controversial views of specific persons such as Georg Major⁴ or Andreas Osiander (chapter 3.2).

In 1580, these disputes culminated in the publishing of the Formula of Concord, which legitimized the positions that had prevailed in the previous controversies. In the following decades until the end of the Thirty Years' War in 1648, this doctrine was consolidated and expanded upon in the Lutheran Orthodoxy.⁵ As such, the time between 1548 and 1580 served as the basis for later efforts of confessionalization⁶, in which a second generation of reformers after Luther and his contemporaries played a main role.⁷

1.2 Polemical pamphlets as a medium of conflict

Beyond verbal confrontations such as the *disputatio*, the disputes were mainly conducted through the medium of polemical publications, so-called *Streitschriften*, most in the form of pamphlets.⁸

While the German term *Streitschrift* or *Schmähschrift*⁹ finds no direct equivalent in English literature, both “polemic” and “pamphlet” have been

certain points of view than as descriptions of actual historical realities (Dingel, “Historische Einleitung” [2010], 10–12).

³ For more detail see Jan Martin Lies and Hans-Otto Schneider, *Der Adiaphoristische Streit (1548–1560)*, ed. Irene Dingel. Vol. 2 of *Controversia et confession* (Göttingen: Vandenhoeck & Ruprecht 2012).

⁴ For more detail see Lies and Schneider, *Majoristischer Streit*.

⁵ Markus Matthias and Olivier Fatio, “Orthodoxie,” in Ochino - *Parapsychologie*, ed. Horst Robert Balz *et al.* Vol. 25 of *Theologische Realenzyklopädie* (Berlin and New York: Walter de Gruyter, 1995), 464–497.

⁶ Due to the close connections and interdependency between church and state in Early Modern History, the confessionalization processes during the Reformation affected not only the theological sphere. Consequently, the terminus is frequently understood to enclose all of the religious, political, and societal developments initiated or aggravated by the formation of the Lutheran (or Calvinist) confession (Dingel, “Historische Einleitung” [2010], 13. – Heinz Schilling, “Die Konfessionalisierung im Reich. Religiöser und gesellschaftlicher Wandel in Deutschland zwischen 1555 und 1620,” *Historische Zeitschrift* 246 [1988]: 3–7). Nevertheless, this paper focuses on the theological aspect of this process and uses the terminus accordingly.

⁷ Bebermeyer, “Schmähschrift,” 672. – Dingel, “Pruning the Vines,” 405–407.

⁸ Dingel, “Pruning the Vines,” 400–401.

⁹ Generally, *Streitschriften* (argumentative texts) are seen as more factual as *Schmähschriften* (vilifying texts), which often contain personal attacks and insults. Some authors see the 16th century as the divide, after which the more rational *Streitschrift* became common, yet the term is often used for the conflicts of the Reformation as well. Bebermeyer suggests this stems from a respect for Luther, despite the often abusive tone of his writing, while according

used in a similar meaning. The Oxford Dictionary of Literary Terms describes a polemic as a „written attack on some opinion or policy, usually within a theological or political dispute“¹⁰, and the *Dictionary of Literary Terms and Literary Theory*, while alluding to its more physical meaning of a “small unbound book, usually with paper covers”, considers a pamphlet a “short work written on a topical subject on which an author feels strongly”, usually from the sphere of politics or religion.¹¹ However, in this paper, pamphlet is used in the meaning of the physical medium alone, i.e. a loose collection of one or more pages, while the particular nature of the *Streitschriften* is expressed by the terms polemics or polemical pamphlets as is common in the relevant literature.

This terminological vagueness stems from the fact that the genre of the *Streitschrift* has never been formally defined¹², although the practice of attacking one’s opponent through writing can be traced back to Greek and Roman antiquity and was also frequently used in religious conflicts prior to the rising of Protestantism.¹³ Yet, a consensus exists that the polemic reached its height during the period of the Reformation; some researchers even call it the defining medium of the 16th century.¹⁴ The invention of the printing press and the use of printed pamphlets as a medium allowed the wide distribution of the polemics and encouraged their publication¹⁵. Often written in German rather than Latin – the traditional language of academic dispute – they also served to further the tradition of folk literature and played an instrumental role in the development of the German language¹⁶. At the same time, polemic debates about religious topics were also carried out in other countries such as England,

to Rohner it can be explained by the many overlaps between the two categories (Bebermeyer, “Schmähschrift,” 670; 672–673. – Ludwig Rohner, *Die literarische Streitschrift. Themen, Motive, Formen* [Wiesbaden: Harrassowitz, 1987], 211).

¹⁰ Chris Baldick, “Polemic,” in *The Oxford Dictionary of Literary Terms* (Oxford: Oxford University Press, 2015), accessed 6 January 2017.

¹¹ Cuddon and Habib, *Dictionary*, 507f.

¹² Bebermeyer, “Schmähschrift,” 665.

¹³ Dingel, “Pruning the Vines,” 399–400. – Martial and Seneca can be named as some of the most famous Roman representatives of the *invective oratio* (Bebermeyer, “Schmähschrift,” 667).

¹⁴ Bebermeyer, “Schmähschrift,” 666. – Bremer, *Religionsstreitigkeiten*, 12. – Mahlmann-Bauer, “Normalform reformatorischer Streitgespräche,” 175.

¹⁵ Hund and Jürgens, “Pamphlets,” 163–165. – Mahlmann-Bauer, “Normalform reformatorischer Streitgespräche,” 176; 178.

¹⁶ Bremer, *Religionsstreitigkeiten*, 41–45.

where for example the protestant reformer William Tyndale used pamphlets to disseminate his views.¹⁷

Characteristically, polemics serve to expose and denounce issues and opinions that are seen as controversial or problematic, either in the political, theological, cultural, or literary sphere. Furthermore they often emerge in times of societal or political change or upheaval.¹⁸ This is certainly true for the *Streitschriften* of the Reformation¹⁹. In many ways, they embody traits usually associated with the genre. Most importantly, the author or authors regularly directed them against one or more specific opponents, often aiming to discredit this person's reputation along with his or her opinions. Consequently, the polemics can take on a dialogic form, in which a pamphlet is followed by an answering text by the affected person, which in turn can elicit a response by the original author and so forth. Through their medium – the pamphlets – and their language – oftentimes German – they reached and were intended for a wide public audience, that for the first time also incorporated laypersons and less educated people to a substantial degree. Nonetheless, this focus shifted in the second half of the 16th century, where the target audience was again mostly comprised of scholars of theology. In this context, it is noticeable that the origin of the texts can often be traced to verbal forms of debate, such as sermons and especially the academic *disputatio*, which represents one of the main influences on the development of the polemical pamphlets of the Reformation. By printing debates, academic *disputationes* were opened up to and generated a broad public audience and, in a process Füssel calls “kommunikative Entgrenzung”²⁰, transcended much of the rules and norms that had previously governed and restrained them.²¹

¹⁷ Cuddon and Habib, Dictionary, 507f. – For another example of religious controversies in England see David J. Appleby, *Black Bartholomews Day. Preaching, polemic and Restoration nonconformity* (Manchester: Manchester University Press, 2007).

¹⁸ Bebermeyer, “Schmähschrift,” 666.

¹⁹ Obviously, such conflicts as described were also fought out between Catholic and Protestant scholars, so that Bebermeyer even called them a “literarisches Vorspiel” (literary prelude) of the Thirty Years' War (Bebermeyer, “Schmähschrift,” 669. – Bremer, *Religionsstreitigkeiten*). In this paper however, the focus lies on intra-Protestant disputes, and Catholic-Protestant debates are not taken into account.

²⁰ Füssel, “Zweikämpfe des Geistes,” 169.

²¹ Kenneth G. Appold, „Disput und Wahrheitsfindung im Konfessionellen Zeitalter,“ in *Streitkultur und Öffentlichkeit im konfessionellen Zeitalter*, ed. Henning Jürgens and Thomas Weller (Göttingen: Vandenhoeck & Ruprecht, 2013), 149–157. – Bebermeyer, “Schmähschrift,” 666. – Bremer, *Religionsstreitigkeiten*, 6; 30–41; 45–46. – Dingel, “Historische Einleitung” (2010), 4. – Dingel, “Pruning the Vines,” 399–404. – Füssel, “Zweikämpfe des Geistes.” – Hund and Jürgens, “Pamphlets,” 165–166. – Mahlmann-Bauer, “Normalform reformatorischer Streitgespräche,” 169. – Jürgens and Weller, “Einleitung,” 9–10; 13.

Through these traits, in the 16th century polemical pamphlets were instrumental in the development of a theological culture of controversy (*Streitkultur*), that Dingel sees as “a critical characteristic of the early modern period”²². It describes a process in which core Protestant beliefs and doctrine were argued out and defined, usually in clear differentiation from contesting opinions. Theological questions were disputed not to reach consensus, but to convince the other party of their erroneous belief. In doing so, reformers aimed to elaborate on and consolidate their own convictions, facilitate the formation of a confessional identity and, to a more unspoken degree, generate public favor for them. Since the foremost goal was the search for a religious truth valid for all Christians, the participants engaged in those debates with considerable fervour and animosity. Compromise was usually not an option as both parties upheld a claim of such an absolute truth for their respective positions.²³ In *Conflict and the Web of Group-Affiliations*, even Simmel used intra-Protestant controversies to illustrate the intensity of conflicts revolving around religious issues, reasoning that “[b]ecause of dogmatic fixation, the minutest divergence here at once comes to have logical irreconcilability – if there is deviation at all, it is conceptually irrelevant whether it be large or small.”²⁴ Yet, Dingel stresses that nevertheless conflict “functions as a decisive medium in the search for doctrinal ‘truth’”²⁵. Consequently, the culture of controversy has to be considered as an essential prerequisite of the processes of confessionalization of the 16th and 17th century.²⁶

1.3 Analyzing the “culture of controversy” from a network theoretical perspective

As discussed before, one key aspect of the intra-Protestant disputes of the late 16th century lies in the formation of a Protestant identity, or rather identities. In his aforementioned work, Simmel ascribes the sociological importance of conflict to its meaning “not for the reciprocal relation of the parties to it, but for the inner structure of each party itself.”²⁷ He further considers conflict a form of sociation, built from relations between humans, and calls it “one of the most vivid interactions, which, furthermore, cannot possibly be carried on by one individual alone.”²⁸ Certainly, the conflicts carried out between Reformers through the medium of polemical pamphlets

²² Dingel, “Pruning the Vines,” 398.

²³ Bremer, *Religionsstreitigkeiten*, 56–60; 215; 217; 221. – Dingel, “Historische Einleitung” (2010), 4–5. – Dingel, “Pruning the Vines,” 397; 399; 404–405. – Hund and Jürgens, “Pamphlets,” 176–177. – Mahlmann-Bauer, “Normalform reformatorischer Streitgespräche,” 178–179.

²⁴ Simmel, *Conflict*, 43.

²⁵ Dingel, “Pruning the Vines,” 399.

²⁶ Dingel, “Historische Einleitung” (2010), 3; 5–6. – Dingel, “Pruning the Vines,” 405. – Hund and Jürgens, “Pamphlets,” 176–177.

²⁷ Simmel, *Conflict*, 85.

²⁸ *Ibid.*, 13.

can be seen as a necessary prerequisite for the definition and consolidation of the Lutheran confession and its core tenets.²⁹ Following this logic, an analysis of the described controversies through network theoretical methods suggests itself.

Building upon the nature of a discourse through polemics as discussed above, this paper examines if and to what extent the characteristics outlined above – namely their highly antagonistic, decisive nature intended not to reach compromise but to state doctrinal “truths” as well as the new publicity their printed publication generated – can be observed in a network created through the author-opponent-relationship of polemical pamphlets. Thus it focuses on the intra-protestant conflicts from 1548 to 1580. The paper questions whether an antagonistic communication such as this produces a network with specific properties that is decidedly distinguished from networks formed by other methods of communications, e.g. letters, and aims to identify and describe these properties. In the special case of Protestant controversies, it also strives to assess to which degree conflicting parties can be distinguished in the network, and to draw conclusions to the strength of the differentiation and group-building processes outlined above.

Another point of interest concerns those pamphlets which can be combined in so-called “*Streitkreise*” or “spheres of conflict”, which deal with one distinctive point of controversy. As alluded to above, there were several conflicts which centered on either specific issues such as Original Sin³⁰ or the question of *adiaphora* or on a particular opinion posed by individual authors. Two examples of such types of spheres of conflict will be examined to determine differences in their structure.

2 Study design and data collection

The data for this study was collected by the long term editorial project *Controversia et Confessio. Quellenedition zur Bekenntnisbildung und Konfessionalisierung (1548-1580)*, funded by the Academy for Sciences and Literature, Mainz. It deals with the outlined intra-Protestant disputes that arose after the Augsburg Interim and with their contribution to the formation and confessionalization of Lutheran Protestantism.³¹ Alongside print publications, six of which have already been published, the project also maintains a database of printed sources related to the conflicts between 1548

²⁹ Dingel, “Historische Einleitung” (2010), 3; 5–6. – Dingel, “Pruning the Vines,” 399; 405. – Hund and Jürgens, “Pamphlets,” 176–177.

³⁰ Dingel, “Historische Einleitung” (2010), 25–25.

³¹ “*Controversia et Confessio. Quellenedition zur Bekenntnisbildung und Konfessionalisierung (1548-1580)*,” accessed 9 January 2017, <http://www.controversia-et-confessio.de>.

and 1580.³² To date, it has catalogued 2,063 printed sources, which consist mostly of polemical pamphlets, but also include exegetical writings or sermons if quoted by opponents as well as published university disputations. Furthermore, due to the mentioned problems in defining the genre of *Streitschrift*, some texts are taken into account which would not necessarily be considered polemical pamphlets, for example because of their length. Because some sources were translated or reprinted, the number of unique texts amounts to approximately 1,300 objects.³³

In 2015, the database was updated and extensive normalization efforts took place, which led to the data basis for the study detailed in this paper. The data was also placed under a CC BY 4.0 licence.³⁴ Despite the listed exceptions, the sources are overall highly homogenous in their structure and composition, systematically collected and categorized, and as such eminently suited for quantitative analyses.³⁵

2.1 Network structure and data modifications

Based on the collected data, a two-mode network was created. It consists of persons and sources as nodes which are connected through directed ties that mark the persons as either authors or opponents of a certain text as they are specified in the project database. For each source, the year of publication, the associated sphere(s) of conflict, and the locality of print were added. To date, only individual persons are included. While groups also appear as authors or opponents of texts, they often represent merely vaguely defined categories such as “theologians from Wittenberg”³⁶ or “City council”³⁷, that might include

³² “Projektbeschreibung: Controversia et Confessio,” accessed 9 January 2017, <http://www.controversia-et-confessio.de/projekt/projektbeschreibung.html>; “C&C Digital: Controversia et Confessio,” accessed 9 January 2017, <http://www.controversia-et-confessio.de/cc-digital.html>.

³³ For a more in depth description of the database, see Hund and Jürgens, “Pamphlets,” 158–162.

³⁴ “Creative Commons — Attribution 4.0 International — CC BY 4.0,” accessed 17 May 2017, <https://creativecommons.org/licenses/by/4.0/legalcode>.

³⁵ In this they comply to the demands put forth by Bixler and Reupke, who emphasize the need for systematic collection of data for network studies to enable comparison and verifiability of analyses (Bixler and Reupke, “Quellen,” 109).

³⁶ For example in a text written by the theological faculty of Wittenberg against Flacius, in which they condemn his views on numerous subjects (Ad toties criminationes Flacii Responsio. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 17 May 2017. <http://www.controversia-et-confessio.de/id/e48437f4-3720-4de7-b12a-8ce4410273ee>).

³⁷ Exemplified among others in a text written in the context of the siege of Magdeburg, which also shows the vagueness of group designations. Here the mayor and the city council of Magdeburg appear as authors of a pamphlet directed against “Baalspfaffen und andere Feinde” (priests of Baal and other enemies) (Widerlegung und Verantwortung alles Ungrunds. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 17 May 2017. <http://www.controversia-et-confessio.de/id/ddbfe106-cac7-41b2-9445-b276624f502b>).

authors who also appear as individuals in the database, but are not easily unravelled into separate persons. Depending on the date of publication of the source, these appellations can also apply to various assemblages of persons. Beyond that, the study focuses on the personal interconnections between actors of the reformation.

From this bimodal network, a directed, weighted one-mode graph consisting only of authors and opponents was constructed, in which the weight of a tie is calculated from the number of sources an author wrote against a specific opponent. For example, if Flacius wrote ten polemics directed against Melanchthon, a directed tie with the weight of ten would be created between the two actors. It has to be noted that due to the adversarial nature of the author-opponent-relationship, the ties carry negative meaning. This factor has obvious consequences for the interpretation of the network.

While all network analyses were carried out on the unimodal graph, the two-mode perspective on the data adds significant details to the study. For instance, some sources, especially the longer ones, can have more than one author and/or be directed against more than one opponent. Consequently, they tend to be overrepresented in the one-mode network. On the other hand, the simplification of relationships eliminates information about co-authorship or co-opponentships. Contextualizing results gained from the one-mode network with two-mode data helps to account for these factors during interpretation.

Some adjustments on the original data were undertaken, since – as Bixler and Reupke mention in their 2016 chapter on data collection in the *Handbuch Historische Netzwerkforschung* – historical research dedicates a good amount of its resources on detailed deliberations of the uncertain nature of the historical record, yet quantitative studies require a more decisive approach.³⁸ These mainly concerned sources whose authors were also listed as opponents in the database, for example because texts were re-printed by other reformers to emphasize a certain point of contention.³⁹ Each case was carefully considered and the record adjusted accordingly.⁴⁰ Sources where the author could not be

³⁸ Bixler and Reupke, “Quellen,” 108f.

³⁹ The most illustrious example for this practice is undoubtedly Luther himself, who despite his death in 1546 appears as an actor in the network analysed in this paper because his writings were seen as particularly convincing arguments and therefore included in numerous publications (Dingel, “Pruning the Vines,” 407. – Hund and Jürgens, “Pamphlets,” 166).

⁴⁰ The sources in question are (identified by their VD16 number):
S 7556: In this source, Hieronymus Menzel answers to a pamphlet by Cyriakus Spangenberg, which contains Spangenberg’s writings as well as Menzel’s answer and therefore lists both persons as author and as opponent. For the study, only Menzel is considered as an author, and Spangenberg as an opponent (Das Spangenbergische Bekenntnis. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et->

identified, even though the opponent was known, were excluded from the study. Another aspect concerns texts that contained a preface or were edited. While mostly, the author of the preface or the editor were the same person as the author of the text itself, a few times this was not the case. Currently, those prints are not included in the study, but will be considered in future analyses.

confessio.de/id/baa2cc7b-0c07-410a-ba3f-29f9caa7fb34). – M 5873: This print presents a collection of the letters written between Osiander and Joachim Mörlin in the course of the Osiandrian controversy. Since all these letters are in the database as single sources, this source is excluded from the study (Epistolae quaedam ad Osiandrum. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/a8da4c01-940e-4c95-8c79-f3822e414430>). – R 2667: Two pamphlets written by and against, respectively, Albert Hardenberg and Eilart Segebadius that were printed together. For the purpose of the study these pamphlets were divided into two nodes and the original excluded (De Ubiquitate scripta duo adversaria. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/f57a740e-d4a8-4f82-bd0d-dfa643e7ca13>). – E 242: The printing includes two pamphlets, one text by “colleagues from Magdeburg,” probably written by Matthias Judex and Johannes Wigand and signed by all scholars except Matthias Flacius, and an answer by the „Wittenberger Scholastici.” The first text is written against Justus Menius, who disparaged a work about ecclestial history that was being written in Magdeburg and hadn’t been published yet (“Centurien”), and defends Flacius. The second one in turn defends Menius and Melanchthon and attacks mainly Flacius and Wigand. The project database mentions Menius, Flacius and Wigand as opponents and the “Wittenberger Scholastici” and the “editors of the ‘Centurien’ from Magdeburg (Wigand)” as authors of the texts. Because groups are not considered in the current study, the second text is dismissed and only the first one is included as a source written by Wigand against Menius (Narratio historica ecclesiastica. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/a2012328-2385-4531-9bbb-b706b079b810>). – M 2392: Anton Otho reprinted a text by Melanchthon to illustrate the strength of his former convictions and his – in Otho’s eyes – moral decline evident in his compliance with the Regensburg Interim. Because of the reprint, Melanchthon is considered an author, but since it serves as an attack on him, in the study he is only considered as an opponent (Die Vorrede auff das fürgelegte Buch zu Regensburg; Acta in conventu Ratisbonensi <dt.>. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/a1bcb753-4310-4be4-bb37-6c10b9c9091c>). – W 3724: Another reprint of a text by Melanchthon to show his betrayal of the ideals of the reformation, this time published by Flacius. Even though Flacius did not provide additional commentary beyond the reissue of the text, and the project database does not consider him an author in this context, the study includes him as an author while Melanchthon is only seen as an opponent (Epistola concionatoribus Norimbergibus missa 17. Febr. 1540, dt. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/d6275644-73aa-4f4b-80a6-f0815858038e>). – M 3541: Another letter by Melanchthon that was reprinted by Johannes Gallus with commentary. Melanchthon is excluded as author and only seen as opponent (Iudicium de controversia coenae Domini <dt.>. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/a7c68645-4db3-4fa4-b4de-0d05da97d114>).

Some author attributions such as “*vir pius*” were considered too vague to contribute to the analysis in a significant manner and were consequently excluded from the data basis.⁴¹

2.2 Source criticism

In relation to the project database, Hund und Jürgens themselves note that “as is true for all numbers concerning printing activity in the sixteenth century, the figures from the database cannot claim statistical accuracy, but are indicative.”⁴² Apart from these gaps in the historical record, which are always to be expected, there are a number of other factors that are important to bear in mind.

As mentioned above, of the 2,063 records in the database, only about 1,300 represent unique texts due to a wide-spread practice of re-issuing and re-printing texts, e.g. to support an argument by citing authoritative works. Beyond that, not all disputes that were held were also published in print. Also, a substantial amount of communication between the reformers was carried out in other mediums, e.g. letters.⁴³

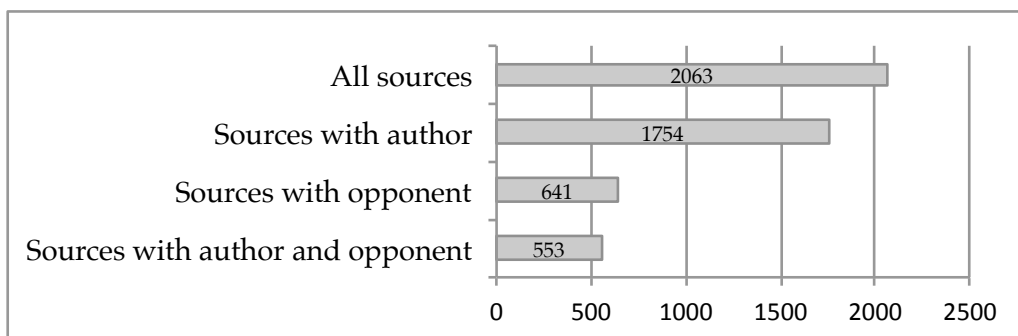


Figure 1: Number of sources in the project database possessing a known author, an opponent, or both.

Other issues concern the structure of the pamphlets themselves. As alluded to above, not all pamphlets were actually addressed to a specific opponent, and of these texts written against groups of opponents are excluded from the study due to their vague nature. Of the remaining sources, 554 are addressed to an opponent while their author is known (figure 1). In this context, it is also interesting to take a closer look at the number of sources prolific authors wrote addressed against an opponent compared to that of texts without a specific target, which can vary quite substantially for different

⁴¹ The other actor taken out of the study was “unknown author”.

⁴² Hund und Jürgens, “Pamphlets,” 162.

⁴³ Dingel, “Pruning the Vines,” 404. – Hund und Jürgens, “Pamphlets,” 169.

reformers. Figure 2 shows the ten authors of whom most texts are represented in the database, and the number of pamphlets collected divided into those with and without an opponent. A significant difference can already be observed between the first two authors, Flacius and Melanchthon. Apart from the strong involvement of Flacius in the post-Interim controversies, the high percentage of his texts written against a named opponent (over 40%) stands out in comparison to Melanchthon (about 30%). These numbers might hint at the more conciliatory position Melanchthon usually took⁴⁴, while also highlighting the aggressive nature of Flacius' works.⁴⁵

Another issue previously alluded to is the frequency of co-authorship and co-opponentship observable in polemical pamphlets. While in the case of some authors, for example Matthäus Judex, Christop Pezel, or Victorinus Strigel, 50-70% of the sources attributed to them were written together with other reformers, most authors with a substantial body of work represented in the database show decidedly lower numbers that seldomly rise beyond 30%.

As noted by other authors⁴⁶, historical network research aims not to recreate an accurate representation of past societies but selects data to answer specific research questions. Insofar, it is important to note that the network analyzed in this paper shows neither a complete picture of acquaintances, working relationships, or antagonisms nor of the written output of the individual authors mentioned. Apart from the outlined gaps and uncertainties of the source record, the reformers maintained a plethora of relationships via other mediums such as letters or personal meetings. Geographical factors – such as working or teaching at the same universities and courts – as well as actual kinship relations⁴⁷ also contributed. In addition, the focus on discourse strategies, i.e. pamphlets addressed to a specific opponent, excludes a large part of the text corpus. Consequently, conclusions regarding the actual content of the controversies should be considered with caution.

⁴⁴ Irene Dingel, "Melanchthon's Efforts for Unity between the Fronts: the Frankfurt Recess," in Philip Melanchthon. Theologian in Classroom, Confession, and Controversy, ed. Irene Dingel, Robert Kolb, Nicole Kuropka, and Timothy J. Wengert. Vol. 7 of *Refo500 Academic Studies* (Göttingen : Vandenhoeck & Ruprecht, 2012), 123–124. – Mahlmann-Bauer, "Normalform reformatorischer Streitgespräche," 179.

⁴⁵ Dingel, "Pruning the Vines," 406–407. – Hund and Jürgens, "Pamphlets," 166–167.

⁴⁶ Bixler and Reupke, "Quellen," 104; Lemerrier, "Formale Methoden," 24.

⁴⁷ Among the many examples were the daughter of Osiander, who was married to Johannes Funck, one of the closest confidants of her father (Funck, Johannes. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/f57de007-a99a-4c53-b752-6e6dee4bd3ac>), or Caspar Peucer, whose father-in-law was none other than Melanchthon himself (Dingel, "Historische Einleitung" (2008), 5).

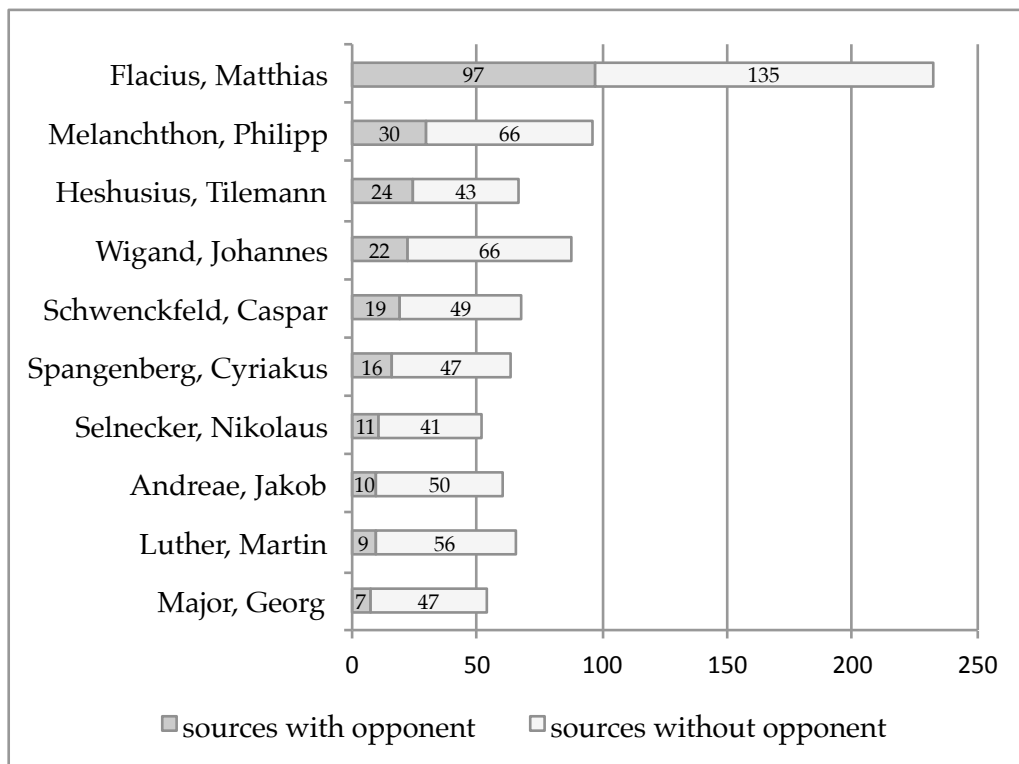


Figure 2: Number of sources written by the ten most prolific authors, split into sources addressed to and not addressed to opponents.

Summarily, the study represents a network created by a subset of the controversies fought out between Protestant leaders in the form of explicitly addressed, printed polemical pamphlets, focusing on the time from 1548 to 1580 and the geographical area of the Holy Roman Empire. Referring to the dimensions of social relationships outlined by Claire Lemerrier⁴⁸, its ties present actual, conscious interactions between two persons – even if those interactions can be assumed to present only a fraction of the total communication between those person.

⁴⁸ Lemerrier, “Formale Methoden,” 26–29.

3 Analyzing networks of conflict

3.1 The complete author-opponent network

The directed, weighted network created from the author-opponent relationship of the polemical pamphlets contains 206 persons as nodes – of which 59 enter into the study only as authors, and 68 only as opponents – which are connected by 770 ties (458 unique ties).⁴⁹ Of the five connected components, only one includes a substantial amount of actors, while the others consist of relations stemming from single texts about a variety of controversies and as such are not relevant to the study. In the main component, no significant clusters or weakly connected components are distinguishable, however, even at first glance (figure 3) a core of about 25 strongly connected, high-degree nodes stands out against numerous less connected nodes, many of which have ties to only one other node.

This first impression is supported by several network measures. For instance, the density of the graph is very low (0.018), while the average degree lies at 7.746. A closer look at the degree distribution (figure 4) reveals a steep decline with a long tail. As such it follows a power-law distribution as detailed by the scale-free property that most real-world networks follow.⁵⁰ Still, the shape of the curve seems extreme; while the highest degree value lies at 172 (Flacius), the median of the distribution reaches only 2, and 81 of 206 actors have a degree of 1. This overrepresentation of low-degree nodes and the low network density also remains when nodes with a degree of one are filtered out, suggesting the pattern to be inherent to the graph structure.

⁴⁹ All analyses were performed with the help of the software Visone (University of Konstanz and Karlsruhe Institute of Technology. “Visone.” Accessed 12 January 2017. <http://visone.info/>) or the database management system Neo4j (Neo Technology, Inc. „Neo4j: The World’s leading graph database.” Accessed 12 January 2017. <https://neo4j.com/>). Unless required by the specific measure or specified otherwise, analyses were conducted on the weighted network.

⁵⁰ Barabási, *Network Science*, chapter 4.

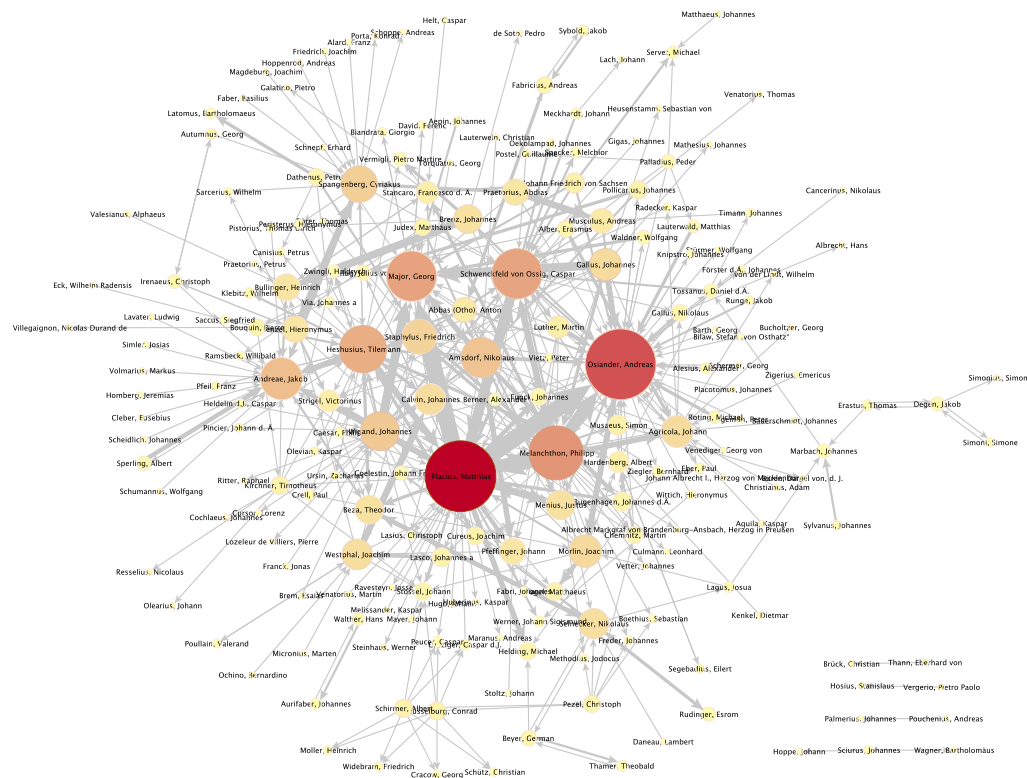


Figure 3: Visualization of the complete network. – Size of nodes: degree. Color of nodes: Indegree. Color of node borders: Outdegree.

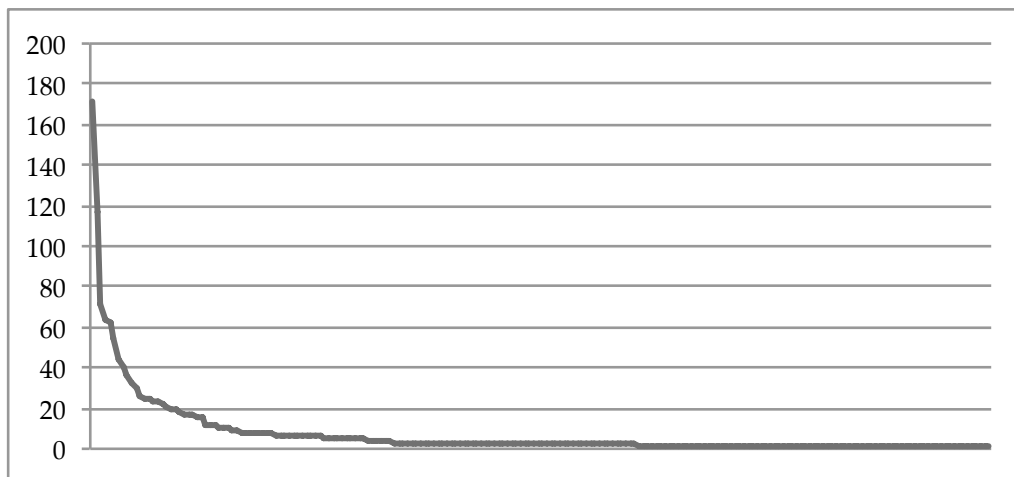


Figure 4: Weighted degree distribution.

According to the theory of preferential attachment, this appearance of the distribution chart is to be expected as nodes tend to favor high-degree hubs in their connections, resulting in disparities that become the more extreme the

bigger the network becomes.⁵¹ On the other hand, the correlations between the degree of nodes and the average degrees of their neighbours seem unusual (figure 5). None of the correlations present values associated with assortative or disassortative graphs, i.e. hubs connecting to hubs and low-degree nodes to low-degree nodes or vice versa as characteristic for most real networks.⁵² Instead, authors seem to target low- as well as high-degree actors. Merely slight tendencies are observable. For example, actors with few connections tend to have more ties to authors that are a frequent target of polemics, while hubs seem to be the driving force in the construction of the networks in that they are more often the opponent of pamphlets written by argumentative authors and contribute more often to attacks against persons at the center of controversies.

The focus of outgoing ties on a smaller amount of actors also shows in the values of in- and outdegree (figure 3). With the exception of Flacius and Melancthon, i.e. the leaders of the main two rivaling factions, actors with a high indegree tend to have a lower outdegree and vice versa. This observation will be examined in more detail in chapter 3.2.1 ("spheres of conflict" related to persons).

While betweenness centrality mirrors the hub structure already given by degree values, closeness centrality corroborates the unexpected findings of the degree correlations. Standardized, the measure varies between 0,192 (Tilemann Heshusius) and 0, with an average of 0,085. This shows that despite its low density the network is evenly spaced out and no actors claim a significantly more central position than others in respects to distance.

One factor to be regarded as instrumental in analyzing the structure of Protestant controversies is reciprocity. As alluded to before, the authors of the Reformation chose very deliberately whose theological views they contested and whose pamphlets they responded to. In a census of the dyads in the network, 397 appear as asymmetric, 373 as mutual, and 20.345 as null dyads. While the last number points once again to the low density of the network, the other values seem to be relatively equal at first. Yet, a closer look reveals, that only 60 of the mutual ties belong to actors with a degree of 10 or less. Indeed, the ten nodes with the highest degree share over 40% of mutual relations (163), supporting the impression of a tightly connected main core given by the visualization of the network graph.

⁵¹ Ibid., chapter 5.

⁵² Ibid., chapter 7, esp. Box 7.3.

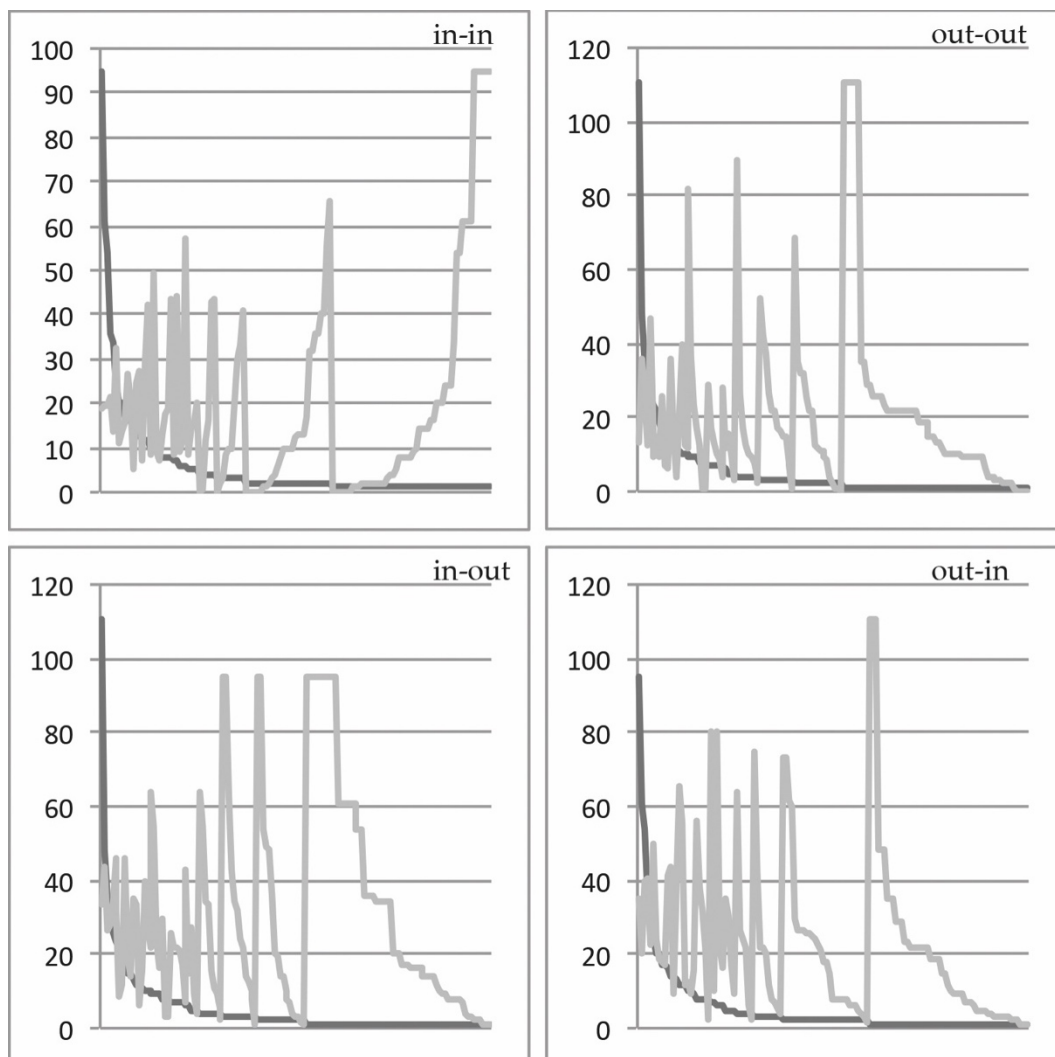


Figure 5: Correlations between degrees of actors (dark line) and average degree of their neighbours (light line). – In-in: Average indegree of in-neighbours. Out-out: Average outdegree of out-neighbours. In-out: Average indegree of out-neighbours. Out-in: Average outdegree of in-neighbours.

A similar picture results from the triad census (table 1). The highest value unsurprisingly belongs to triad 003⁵³, which is entirely unconnected, mirroring the findings of the dyad census. Triads with one asymmetric tie appear as second most frequent (012), and with one mutual tie third (102). Again the

⁵³ The categorization of triads follows the M-A-N labeling scheme as introduced by Davis, Holland and Leinhardt (Stanley Wasserman and Katherine Faust, *Social network analysis. Methods and applications*. Vol. 8 of *Structural analysis in the social sciences* [Cambridge: Cambridge Univ. Press, 1994], 564–567).

relation reflects the dyad census, and their much more frequent occurrence the low density of the network. At the same time, the substantial difference between the two frequencies is also linked to the high number of nodes with a degree of one in the network, i.e. those with one asymmetric tie.

type of triad	complete network	Osiandrian Controversy	Eucharistic Controversy
003	1.362.001	15463	89109
012	56.543	925	7645
102	12.738	173	1478
021D	765	15	184
021U	938	230	75
021C	909	29	116
111D	901	328	61
111U	599	20	66
030T	61	4	7
030C	8	0	0
201	243	105	26
120D	32	2	2
120U	16	0	0
120C	20	1	1
210	38	1	0
300	8	0	0

Table 1: Triad Censuses of the complete network and the networks of the Osiandrian Controversy (Chapter 3.2.1) and of the Eucharistic Controversy (chapter 3.2.2).

Concerning triads with one null dyad, again a focus on opponents rather than authors emerges, as patterns where two ties are directed against a specific actor are more common than two ties originating from the same author

towards two different opponents. Triads involving mutual ties are much less numerous than those with only asymmetric ties.

Triads without null dyads occur only rarely. Perhaps not unexpectedly, circular structures like 030C and 300 are almost non-existent. Patterns like these would indicate a direct conflict between authors of three parties and negate the logic of the main conflicts presented here. In fact, this reason might be responsible for the generally low values of triads of this group. In addition to this, triads with mutual ties again appear decidedly less frequently than those with only asymmetric dyads. Interestingly, the transitive triad 030T presents itself with the highest number of this group.

A closer look at the network shows that the existence of this last group of triads is mostly due to the involvement of hubs and their numerous relations to each other as well as to actors with fewer connections. For example, almost all of the triads of type 030C involve either Flacius, Osiander, Caspar Schwenckfeld, or Major, while those of type 300 are centered on Flacius und Osiander (figure 6).

The traits outlined above indicate a structure of discourse formed through polemical pamphlets that is heavily influenced by hubs – persons either the author or the opponent of a large number of texts, or both – and numerous low-degree actors, many only involved with one or two sources, whose communication, while also conversing among each other, is mainly focused on these hubs. This relationship is exemplified by the low density of the network, the comparative high average degree (see chapter 3.2), and the prevalence of 012 and 102 triads as well as the low variation in the closeness centrality of the nodes.

As is to be expected, most important among these hubs are Flacius and Melancthon as main representatives of the Philippist and Gnesio-Lutheran sides of the debates. In addition, the reformers Heshusius and Osiander rank highly in their out- and indegree values, respectively.⁵⁴ Both are deeply involved in particular spheres of conflicts and will be discussed in more detail in the next chapter.

⁵⁴ As already noted by Hund and Jürgens, “Pamphlets,” 166–167.

On the other hand, the prevalence of low-degree actors in the graph might be a reflection of the popularization of the controversies through the printing of polemics, which led to a wider dissemination. It is a testament to the importance the issues discussed held not only in the sphere of religion, but also their political and societal impact.⁵⁵

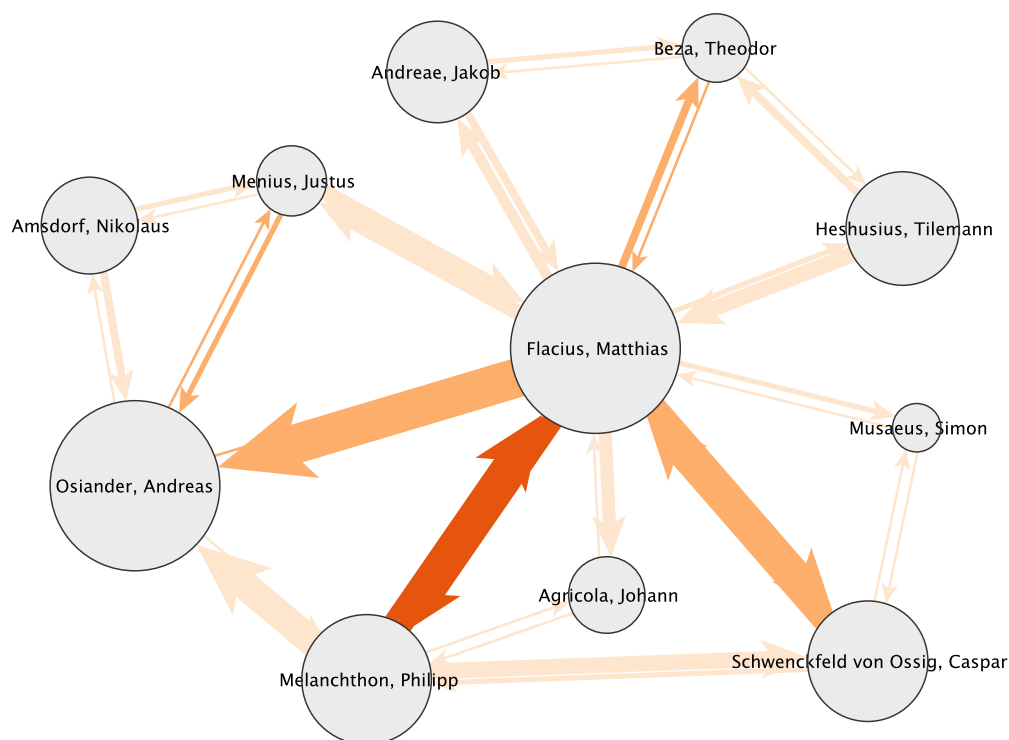


Figure 6: Network visualization of triads of type 300. – Size of nodes: degree. Color of links: number of triads the link is part of (light orange: 1, orange: 2, dark orange: 3).

Contrary to trends observed in other real networks, there is no observable correlation between degree and the type of actors nodes prefer to connect with. As already mentioned, the reformers were quite deliberate in choosing which polemics to respond to, and the network findings suggest that this selection process was only to some extent dependent on the “popularity” of a certain author. While there is a tendency among less prolific authors to connect more to the influential figures of the Reformation, both of these groups also wrote to and were attacked by everyone alike. It follows, that other factors such as topical considerations or personal affects played a bigger role than mere illustriousness. One such case is illustrated by the polemical pamphlet written

⁵⁵ Dingel, “Historische Einleitung” (2010), 4; 12–13. – Füssel, “Zweikämpfe des Geistes,” 169–178. – This impact is particularly obvious in cases like the Eucharistic Controversy as discussed in chapter 3.2.2.

by Osiander against Bernhard Ziegler in the Osiandrian Controversy detailed below. Though Ziegler plays only a small role in the network, Osiander – who responded to almost none of the other attacks against his views in personally addressed writings – directed a pamphlet against him as he suspected him of siding with an opponent of his in his native Königsberg, Matthias Lauterwald.* This example illustrates how the disputes between the reformers were influenced by countless factors such as geography, personal affiliations to one faction or the other, and so on.

Nevertheless, reciprocity in the network is low and mostly restricted to a small number of high-degree actors as is evident by the prevalence of mutual dyads in this group and the general low frequency of triads including mutual ties. While the Protestant authors were very deliberate in their selection of opponents, they apparently chose not to dignify the better part of the attacks against them with a personally addressed response. This might be due to the development of the polemics from the structures of academia, especially from the *disputatio*. Even if printed controversies reached a wide audience and subsequently brought forth numerous responses from a public very much interested in the issues at hand, the Reformers themselves might have still operated in the communicative space previously determined by the *disputatio*, i.e. a debate between a limited number of opponents which took place at a specific geographic space.⁵⁷ While many were quick to exploit the possibilities a wider dissemination of their works offered them to manipulate public perception in their favor*, the structures of the actual discourse might have been more ingrained and slower to change.

In accordance with the nature of the network, one of the main driving forces of the creation of the network – next to a high output of prints by some authors such as Flacius, Melancthon, or Heshusius – seems to have been the opposition against views held by individual persons. Apart from the high indegrees of actors like Osiander, Major, or Schwenckfeld (see chapter 3.2.1), this is also evident in the high frequency of patterns emphasizing arcs by several actors against one specific actor as seen by the prevalence of triads of type 021U, 111D, 201, or even 030T. Also, as the lack of more involved triads attests – namely those consisting of only asymmetric or mutual dyads – despite

⁵⁶ Epistola in qua confutantur ... deliramenta. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 3 January 2017. <http://www.controversia-et-confessio.de/id/e9c9c736-oed5-4018-8e49-8d20bc1271ea>. – For a more detailed look at the conflict between Osiander, Lauterwald and Ziegler, see Stupperich, Osiander in Preussen, 36–61.

⁵⁷ In this context, Jürgens and Weller mention how forms of personal communication still retained great importance and obviously continued to exist next to printed texts (Jürgens and Weller, “Einleitung,” 13).

⁵⁸ Frequently, discussions between scholars were printed despite previous agreements of discretion, in order to publically determine a “winner” of debates that had ended in a standoff. For some examples, see Füssel, “Zweikämpfe des Geistes,” 169–175.

the complex issues at hand most conflicts seem to have been of such a divisive nature that they were overwhelmingly fought between two opposing factions. If a third party took part in a controversy, it appears to not have taken an entirely new or even conciliatory position but joined one of these two sides, as will be examined in further detail in chapter 3.2.2.

3.2 Spheres of conflict

Beyond their individual scope, the sources analyzed in this paper can be categorized as belonging to one of several spheres of conflict.⁵⁹ The project *Controversia et Confessio* traces 24 of such controversies, 18 of which were discussed in pamphlets that were written by a known author against one or more opponents.⁶⁰ While most of these conflicts involve less than a hundred sources, others were debated through much larger numbers of texts, for example the Adiaporistic Controversy with almost 300 polemics. Especially longer pamphlets or summarizing texts can comment on more than one controversy, however, less than 8% of the texts in the database are concerned with more than one conflict, and only five with more than one.

As to be expected, most of the actors remarking on numerous controversial issues can be counted among those prolific authors that exhibit high degree values in the network. Yet, noticeable exceptions also exist, for example Matthäus Judex who wrote 14 pamphlets on eight topics, or Anthon Otho, who published 13 texts dealing with 9 conflicts. On the other hand, actors with a high indegree, who were often the target of polemics, tend not to be involved in many different controversies, even if they also published a considerable numbers of texts. To a large extent, this can be attributed to the two different types of categories the controversies can be sorted into, namely spheres of conflict relating to persons, and those relating to specific issues.

⁵⁹ Dingel, “Historische Einleitung” (2010), 13–14.

⁶⁰ While the sources collected in the project database belong to 24 spheres of conflict, the print publications cover only the eight most important ones, each in a separate volume (Hund and Jürgens, “Pamphlets,” 161).

3.2.1 Conflicts relating to persons: the Osiandrian Controversy

As alluded to above, it is noticeable that among the five actors with the highest indegree, three were at the center of conflicts – Schwenckfeld⁶¹, Major and Osiander – two of which were even named after them: the Majoristic⁶² and the Osiandrian Controversy, the latter of which will be examined in further detail below.

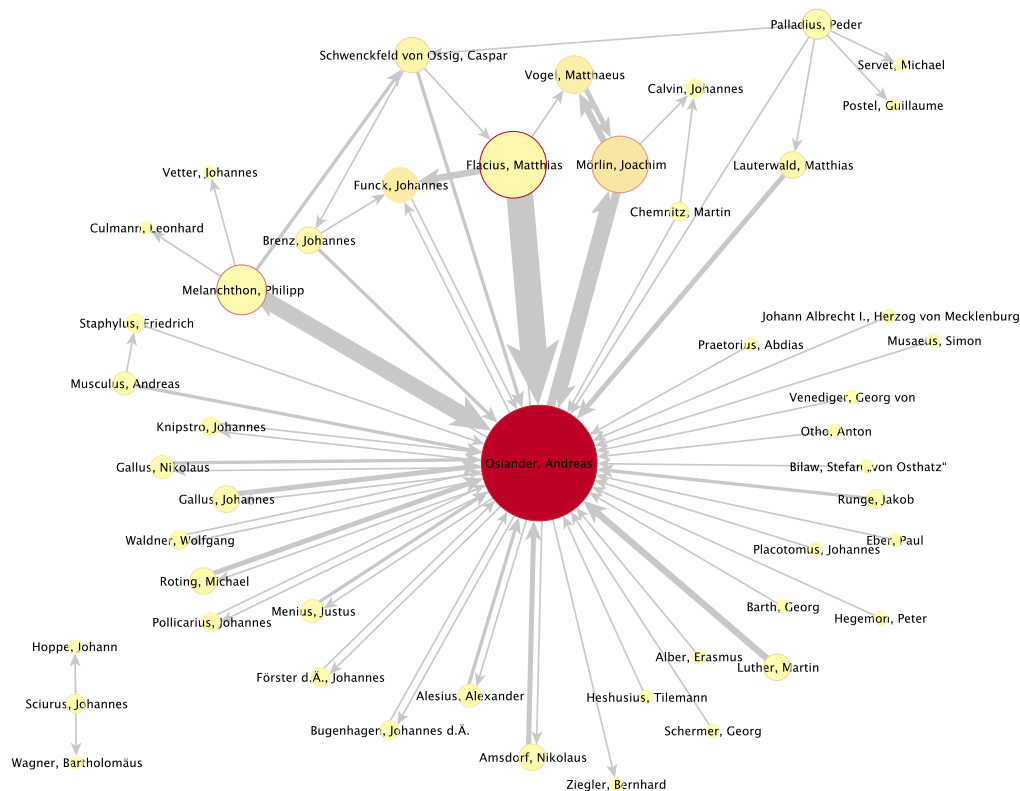


Figure 7: Network vizualisation of the author-opponent-relations of the Osiandrian Controversy. – Size of nodes: Degree. Width of links: Weight. Color of nodes: Indegree. Color of node borders: Outdegree.

The Controversy incited on Osiander's view on justification by faith that he first presented in 1550 and published in 1551 in form of a pamphlet titled

⁶¹ For more detail see Robert Emmet McLaughlin, *The freedom of spirit, social privilege, and religious dissent. Caspar Schwenckfeld and the Schwenckfelders*. Vol. 6 of *Bibliotheca dissidentium. Scripta et studia* (Baden-Baden: Koerner, 1996)

⁶² For more detail see Lies and Schneider, *Majoristischer Streit*.

“Von dem einigen Mittler Christo.”⁶³ In opposition to the view of the “alien righteousness of Christ, which we grasp by faith, and thus the obedience of the whole person to Christ”⁶⁴, it revolved around subjects such as “justification, redemption, faith and Christology”⁶⁵. Especially the first one was seen as one of the central doctrines of Christianity, which led to particularly bitter disputes.⁶⁶

In many ways, the Osiandrian Controversy can be considered as an archetype of a conflict centered upon a person. Almost every Protestant scholar rejected Osiander’s view on justification, to the effect that Philippists and Gnesio-Lutherans stood united in opposition against Osiander. Even Flacius and Melancthon not only allied with each other in their fight against him, but also defended one another despite their opposing views on almost every other issue of the Lutheran doctrine.⁶⁷ Beyond that, the Controversy drew a wide coalition of Protestant reformers “from [...] many different traditions within the Evangelical camp”⁶⁸.

This particular nature of the conflict is immediately apparent in the visualization of the network (figure 7). Osiander stands out as the center of the graph, exhibiting the highest indegree by far with a value of 84 while Mörlin, the actor with the second highest value, has only 8 texts directed against him. Apart from some small entanglements, the graph reminds strongly of the star form of an ego-network. This impression is supported by the average degree value, which at just 3 is considerably lower than in the complete network. Indeed, the main protagonists of Osiander’s ego-network correlate with those of the graph of the Controversy, indicating the significance of this conflict on his theological work.

⁶³ Wengert, *Defending Faith*, 10–11; 22–25. – Von dem einigen Mittler Christo. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 13 January 2017. <http://www.controversia-et-confessio.de/id/ef04a890-cd47-40ba-b67e-8db8c4b3ee20>; <http://www.controversia-et-confessio.de/id/d7659290-e96e-4e40-bc48-5ca4ea6e99d2>.

⁶⁴ Jörg Baur, with Timothy J. Wengert, “Formula of Concord,” in E-I. Vol. 2 of *The Encyclopedia of Christianity*, ed. Erwin Fahlbusch, Jan Milič Lochman and John Mbiti (Leiden: Brill), 334.

⁶⁵ Wengert, *Defending Faith*, 2.

⁶⁶ Dingel, “Historische Einleitung” (2010), 26–27. – Wengert, *Defending Faith*, 1; 4. – Stupperich, *Osiander in Preussen*. – For a detailed consideration of this controversy in the context of culture of conflict and (theological) public opinion see Henning Jürgens, “Das ‘Urteil der Kirche’ im Osiandrischen Streit. Theologische Öffentlichkeit als Schiedsinstanz,” in *Streitkultur und Öffentlichkeit im konfessionellen Zeitalter*, ed. Henning Jürgens and Thomas Weller (Göttingen: Vandenhoeck & Ruprecht, 2013), 229–252.

⁶⁷ Dingel, “Historische Einleitung” (2010), 12; 28. – Wengert, *Defending Faith*, 4.

⁶⁸ Wengert, *Defending Faith*, 4.

Indeed, the relations between Osiander and the other actors of the network are characterized by a very selective reciprocity. On the one hand, except for few exceptions⁷¹, all actors have outgoing ties towards Osiander. On the other hand, Osiander himself replied only to 16 actors, ten of which he addressed together in one pamphlet, and three in another. The only author to whom he maintains truly mutual relations is Joachim Mörlin, who emerged as his main opponent. This might be traced back to the geographical proximity and personal acquaintance between the two men. Both Mörlin and Osiander lived and worked in Königsberg at the time of the conflict, one as a pastor and the other a professor of theology at the local university, and communicated frequently. At the start of the Controversy, Mörlin was appointed as a mediator by Duke Albert of Prussia, yet soon he found himself in direct competition with Osiander for the Duke's opinion, and was eventually exiled from Königsberg.⁷² These events doubtlessly served to exacerbate the conflict between them and might have led to the reciprocity observed in the network. Another point of particular interest are Osiander's disregarded interactions in the case of Flacius and Melancthon, apart from Mörlin the two other main antagonists of his views.

The triad census of the network – particularly in comparison to the one of the complete graph – supports this notion (table 1). While again null triads and asymmetric dyads occur most frequently, the third most common pattern in the network of the Osiandrian Controversy is not the mutual dyad as observed in the complete graph, but 111D, detailing one mutual and one asymmetric tie against a shared target. Accordingly, the dyad census sees mutual and asymmetric dyads almost equally represented (35 and 37). The 201 dyad (two mutual relations) appears at a higher percentage than in the complete network as well, all representing patterns that emphasize how Osiander – as the negative centre of the graph – shapes the network through his selective responses to a few opponents. Accordingly, the triads of type 021D and 021C exhibit low values, as they are based on outgoing ties of a central actor, while triads requiring three non-null dyads, meaning interactions between three different persons, are almost non-existent.

In consequence, the subgraph of the Osiandrian Controversy, while certainly an extreme case, represents an archetypical example of a conflict centered on the views of a specific individual. This focus is visible in the

⁷¹ Namely Bernhard Ziegler, who is the only target of a pamphlet by Osiander as detailed in chapter 3.1, a second connected component revolving around a source written by Johannes Sciurus (*Sciurus, Apologia*. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 13 January 2017. <http://www.controversia-et-confessio.de/id/ac3bff54-3e44-48a8-9d71-987ebe82b802>), and two actors addressed in a text by Melancthon (*Antwort und Bericht Melancthons*. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 13 January 2017. <http://www.controversia-et-confessio.de/id/cb35af53-27c9-4976-83e9-b621765fie99>).

⁷² Wengert, *Defending Faith*, 6; 9–11. – Stupperich, *Osiander in Preussen*, 120–165; 359–362.

structure of the network resembling a star pattern, the high indegree value of Osiander, the low average degree, and the frequency of triads of type 111D and 021U. At the same time, it illustrates Osiander's communication strategy, which seems deliberately economical in its restraint. It consists of few responses at selected opponents, often summarized in one publication. Instead of engaging in a personal feud with prominent, influential enemies such as Melancthon and Flacius, at least in terms of specifically addressed pamphlets he focuses on the much more immediate antagonism towards his fellow Königsbergian Mörlin.

3.2.2 Conflicts relating to topics: the Eucharistic Controversy

The second Eucharistic Controversy presents another highly consequential issue of the post-Interim period, and the one on which the database of the project *Controversia et Confessio* contains the most sources⁷³. As such, it suggests itself for the analysis of the network of a topic-related conflict. Apart from its theological side, it was also a deeply political conflict as it revolved around the impression that Calvinist beliefs had been secretly spread in Saxony. Since Calvinism – also known as Reformed Protestantism – was not covered by the Peace of Augsburg that granted electors of the Holy Roman Empire the right to choose between Catholicism and Lutheranism as their official confession, this would have had serious political consequences and prompted Augustus of Saxony to take resolute measures against the suspected “crypto-Calvinists.”⁷⁴

Essentially, the controversy revolved around the concept of the Eucharist and associated arguments of Christology. While Luther advocated the doctrine of Real Presence of Christ in the Eucharist, Calvinists stood for a more metaphorical interpretation, which he strongly rejected. Disputes between the Calvinist camp and Lutherans already started in 1552, when Joachim Westphal spoke out against the Reformed doctrine. However, it turned into a controversy between Philippists and Gnesio-Lutherans only in 1571, when Christoph Pezel published the *Wittenberg Catechism*⁷⁵, which the Gnesio-Lutheran faction considered to contain Calvinist views, especially on the Eucharist, and to deviate from the teachings of Luther. After intense disputes

⁷³ Specifically 526 prints, 122 of which have been written by a known author against one or more specific opponents.

⁷⁴ Dingel, “Historische Einleitung” (2010), 29–31. – For this reason, the controversy is occasionally known as “Crypto Calvinism in Electoral Saxony,” but as Dingel remarks, the term is misleading since the confrontation and its consequences went far beyond the events in Saxony or the question of crypto-Calvinism; among others it led to the publication of the Formula of Concord (Dingel, “Historische Einleitung” (2008), 3; 15. – Hund and Jürgens, “Pamphlets,” 171; 161).

⁷⁵ Johannes Hund, “Wittenberger Katechismus (1571),” in Dingel, *Wittenberger Abendmahlslehre und Christologie*, 79–288.

that also included conciliatory writings such as the *Consensus Dresdensis*⁷⁶, the conflict escalated in 1574, when an anonymous print⁷⁷ later to be revealed to be written by Joachim Cureus sided with Melanchthon using Calvinist argumentations on Christology. Its publication led to the aforementioned measures by elector Augustus, who arrested several Philippists and ordered a group of theologians to compose a confession about the Eucharist and Christology contradicting Calvinist beliefs, the *Torgauer Artikel*⁷⁸, which had to be signed by all theologians remaining in Saxony.⁷⁹

The focus on issues rather than persons becomes already evident in the ratio of all sources contained in the project database to those sources that were addressed against an opponent. While for the Osiandrian Controversy, 58% of all sources were written against a specific target, for the Eucharistic Controversy this number amounts to only 23%.

The two types also differ markedly in the shape of the network itself (figure 9, 10). In comparison to the almost star-graph of the Osiandrian Controversy, the visualization of the Eucharistic conflict appears much more spread out and connected. While there are still hubs that dominate the graph, the number of low-degree actors centered on one high-degree node is far lower. A closer look at the original bimodal network confirms these observations, as apart from some texts by Melanchthon and Heshusius, most connections come from sources against or from one or two opponents or authors, respectively. The only exception is a cluster around Christoph Pezel, Albert Schirmer, and Conrad Schlüsselburg, which actually consists of only two sources, one by Schirmer and Schlüsselburg⁸⁰, and a re-issue of the *Wittenberger Katechismus* by Pezel with a commentary by Melanchthon⁸¹ that accounts for the many shared links between them.

⁷⁶ Henning Jürgens, "Consensus Dresdensis (1571)," in Dingel, *Wittenberger Abendmahlslehre und Christologie*, 797–822.

⁷⁷ Johannes Hund, "Joachim Curaeus: Exegesis perspicua (1574)," in Dingel, *Wittenberger Abendmahlslehre und Christologie*, 1017–1089.

⁷⁸ Henning Jürgens, "Torgauer Artikel (1574)," in Dingel, *Wittenberger Abendmahlslehre und Christologie*, 1093–1151.

⁷⁹ Dingel, "Historische Einleitung" (2008). – Dingel, "Historische Einleitung" (2010), 29–31. – Hund and Jürgens, "Pamphlets," 170–177. – For a closer look at the theological issues discussed, see Johannes Hund, *Das Wort ward Fleisch. Eine systematisch-theologische Untersuchung zur Debatte um die Wittenberger Christologie und Abendmahlslehre in den Jahren 1567 und 1574* (Goettingen: Vandenhoeck & Ruprecht, 2006).

⁸⁰ Schlüsselburg/ Schirmer, *Bekenntnis*. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 13 January 2017. <http://www.controversia-et-confessio.de/id/ce8ff902-1914-4a15-b669-29497c71ab70>.

⁸¹ Pezel, *Wittenberger Katechismus*. In *Controversia et Confessio Digital*, ed. Irene Dingel. Accessed 13 January 2017. <http://www.controversia-et-confessio.de/id/f57af537-65e8-43d9-aebo-99726e03da30>.

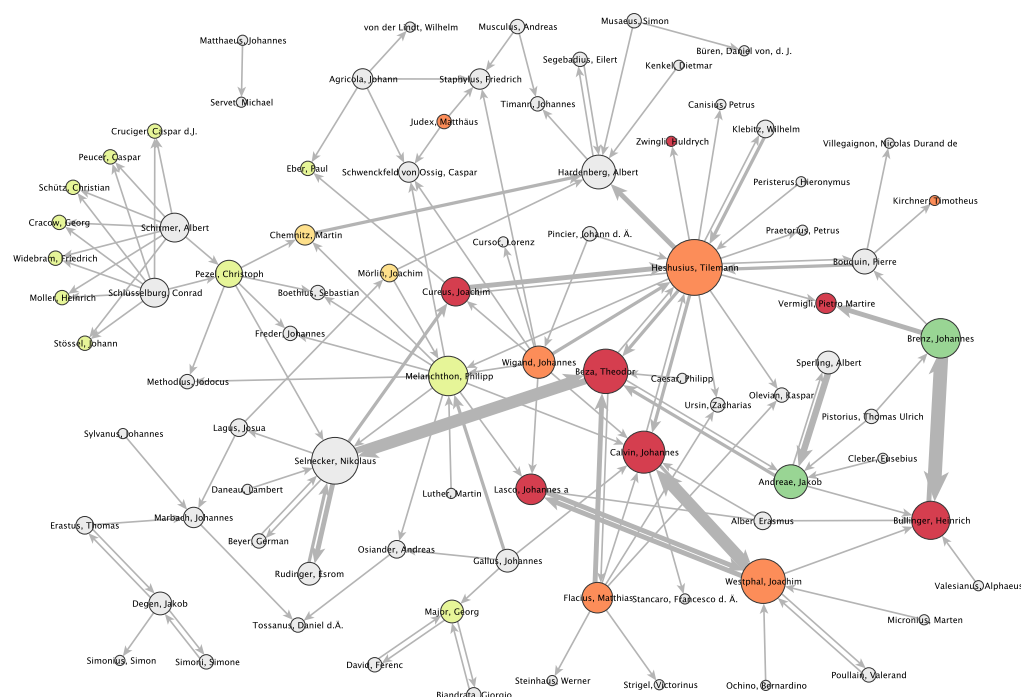


Figure 9: Visualizations of the network. – Size of nodes: degree. Color of nodes: (Assumed) affiliation of main contributors (red: Calvinists, orange: Gnesio-Lutherans, Green: Württemberg, light orange: Lower Saxony, light green: Philippists).

This structure is also reflected in the measures of network density and average degree, which exhibit a slightly lower and higher value, respectively, than for the Osiandrian Controversy, representing less isolated disputes centered on one central actor and instead a discussion among more or less equals.

The degree values of the individual nodes point to the main actors of the conflict as outlined above. For the Flacian camp, Heshusius⁸² appears as the most prolific representative, along with Westphal, whose involvement however mainly consists of his disputes with several Calvinists before 1571 (figure 9).⁸³ Also at the center of the controversy appears Nikolaus Selnecker. Although initially a disciple of Melanchthon, he distanced himself from him in

⁸² Heshusius particularly distinguished himself in these discussions with his concepts on the Eucharist and Christology (Peter F. Barton, “Heshusius, Tilemann [1527–1588],” in Heinrich II. – Ibsen, ed. Horst Robert Balz *et al.* Vol. 15 of *Theologische Realenzyklopädie* [Berlin and New York: Walter de Gruyter, 1986], 257–258).

⁸³ Dingel, “Historische Einleitung” (2008), 6.

his position on the Eucharist and Christology.⁸⁴ Nevertheless, the network visualization shows him primarily in an intense dispute with Theodor Beza.

Further, he wrote a number of polemics against groups such as Zwinglians, Calvinists, and the faculty of theology at Wittenberg, which are not considered in network study. In the light of his former affiliation, this high output in the context of the controversy shows an acute need for distinguishing himself and thus embodies the processes of argumentative identity consolidation characteristic to the culture of conflict.

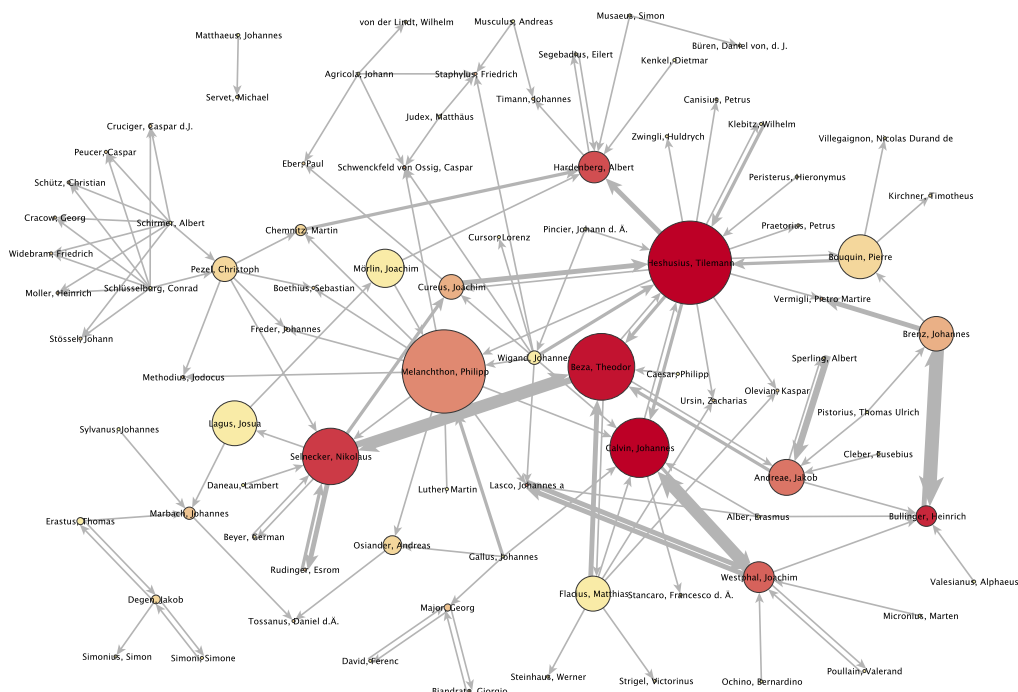


Figure 10: Visualizations of the network. – Size of nodes: Betweenness centrality. Color of nodes: Indegree.

His personal attacks against Beza, yet not Melancthon, also serve to illustrate another aspect of the network. The comparison of in- to outdegree values show a high disparity in the case of the Calvinists authors, who were disproportionately the target of texts, while the ratio is much more even for Lutheran actors, demonstrating a more equal conversation. This focus on reformed authors as the generally accepted adversaries of this conflict becomes even clearer in the betweenness centrality of the individual actors, which clearly shows Beza and Johannes Calvin as central figures, together with Melancthon as the representative of the suspected crypto-Calvinists, and Heshusius and Selnecker as the central opponents of reformed theology. As

⁸⁴ Hund and Jürgens, “Pamphlets,” 172.

figure 9 shows, these persons were also those involved in debates with members of more than one camp, other than for example Westphal, who though prolific, mainly disputed Calvinist authors.

These relations represent one defining trait of the Eucharistic Controversy: the many different groups of reformers involved, transcending the boundaries of the Holy Roman Empire⁸⁵. Apart from Calvinists, the Philippist faction in Wittenberg, and the one around Flacius in Jena, theologians from Württemberg and Lower Saxony were also involved.⁸⁶ Yet this multitude of actors was hardly reflected in the positions that were taken. Essentially, the authors were either Calvinists or suspected of Calvinist inclinations or claimed to defend the true Lutheran doctrine. This dichotomy is clearly visible in the patterns of reciprocity and the absence of more complex relations between triads in the network (table 1), for example in the common occurrence of mutual ties or the chain-pattern 021C in comparison to the Osiandrian Controversy. As such, the network is shaped less by the complexity and plurality of the reformatory discourse⁸⁷, and instead primarily by the medium of the polemics and the antagonistic, divisive nature of the communicative processes conducted through them.

Another aspect the triad census demonstrates is the nature of the conflict as driven by a broad discussion of issues instead of opposition against one individual actor. So are triads that embody authors writing pamphlets against two opponents, i.e. 021D and 111D, much more frequent than in either the complete or the Osiandrian network, while their counterparts, 021U and 111U, exhibit comparatively lower numbers. Generally, in examining the two different types of controversies, a picture emerges of how they shape the characteristic structure observed in the complete network.

4 Conclusion and Outlook

One of the main advantages of network theory is the ability to cross the micro-macro-divide and integrate structural and actor-based perspectives into one study.⁸⁸ Following this concept, analyzing the structure of the Protestant conflict of culture from a network-theoretical perspective as it reveals itself in the relations between authors and opponents of polemical pamphlets discloses

⁸⁵ Apart from Calvin, his faction also included the Swiss reformers Zwingli and Bullinger as well as the leader of the Dutch exiles in London, Johannes a Lasco (Dingel, "Historische Einleitung" [2008], 6).

⁸⁶ Dingel, "Historische Einleitung" (2008), esp. 11–12. – Hund and Jürgens, "Pamphlets," 172–174.

⁸⁷ Dingel, "Historische Einleitung" (2010), 10–12.

⁸⁸ Lemercier, "Formale Methoden," 19.

several characteristics that can be seen as profoundly distinctive of this particular type of communication.

The confrontations were dominated by two types of actors that stood in intense connection to one another: high-degree hubs with a multitude of ties to weakly as well as strongly interlinked persons, and a high number of low-degree nodes engaged in often asymmetric contact to each other, but primarily to the central hubs. The network they create is sparse, but evenly spread out, as no group is removed from the core by a significant distance. While reciprocity is low except among hubs, the mechanisms of selection seem to depend not on a dominant position in the network, but follow others preferences, for example geography or topical interests.

A closer examination of the two types of controversy that shape the network – those revolving around controversial views of one individual person and those related to specific issues – shows that their influence fundamentally contributes to this characteristic structure. On the one hand, person-related controversies introduce a focus on opposition against one particular actor that manifests itself in an almost ego-network-like form, while topic-related networks exhibit a more connected, more reciprocal organization without many isolated actors that embody their focus on widely debated issues.

These traits illustrate a conception of the culture of conflict as a structure of confrontation that revolved around a few main actors – chief among them Philipp Melancthon and Matthias Flacius – yet also included a broader audience in the form of numerous less influential theologians and scholars who joined in the discussion of the fundamental questions of their forming confession. Opponents were chosen carefully, and not everyone was “worthy” of a personal rebuttal. Instead, despite the wide public resonance brought forth by the printing and subsequent wider dissemination of pamphlets as well as by subjects of high political interest, authors still followed the structures of discourse rooted in academic practices of debate, particularly the *disputatio* with its narrow personal and spatial focus. At the same time, it emphasizes the divisiveness of the issues at hand, as despite the existence of numerous, only vaguely defined factions formed by persons with highly individual, pronounced beliefs, this multitude finds no reflection in the networks. Instead, antagonistic relations prevail, and more complex communication patterns – as observable mainly in the complete network – most likely stem from the intersection of several controversies influential actors were involved in simultaneously. These severe patterns of contention pay testament to the intensity of the processes of identity formation and group consolidation that took place in the wake of the Augsburg Diet. For the reasons outlined in chapter 2.2, the results presented certainly can not give a complete picture of these processes. Still, they are unquestionably indicative of certain trends of

the source material as outlined above, and in their focus on the author-opponent-relationship help to illuminate the structure of the communicative processes of antagonism embodied in these conflicts.

The findings presented in this paper are a starting point for the quantitative analysis of Post-Lutheran controversies. A variety of questions extend beyond its reach, but certainly deserve attention in future studies. Apart from the inclusion of different roles actors could inhabit, such as editor or author of a preface, the comparison of these findings to other spheres of controversies, for example among Catholic and Protestant scholars, would certainly be of great interest. As Dingel remarks, it “would be worthwhile to ascertain whether in that period in other geographical setting similar clusters of these characteristics can be identified or whether dependence on contingent factors in their environment gave different ‘cultures of controversy’ their unique cast”.⁸⁹ Another aspect entails the dynamics of the network at hand. As alluded to in the discussion of the Osiandrian Controversy, chronological factors certainly are of great importance regarding aspects such as reciprocity or the emergence and resolution of confrontations. The role of geographic distance could shed light on these mechanisms as well. And last but not least, a comparison of the network with one created by a different type of communication, for example letters, could help to ascertain the significance of the characteristics outlined above.

References

- Barabási, Albert-László. *Network Science*. Cambridge, Accessed 12 January 2017. <http://barabasi.com/networksciencebook/>.
- Bebermeyer, Gustav, *Schmähschrift (Streitschrift)*, in: *Reallexikon der deutschen Literaturgeschichte 3*, edited by Werner Kohlschmidt and Klaus Kanzog. Berlin 1977, 665–678.
- Bixler, Matthias, and Daniel Reupke, *Von Quellen zu Netzwerke*, in: *Handbuch Historische Netzwerkforschung. Grundlagen und Anwendungen*, edited by Marten Düring, Ulrich Eumann, Martin Stark and Linda von Keyserlingk. Vol. 1 of *Schriften des Kulturwissenschaftlichen Instituts Essen (KWI) zur Methodenforschung*, Berlin 2016, 101–122.
- Bremer, Kai. 2005. *Religionsstreitigkeiten. Volkssprachliche Kontroversen zwischen altgläubigen und evangelischen Theologen im 16. Jahrhundert*. Vol. 104 of *Frühe Neuzeit*. Tübingen 2005.
- Cuddon, John Anthony, and M. A. R. Habib, *Dictionary of literary terms and literary theory*. Chichester, 2013.

⁸⁹ Dingel, “Pruning the Vines,” 399.

- Dingel, Irene, ed., *Die Debatte um die Wittenberger Abendmahlslehre und Christologie (1570–1574), Vol. 8 of Controversia et Confessio*. Göttingen 2008.
- “Historische Einleitung.” In Dingel, *Wittenberger Abendmahlslehre und Christologie*, Göttingen 2008, 3–15.
- . “Historische Einleitung”, in: *Reaktionen auf das Augsburger Interim. Der Interimistische Streit (1548-1549)*, edited by Irene Dingel. Vol. 1 of *Controversia et Confessio*, 3–34. Göttingen 2010, 3–34.
- . *Pruning the Vines, Plowing Up the Vineyard: The Sixteenth-Century Culture of Controversy between Disputation and Polemic*, in: *The Reformation as Christianization. Essays on Scott Hendrix's Christianization Thesis*, edited by Anna Marie Johnson and John A. Maxfield. Vol. 66 of *Spätmittelalter, Humanismus, Reformation. Studies in the Late Middle Ages, Humanism and the Reformation*, Tübingen 2012, 397–408.
- Füssel, Marian, *Zweikämpfe des Geistes. Die Disputation als Schlüsselpraxis gelehrter Streitkultur im konfessionellen Zeitalter*, in: Jürgens and Weller, *Streitkultur und Öffentlichkeit*, o.O. 2013, 159–178.
- Jürgens, Henning P. and Thomas Weller, eds., *Streitkultur und Öffentlichkeit im konfessionellen Zeitalter*. Vol. 95 of *Veröffentlichungen des Instituts für Europäische Geschichte Mainz*. Göttingen 2013.
- . 2013. “Einleitung”, in: Jürgens and Weller, *Streitkultur und Öffentlichkeit*, 7–14.
- Lies, Jan Martin and Hans-Otto Schneider, *Der Majoristische Streit (1552–1570)*, Edited by Irene Dingel. Vol. 3 of *Controversia et Confessio*. Göttingen 2014.
- Hund, Johannes, and Henning P. Jürgens, *Pamphlets in the Theological Debates of the Later Sixteenth Century: The Mainz Editorial Project ‘Controversia et Confessio’*, in: *The Book Triumphant. Print in Transition in the Sixteenth and Seventeenth Century*, edited by Malcolm Walsby and Graeme Kemp. Vol. 15 of *Library of the written word*. Vol. 9 of *The Handpress World*, Leiden 2011, 158–177.
- Lemercier, Claire. *Formale Methoden der Netzwerkanalyse in den Geschichtswissenschaften: Warum und Wie?* In: *Österreichische Zeitschrift für Geschichtswissenschaften* 23 (2012), 16–41.
- Mahlmann-Bauer, Barbara. “Luther gegen Eck, Luther gegen Erasmus und Castellio gegen Calvin”. *Die Normalform reformatorischer Streitgespräche und die Entgleisung eines innerprotestantischen Streits*, in: *Die Kunst des Streits. Inszenierung, Formen und Funktionen öffentlichen Streits in historischer Perspektive*, edited by Marc Laureys and Roswitha Simons. Vol. 10 of *Super alta perennis. Studien zur Wirkung der Klassischen Antike*, Göttingen 2010, 167–218.
- Simmel, Georg, *Conflict and the Web of Group-Affiliations*. Translated by Reinhard Bendix and Kurt H. Wolff. New York 1955.
- Stupperich, Martin, *Osiander in Preussen. 1549 – 1552*. Vol. 44 of *Arbeiten zur Kirchengeschichte*. Berlin et al. 1973.

Wengert, Timothy J. *Defending Faith. Lutheran Responses to Andreas Osiander's Doctrine of Justification, 1551-1559*. Vol. 65 of *Spätmittelalter, Humanismus, Reformation. Studies in the Late Middle Ages, Humanism and the Reformation*. Tübingen 2012.

EPPLE, RUEDI

Flucht und Unterstützung.

Die “Auskunftsstelle für Flüchtlinge” in Zürich und ihre Netzwerke

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Abstract

As in any case of migration, escaping is embedded in network relationships. This is not only true for the refugees themselves, but also for their helpers. They are also part of networks. Since the escape and its support are dynamic processes, the networks in which they are embedded are also changing. The article analyzes such changes of network relationships for an assorted example. Firstly, it investigates the escape of religious and revolutionary socialists after the so-called Anschluss (annexation) of Austria to Nazi Germany in 1938. Secondly, the support of the refugees by the Zurich Refugee Center is analyzed. Thirdly, the change of the network relationships of refugees and supporters is dissected. The paper is inspired by a theory of Henning Laux. The theory postulates a network development as follows: collision, composition, institutionalization, and deconstruction. The chosen theoretical point of view draws attention to changes and interdependent relationships, overcoming a simple static approach.



1 Einleitung*

Die Frauen, Männer und Kinder, die seit Jahren als Flüchtlinge über das Mittelmeer und auf anderen Wegen nach Europa ziehen, folgen in vielen Fällen Netzwerkverbindungen. In der Migrationstheorie und entsprechenden empirischen Untersuchungen gehört es deshalb zum Standard, die Netzwerke zu berücksichtigen, in die Migration verwoben ist.¹ Doch nicht nur migrierende Personen, auch diejenigen Personen, die sie auf ihrem Weg oder dann im Ankunftsland unterstützen, sind in Netzwerke eingebunden. Das gilt sowohl für die professionelle als auch für die freiwillige Unterstützung.²

Die gegenwärtigen Flucht- und Migrationsbewegungen stehen in einer langen Tradition.³ Man denke etwa an die Glaubensflüchtlinge der Frühen Neuzeit, die den Weg aus Frankreich oder England in die Schweiz oder in die neue Welt fanden.⁴ Auch der Zweite Weltkrieg führte zu massiven Fluchtbewegungen. Die flüchtenden Menschen stiessen in den Ankunftsländern oft auf restriktive Aufnahmebedingungen. Vielfach fanden sie aber auch freiwillige oder professionelle Unterstützung. Ein eindrückliches Beispiel dafür ist die Hilfe, auf die jüdische Flüchtlinge in Chambon-sur-Lignon und seiner Umgebung im Süden Frankreichs stiessen.⁵

Auch der vorliegende Beitrag setzt sich mit einem Beispiel konkreter Unterstützung für Flüchtlinge während des Zweiten Weltkriegs auseinander. Es handelt sich um die Arbeit, welche die „Auskunftsstelle für Flüchtlinge“ in Zürich leistete. Diese „Auskunftsstelle“ hatte sich im Laufe der 1930er Jahre am „Gartenhof“ herausgebildet, einem von Leonhard Ragaz und seiner Familie betriebenen Settlement im Zürcher Arbeiterquartier Aussersihl. Waren es zunächst Jüdinnen und Juden sowie Sozialistinnen und Sozialisten aus Deutschland, die den Weg zum „Gartenhof“ fanden, so wurde dieser 1938 zu einer wichtigen Anlaufstelle für Flüchtlinge aus Österreich. Zu diesem Zeitpunkt erfolgte auch die offizielle Gründung der „Auskunftsstelle für

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Corresponding author: Dr. Ruedi Epple, Sozialwissenschaftler, Lektor i.R., Rheinfelderstrasse 53, CH-4450 Sissach, Schweiz, email: ruedi.epple@unifr.ch

1 Pries 2010; Han 2010; Nagel 2012; Stelzig 2012; Monsutti 2005; Gold 2005.

2 Unabhängige Expertenkommission Schweiz – Zweiter Weltkrieg 2001, 147-168; Gamper und Fenicia 2013.

3 Oltmer 2013; Freiplatzaktion Zürich 2015.

4 Bergier 1983; Jecker 2012; Skoeries 2012.

5 Moorehead 2014; Cabanel 2013.

Flüchtlinge“ und wurde die Unterstützung für Flüchtlinge zum zentralen Tätigkeitsfeld des „Gartenhofs“. Hatte für die an der Gartenhofstrasse in Zürich lebende Familie Ragaz sowie ihr Umfeld, das aus der religiös-sozialen Bewegung, der Zeitschrift „Neue Wege“ und ihren Abonnenten, der „Zentralstelle für Friedensarbeit“ sowie der „Internationalen Frauenliga für Frieden und Freiheit“ bestand, bisher die politische und publizistische Arbeit gegen die Militarisierung der Schweiz und für eine offene Haltung gegenüber Flüchtlingen im Zentrum gestanden, so trat nun die soziale Arbeit in den Mittelpunkt.⁷ Dieser Wandel hatte zwei Gründe: Einerseits wurde die politische und publizistische Arbeit durch verschärften Staatsschutz und Zensur erschwert. Andererseits drängten sich mit dem Auftreten von Flüchtlingen neue Prioritäten auf.

Der vorliegende Beitrag untersucht die Netzwerke, in die der „Gartenhof“ und seine „Auskunftsstelle für Flüchtlinge“ eingebunden waren. Sowohl das Netzwerk der flüchtenden Personen aus Österreich als auch das Netzwerk der unterstützenden Personen in der Schweiz wurden entlang von freundschaftlichen und verwandtschaftlichen Beziehungen sowie von geteilten Mitgliedschaften in politischen Organisationen rekonstruiert. Es wird die These vertreten, dass es solche Netzwerkbeziehungen waren, die dazu führten, dass die „Auskunftsstelle“ ab 1938 zur Anlaufstation eines ganz bestimmten Teils österreichischer Flüchtlinge wurde. Zudem soll aufgezeigt werden, dass die Verlagerung des Arbeitsschwerpunkts des „Gartenhofs“ von der politischen zur sozialen Arbeit Rückwirkungen hatte. Das Netzwerk musste unter den gegebenen Umständen zu klandestinen Praktiken Zuflucht nehmen und seine internationale Vernetzung erweitern. Die Fortsetzung der Flucht aus der Schweiz in andere europäische Staaten und die USA führte nicht etwa zum Abbruch der Beziehungen, sondern es resultierte im weiteren Verlauf eine Verflechtung zwischen Flüchtenden und Unterstützenden. Von Verflechtung spreche ich, wenn ich Beziehungen zwischen Netzwerken meine. „Netzwerke von Netzwerken“ wie sie Friedhelm Neidhardt beispielsweise in Sozialen Bewegungen beobachtet,⁸ realisieren sich zwar ebenfalls über Beziehungen zwischen Personen, konstituieren also ein soziales Netzwerk neuer Grössenordnung. Doch ziehe ich es im vorliegenden Fall in Anbetracht der Netzwerkdynamik und der Vorläufigkeit und Prekarität dieser Beziehungen vor, von Verflechtungen zu sprechen und neben den zwei präexistierenden Netzwerken nicht auch noch ein zusätzliches Netzwerk einzuführen.

6 Kocher 1996, 128-132.

7 Spieler 2006, Spieler, Brassel und Howald 2009.

8 Neidhardt 1985.

Da mit diesen Fragestellungen der Wandel von Netzwerkstrukturen ins Zentrum des Interesses rückt, lässt sich der vorliegende Beitrag theoretisch von Überlegungen anregen, die Henning Laux im Anschluss an Harrison White und Bruno Latour in seinen „Koordinaten einer integrativen Netzwerktheorie“ entwickelt hat.⁹ Nach Laux durchlaufen Netzwerke vier Phasen. Sie gehen aus einer „Kollisionsphase“ hervor, finden in einer „Kompositionsphase“ zu einer gewissen Stabilisierung, verfestigen sich in einer „Institutionalisierungsphase“ und lösen sich in einer „Dekonstruktionsphase“ unter Umständen wieder auf. Es soll versucht werden nachzuweisen, dass die Überlegungen von Laux zu den „Mechanismen der Strukturbildung“, denen Netzwerke unterliegen, für die empirische Untersuchung eines konkreten Beispiels fruchtbar gemacht werden können.¹⁰ Darüber hinaus aber werden auch Konzepte herbeigezogen, die wie die Überlegungen zu den „strukturellen Löchern“,¹¹ den „schwachen Beziehungen“¹² oder den „Unterstützungsnetzwerken“¹³ Netzwerkstrukturen erhellen können.

Empirisch stützt sich der vorliegende Beitrag in erster Linie auf Netzwerkdaten, die einem Briefwechsel zwischen Christine Ragaz und Steffi Mattersdorf entnommen sind.¹⁴ Ragaz, die Tochter der „Gartenhof“-Gründer Clara und Leonhard Ragaz, arbeitete in der „Auskunftsstelle für Flüchtlinge“ mit. Mattersdorf, eine Sozialistin aus Österreich, kam 1938 auf ihrer Flucht vorübergehend im „Gartenhof“ in Zürich unter und lernte bei dieser Gelegenheit sowohl die Arbeit als auch das Umfeld der „Auskunftsstelle“ kennen. Die beiden Frauen pflegten von da an eine Jahrzehnte dauernde Brieffreundschaft. In deren Anfangszeit tauschten sie sich intensiv über ihre gemeinsamen Bekannten aus Österreich und Zürich sowie über die Arbeit der „Auskunftsstelle“ aus, was den Briefwechsel dieser Phase zu einer gehaltvollen Quelle macht. Die untersuchten Netzwerke wurden auf diejenigen Personen begrenzt, die in der Anfangsphase dieses Briefwechsels erwähnt wurden. In Bezug auf die Relationen zwischen diesen Personen wurden die Informationen aus dem Briefwechsel aber mit Daten aus weiteren, teilweise auch publizierten Quellen und aus der Sekundärliteratur ergänzt. So waren beispielsweise die Beziehungen zwischen österreichischen Flüchtlingen auch durch eine Reihe von

9 Laux 2014.

10 Laux 2014.

11 Burt 1995; Scheidegger 2010.

12 Avenarius 2010.

13 Diewald und Sattler 2010; Gamper und Fenicia 2013.

14 Der Briefwechsel ist im Staatsarchiv Zürich archiviert. Um den Anmerkungsapparat zu entlasten, sind die Signaturen mit A, B oder C abgekürzt (vgl. Archivbestand).

Handbüchern und Monographien erschliessbar.¹⁵ Aus dem Briefwechsel gingen vorwiegend die persönlichen, das heißt freundschaftlichen und verwandtschaftlichen Beziehungen sowie die Verbindungen hervor, die sich aus den Unterstützungsbeziehungen ergaben. Wenn möglich wurde dabei in Anlehnung an Marten Düring, Martin Skoeries sowie an Diewald und Sattler auch die Art der Unterstützung festgehalten.¹⁶ Die zusätzlichen Quellen lieferten in erster Linie Angaben über geteilte Mitgliedschaften in politischen Organisationen. Aus dem aus den geteilten Mitgliedschaften resultierenden bipartiten Datensatz wurden die politischen Verbindungen ermittelt.¹⁷ Die Netzwerke, die den Ausgangspunkt der folgenden Analyse bilden – das präexistierende Netzwerk des „Gartenhofs“ in Zürich einerseits, das präexistierende Netzwerk in Österreich andererseits – summieren persönliche und politische Beziehungen. Die Gewichtung der Netzwerkverbindungen misst deren Multiplexität,¹⁸ nicht die Häufigkeit der Kontakte zwischen den Netzwerkpersonen. Die Visualisierung erfolgt jeweils mit dem Programm Visone und dessen klassisch „force-directed layout algorithm“, der sich an Fruchterman und Reingold anlehnt.¹⁹

Da die Netzwerkpersonen im Briefwechsel zwischen Ragaz und Mattersdorf erwähnt werden müssen, weist deren Zusammensetzung eine Verzerrung auf. Die Wahrscheinlichkeit, dass das nahe Umfeld der beiden Korrespondentinnen Erwähnung findet und damit im Netzwerk vertreten ist, ist grösser als diejenige für Personen aus dem weiteren Umfeld. Sichtbar wird das etwa daran, dass die Familien Mattersdorf und Ragaz Teil der beiden präexistierenden Netzwerke sind. Dieser Problematik begegnet die vorliegende Analyse dadurch, dass sie die rekonstruierten Netzwerke nicht als repräsentativ betrachtet und die qualitative Auswertung in den Vordergrund rückt.

Der vorliegende Beitrag übernimmt den Vorschlag von Henning Laux, bei der Entwicklung von Netzwerken Phasen zu verfolgen.²⁰ Ich beginne mit einem

15 Buttinger 1953; Leichter 1968; Leichter 2003[1939]; Gardiner 1989; Gardinger und Buttinger 1978; Binder 1997; Pelinka 1981; Oesch 2014; Aussermair 1979; Roeder et al. 1983; Weinzierl, Pfoser-Schewig und Schwager 1984, Goldner 1977; Bolbecher, Adunka und Kaiser 2000; Hoerschelmann 1997.

16 Düring 2015; Skoeries 2012; Diewald und Sattler 2010.

17 Borgatti 2009; Borgatti und Everett 1997; Bonacich 1972.

18 Avenarius 2010.

19 Baur 2008, 68-69.

20 Es ist mir bewusst, dass ich damit nur einen Teil seiner „Koordinaten einer integrativen Netzwerktheorie“ übernehme und beispielsweise die interessante Frage beiseitelasse, ob auch das Gebäude „Gartenhof“ oder die restriktive Flüchtlingspolitik der Schweiz als Teil eines Netzwerks zu betrachten wären (vgl. Laux 2014 und allgemein zur Akteur-Netzwerk-Theorie (ANT): Peuker 2010).

Abschnitt über das präexistierende Netzwerk in Österreich, das 1938 mit dem „Anschluss“ Österreichs an das nationalsozialistische Deutschland in eine nach Laux sogenannte „Kollisionsphase“ geriet. Dabei wurde es teilweise dekonstruiert. Die Netzwerkpersonen verteilten sich geographisch neu und stossen auf ihrer Flucht mit den Personen eines präexistierenden Netzwerks in der Schweiz sowie mit der dort herrschenden restriktiven Flüchtlingspolitik zusammen. In einem weiteren Abschnitt befasse ich mich mit der „Kompositionsphase“. Dabei rückt das präexistierende Netzwerk in der Schweiz ins Zentrum der Analyse. Aus dem Zusammentreffen mit den Personen des geographisch expandierenden österreichischen Netzwerks stellten sich den Personen des Netzwerks in der Schweiz neue Aufgaben. War bisher die politische und publizistische Tätigkeit im Vordergrund gestanden, so trat nun die soziale oder Unterstützungsarbeit ins Zentrum. Nach und nach kristallisierten sich Formen der Verflechtung zwischen den beiden präexistierenden Netzwerken heraus, wobei sich beide Netzwerke veränderten: Einerseits wurde der Zusammenhalt zwischen den Personen des präexistierenden österreichischen Netzwerks unter den Bedingungen der Flucht und des weiteren Kriegsverlaufs teilweise von der Kommunikation über die Schweiz und von der Unterstützung aus der Schweiz abhängig. Andererseits passte sich das präexistierende Netzwerk der Schweiz seinen neuen Aufgaben an, indem es neue Formen der Unterstützungsarbeit entwickelte. Erst als der Kern des österreichischen Netzwerks die USA erreichte, erfuhr dieses eine Reinstitutionalisierung und nahm die Verflechtung mit dem schweizerischen Netzwerk wieder ab. Auf die Phasen der Institutionalisierung und erneuten Dekonstruktion werde ich nur noch in einem kursorischen Schlussabschnitt eingehen.

2 Kollisionsphase

In der von Henning Laux so genannten „Kollisionsphase“ trifft ein „konturloses amorphes Gemenge“ von „heterogenen“, „frei flottierenden Elementen“ aufeinander. Diese bilden „nicht mehr als eine lose Akkumulation“: „Kein Element hat die Kontrolle über das Geschehen. Feste Positionen, Distanzen, Abhängigkeiten, Kompetenzen, Ressourcen und Hierarchien können sich im ‚Embrionalstadium der Struktur‘ weder herausbilden noch festigen. Alles ist im Fluss, nichts ist entschieden. Wir beobachten eine offene Situation.“ Ein strukturiertes Netzwerk entsteht erst, „wenn es gelungen ist, flüchtige Relationen durch wiederholte Begegnungen zu stabilisieren.“²¹ Die folgenden Abschnitte beschreiben zunächst ein präexistierendes Netzwerk in Österreich. Dieses erfuhr mit dem „Anschluss“ Österreichs an das nationalsozialistische Deutschland seinen „Urknall des Sozialen“ und wurde

21 Laux 2014, 161-163.

teilweise dekonstruiert. Die meisten Netzwerkpersonen sahen sich dadurch zur Flucht gezwungen. Ebenfalls präexistierende Beziehungen zur Schweiz liessen sie dabei mit einem Netzwerk in der Schweiz sowie mit der dort herrschenden restriktiven Flüchtlingspolitik kollidieren.

2.1 Ein präexistierendes Netzwerk in Österreich

Das präexistierende Netzwerk in Österreich, das sich auf der Grundlage des Briefwechsels von Mattersdorf/Ragaz rekonstruieren lässt (vgl. Abbildung 1), setzt sich ausschliesslich aus Personen zusammen, die sich vor dem „Anschluss“ an das nationalsozialistische Deutschland in Österreich aufhielten. Es umfasste 41 Personen. Davon waren 22 männlichen, 19 weiblichen Geschlechts. Die Netzwerkkarte weist ein dichtes, vorwiegend aus Männern bestehendes Zentrum aus, die einander als Mitglieder der „Revolutionären Sozialisten“ verbunden waren. Die „Revolutionären Sozialisten“ (RS) waren die im Untergrund tätige Nachfolgeorganisation der exilierten „Sozialdemokratischen Partei Österreich“ (SPÖ). Eine besondere Rolle spielte in diesem Zentrum der „kleine“ Otto Bauer,²² der dieses Zentrum mit dem „Bund religiöser Sozialisten“ (BRS) Österreichs verknüpfte. Der „kleine“ Bauer war Vorsitzender des BRS gewesen. Seit dieser Bund 1934 ebenfalls verboten worden war, hatte er seine politische Arbeit im Untergrund und in enger Verbindung mit den RS fortgesetzt.²³ Um das Zentrum herum sind in der Netzwerkkarte diejenigen Personen angesiedelt, die den Personen aus dem Zentrum verwandtschaftlich oder freundschaftlich verbunden waren. Für drei der im Briefwechsel auftretenden Personen konnten keine Beziehungen eruiert werden.

22 Dieser Otto Bauer ist von seinem „grossen“ Namensvetter zu unterscheiden, der Vorsitzender der „Sozialdemokratischen Partei Österreich“ (SPÖ) war und sich im tschechoslowakischen Exil aufhielt (www.dasrotewien.at/bauer-otto.html, Zugriff 3.5.2017).

23 Aussermair 1979.

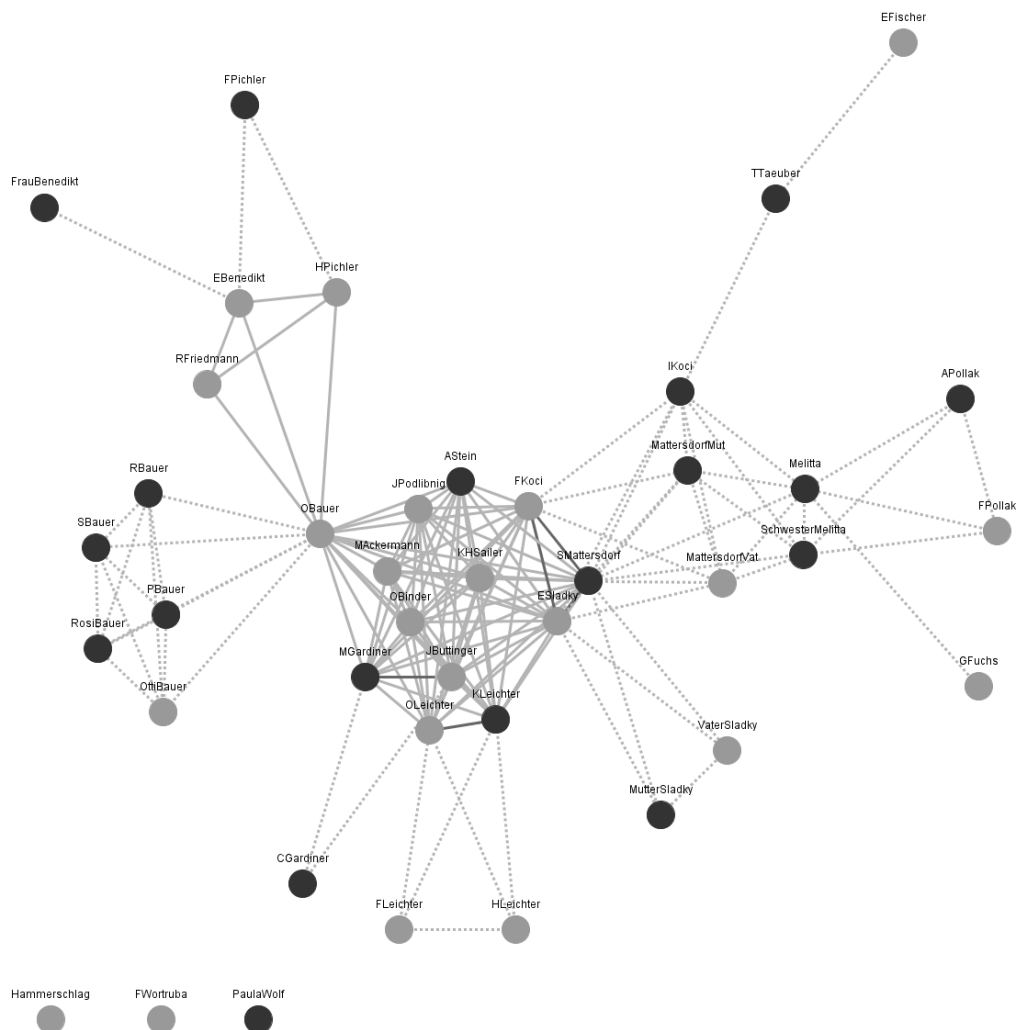


Abbildung 1: Das präexistierende Netzwerk in Österreich um 1938. Männer sind hell-, Frauen dunkelgrau dargestellt. Politische Verbindungen sind ausgezogen, verwandtschaftliche und freundschaftliche Beziehungen punktiert. Kommen persönliche und politische Verbindungen zusammen, sind die ausgezogenen Linien dunkel gefärbt.

2.2 „Urknall des Sozialen“

Der Zyklus von Kollision über Komposition zur Institutionalisierung oder Dekonstruktion, den die hier untersuchten Netzwerke durchliefen, begann 1938 mit der Angliederung Österreichs an das nationalsozialistische Deutschland.²⁴ Sollte auch dieser Zyklus einen „sozialen Urknall“ gekannt haben, der im Sinne

²⁴ Rathkolb 2015b.

der Theorie von Henning Laux am Anfang steht, dann dürfte es sich um den Moment gehandelt haben, von dem ein Augenzeuge wie folgt berichtete:

Als ich auf dem Weg zu meinem Büro den Graben überquerte, wälzte sich auch hier schon die braune Flut heran. Es war ein unbeschreiblicher Hexensabbat -- Sturmtruppe, von denen viele kaum der Schulbank entwachsen waren, marschierten mit umgeschnallten Patronengürteln und Karabinern, als einziges Zeichen ihrer Autorität die Hakenkreuzbinde auf dem Ärmel, neben den Überläufern aus den Reihen der Polizei; Männer und Frauen brüllten und schrien hysterisch den Namen ihres Führers, umarmten die Wachleute und zogen sie mit sich in den wirbelnden Menschenstrom; Lastwagen mit SA-Leuten, die ihre lang versteckt gehaltenen Mordwaffen nun offen trugen, hupten ohrenbetäubend und versuchten vergeblich, sich durch die Menge von Männern und Frauen einen Weg zu bahnen, die im Lichte der nun auftauchenden, schwelenden Fackeln brüllten und tanzten. Die Luft war voll der Geräusche des heillosen Spektakels, und nur hin und wieder konnte man einzelne Schreie wie: ‚Nieder mit den Juden! Heil Hitler! Sieg Heil! Juda verrecke! An den Galgen mit Schuschnigg! Heil Seyss-Inquart! Heil Planetta! Nieder mit den Schwarzen! Ein Volk, ein Reich, ein Führer, ein Sieg!‘ unterscheiden. Fetzen des Horst-Wessel-Liedes klangen immer wieder auf, nur um im Gebrüll des ‚Heute gehört uns Deutschland und morgen die ganze Welt!‘ und ‚Deutschland, Deutschland über alles!‘ wieder zu ertrinken. Bis lang nach 3 Uhr waren die Strassen Wiens ein Inferno.²⁵

Das Zitat stammt von Georg Eric Rowe Gedy. Er war viele Jahre Korrespondent der „New York Times“ in Wien und beobachtete den „Anschluss“ Österreichs aus nächster Nähe. Die chaotischen Ereignisse, die er beschreibt, fanden am Freitag, 11. März 1938, zwischen dem Rücktritt von Kurt Schuschnigg als altem und der Ernennung von Arthur Seyss-Inquart als neuem Bundeskanzler Österreichs statt.²⁶

Der 11. März bildete den Höhepunkt und Abschluss der von Adolf Hitler im Bündnis mit den österreichischen Nationalsozialisten seit Jahren betriebenen „Heimführung“ Österreichs ins „Dritte Reich“. Seit einem Treffen zwischen Hitler und Schuschnigg im grenznahen bayerischen Berchtesgaden rund einen Monat vorher hatten die Drohgebärden des nationalsozialistischen Deutschlands trotz anderslautender Versprechungen und österreichischem Entgegenkommen praktisch von Tag zu Tag zugenommen. Schuschnigg und seine „Vaterländische Front“ hatten im letzten Moment noch versucht, das politische Ruder herumzureissen. Erstens signalisierten sie den seit 1934 unterdrückten sozialistischen und kommunistischen Parteien und Gewerkschaften Entgegenkommen und liessen politische Gefangene frei. Zweitens setzten sie auf den 13. März überraschend eine Volksabstimmung zur staatlichen Unabhängigkeit Österreichs an, die sie mit Unterstützung der

25 Gedy 1947, 281-282.

26 Gedy 1947, 268-286.

politischen Linken zu gewinnen hofften. Doch kamen Hitler und die deutsche Armee diesem Plan zuvor. Als Schuschnigg am Nachmittag des 11. März zurücktrat, hatte der Einmarsch der an der österreichischen Grenze konzentrierten deutschen Verbände bereits eingesetzt und die paramilitärischen Organisationen der österreichischen Nationalsozialisten besetzten öffentliche Gebäude, Plätze und Strassen.²⁷

Diese Ereignisse und ihre Folgen führten dazu, dass die Personen des präexistierenden Netzwerks, die bis anhin – wenn auch unter erschwerten Bedingungen – in Österreich hatten leben können, aus religiösen oder politischen Gründen ihres Lebens nicht mehr sicher sein konnten.²⁸ Sie sahen sich einer massiv verschärften Verfolgung ausgesetzt, weil statt der österreichischen Polizei nun die Gestapo das Heft an sich riss, die als effizienter und unnachsichtiger und deshalb als bedrohlicher galt.²⁹ Sie wurden in die Flucht getrieben und mussten Österreich unter grossem zeitlichem Druck verlassen. Ihr Netzwerk trat in den Tagen und Wochen, die dem 11. März 1938 folgten, in eine Phase der Dekonstruktion und geographischen Expansion. Rund ein Jahr später befanden sich die 41 Personen des präexistierenden Netzwerks auf über sechs Länder verteilt: Nur sieben Personen waren in Österreich zurückgeblieben. 18 Personen waren nach Frankreich, sechs nach England, fünf in die Schweiz, drei nach Schweden und eine Person in die USA geflohen. Von einer Person konnte der Aufenthaltsort rund ein Jahr später nicht festgestellt werden. Wie sich die geographische Expansion des österreichischen Netzwerks vollzog, hatte mit dessen Struktur zu tun. Diese führte dazu, dass es in der Kollisionsphase mit einem zweiten, in der Schweiz verorteten Netzwerk sowie mit der dort herrschenden restriktiven Flüchtlingspolitik zusammenstiess. Dieser Zusammenstoss und seine Rückwirkungen sind Gegenstand des folgenden Abschnitts.

2.3 Flucht über die Schweiz

An der Wiener Rummelhardtgasse, etwa zwei Kilometer vom Graben entfernt, wo Gedye die Geschehnisse beobachtete, wurde auch Muriel Gardiner durch „ungewohnte Töne“ auf die Vorgänge unten auf der Strasse aufmerksam. Auch dort drängte sich „eine dichte, sich vorwärtsschiebende Menge, die Hakenkreuzfahnen schwang und das Horst-Wessel-Lied sang“. In ihrem Rückblick auf den 11. März 1938 berichtet Gardiner von körperlichen Reaktionen, die sich mit einer „Vision der Zukunft“ verbanden: Sie habe Herzklopfen und Schwindel empfunden und das Beobachtete als „schwachen

²⁷ Rathkolb 2015b, 501-510.

²⁸ Gedye 1947, 287-301.

²⁹ Rathkolb 2015b, 511-517.

Vorgeschmack eines tiefgehenden Wandels“ erlebt, „der unser aller Leben zerrütten sollte“, als „eine Ankündigung kommenden Unheils“, als „ein Auftakt zu Tod und Vernichtung.“³⁰ Mit dem „Anschluss“ Österreichs war eingetreten, was sie und Josef Buttinger, ihr damaliger Lebenspartner und späterer Ehemann, seit Monaten befürchtet hatten.³¹

Gardiner und Buttinger gehörten seit 1934 dem politischen Untergrund an. Beide waren sie führende Mitglieder der Gruppe „Funke“, einer leninistischen Gruppierung innerhalb der „Revolutionären Sozialisten“ (RS). In deren Reihen hatten sie sich erstmals getroffen. Seit 1935 waren sie ein Paar.³² Nachdem Buttinger Vorsitzender der RS geworden war, konzentrierte sich Gardiner darauf, ihn in ihren beiden Wiener Wohnungen an der Rummelhardt- und Lammgasse oder im Wochenendhaus im Wiener Wald zu verstecken. Zudem übernahm sie konspirative Aufgaben, verfasste und verteilte Informationsblätter für die Wiener Arbeiterschaft, organisierte und finanzierte Hilfe für Sozialisten, die ihre Arbeit verloren hatten oder im Gefängnis steckten, und stellte die Kontakte zur Führung der „Sozialdemokratischen Partei Österreichs“ sicher, die im tschechoslowakischen Brunn im Exil wirkte.³³

Im Laufe des Jahres 1937 hatte sich der Ring der Repression zunehmend enger um die RS gelegt. Wichtige ihrer Vertreter wurden verhaftet. Buttinger selbst musste sich vorübergehend im Ausland in Sicherheit bringen. Bei seiner Rückkehr Mitte Februar 1938 traf er viele seiner Genossen wieder in Freiheit an. Schuschnigg, der die politische Linke jahrelang verfolgt und unterdrückt hatte, hatte sie entlassen, um sie für ein Bündnis gegen die Nationalsozialisten zu gewinnen. Doch Buttinger und Gardiner blieben pessimistisch. Aus ihrer Sicht waren die Tage des unabhängigen Österreichs gezählt. Sollte der „Anschluss“ erfolgen, war ausgemacht, dass Buttinger erneut sofort ausser Landes gehen würde. Sie versuchten, auch Genossinnen und Genossen zu überzeugen, für diesen Fall vorzusorgen.³⁴

Muriel Gardiner übernahm in diesem Zusammenhang erneut eine zentrale Funktion. Als wohlhabende Frau mit amerikanischem und englischem Pass genoss sie eine gewisse Vorzugsstellung. Mutterschaft und Medizinstudium verschafften ihr eine gewisse Tarnung. Im politischen Netzwerk, dem sie angehörte, war sie unter dem Codename „Mary“ bekannt und genoss Vertrauen. „Mary“ übernahm Kurierdienste. Sie besorgte und schmuggelte falsche Pässe. Sie versah Flüchtlinge mit Informationen, Fahrkarten und

30 Gardiner 1978, 73.

31 Isenberg 2010, 1-5.

32 Isenberg 2010, 79-83.

33 Isenberg 2010, 91-97.

34 Isenberg 2010, 97-98; Gardiner 1978, 70-77.

Devisen. Sie beschaffte Visa und sogenannte Affidavits, Bürgschaftserklärungen von Leuten im Ausland, in denen diese sich verpflichteten, für Kost und Logis der Flüchtlinge aufzukommen. Häufig gingen solche Verpflichtungen auch zu Gardiners eigenen finanziellen Lasten. Sie versteckte Flüchtende vorübergehend und begleitete sie zum Bahnhof oder über die Grenze ins benachbarte Ausland.³⁵

Von den Personen aus dem präexistierenden Netzwerk in Österreich verhalf Muriel Gardiner neben ihrem Lebenspartner Buttinger und ihrer Tochter Connie beispielsweise Emil Sladky, Steffi Mattersdorf, Manfred Ackermann, Hans Karl Sailer, Otto Leichter sowie dem „kleinen“ Otto Bauer zur Flucht. In vielen Fällen leistete sie auch deren Familienangehörigen Hilfe.³⁶ Die sechsköpfige Familie Bauer begleitete Gardiner beispielsweise über Venedig bis nach Zürich. In den dem „Anschluss“ folgenden Wochen wurde die Fluchthilfe neben den Abschlussprüfungen für ihr Medizinstudium an der Universität Wien zu Gardiners Hauptbeschäftigung. Für zahlreiche aus politischen und religiösen Gründen verfolgte Menschen wurde „Mary“ in diesen Tagen zur letzten Rettung.³⁷ Bevor die Gestapo, die bereits Verdacht geschöpft hatte, zugriff, konnte Gardiner im Sommer 1938, wenige Tage nach ihrer letzten Prüfung vom 18. Juni Wien sicher und mit Promotion verlassen.³⁸

Viele der Flüchtlinge, die Österreich mit Muriel Gardiners Unterstützung verliessen, flohen über die Schweiz. Sie überquerten die Schweizer Grenze legal mit Visa und echten Reisedokumenten oder illegal mit falschen Pässen. Die falschen Papiere hatten Gardiner unter anderem aus der Tschechoslowakei oder vom tschechoslowakischen Konsulat in Wien.³⁹ Muriel Gardiner trug damit wesentlich dazu bei, dass das präexistierende Netzwerk, dem sie selbst angehörte und dem sie zur Flucht verhalf, mit dem präexistierenden Netzwerk in der Schweiz sowie mit der dort herrschenden restriktiven Flüchtlingspolitik kollidierte.

Dass die Kollision aber ausgerechnet mit dem präexistierenden Netzwerk im Umfeld des „Gartenhofs“ erfolgte, war aber weniger Gardiner als dem „kleinen“ Otto Bauer zuzuschreiben. Wie bereits erwähnt wurde, nahm dieser im präexistierenden österreichischen Netzwerk eine zentrale Stellung ein (vgl. die Netzwerkkarte in Abbildung 1). Über ihn liefen die Verbindungen zwischen den „religiösen“ und den „revolutionären“ Sozialisten. Gleichzeitig verfügte Bauer über ausgezeichnete Verbindungen zu Leonhard Ragaz. Er kannte den

35 Gardiner 1978, 73-115; Isenberg 2010, 109-126.

36 Gardiner 1978, 73-115.

37 Isenberg 2010, 109-126.

38 Gardiner 1978, 115.

39 Gardiner 1978, 90-97.

Vorsitzenden des internationalen Zusammenschlusses religiöser Sozialisten seit Ende der 1920er Jahre und sah sich rückblickend sogar als dessen „Bruder und Sohn“ zugleich. Sie trafen sich wiederholt an Anlässen der religiösen Sozialisten oder 1931 an der Jahrestagung der „Freunde der Neuen Wege“ im „Gartenhof“.⁴⁰ Bauer war auch an der letzten internationalen Konferenz in Eptingen zugegen.⁴¹ Gemeinsam publizierten Bauer und Ragaz eine Broschüre, die als Programmschrift des internationalen Bundes gelten kann und teilweise auf Beiträgen beruhte, die Otto Bauer unter dem Pseudonym „Traugott Weber“ in den von Ragaz redigierten „Neuen Wegen“ publiziert hatte.⁴² Ab und zu hielten sich die Bauers auch ferienhalber im „Gartenhof“ auf und die Familie Ragaz unterstützte die Familie Bauer auch finanziell.

Es lag deshalb auf der Hand, dass die Familie Ragaz einen Emissär nach Wien entsandte, um Otto Bauer zur Flucht in die Schweiz zu bewegen, wie dieser später berichtete.⁴³ Doch habe er nicht ohne seine Familie fliehen wollen und habe dieses Angebot deswegen abgelehnt. Als er dann aber mit Hilfe von Muriel Gardiner mit der ganzen Familie flüchten konnte, war es auch für ihn selbstverständlich, sich in Zürich an die Familie Ragaz zu wenden. Er habe sich denn dort auch telegraphisch angemeldet und sei am Bahnhof von Clara Ragaz abgeholt worden. Dass neben „Mary“ auch seine Familie dabei war, soll bei den Zürcher Freunden Überraschung ausgelöst haben.⁴⁴

Otto Bauer konnte diese zentrale Rolle spielen, weil er „strukturelle Lücken“⁴⁵ zwischen den Netzwerken der religiösen und revolutionären Sozialisten einerseits und zwischen den präexistierenden Netzwerken in Österreich und der Schweiz andererseits überbrückte. Wie die Netzwerkkarte in Abbildung 2 zeigt, gab es zwar noch weitere Kontakte zwischen Zürich und Wien, welche die beiden Netzwerke verbanden. So gab es etwa Beziehungen zwischen den Familien Käthe und Otto Leichter und Millicent und Paul Furrer.⁴⁶ Doch verknüpften diese Bande eher die Vertreter der „alten“ SPÖ, zu denen die Familie Leichter gehörte, mit dem Gartenhofnetzwerk. Otto Bauers Bande stellten hingegen in erster Linie die Verbindungen zur jüngeren Generation der „Revolutionären Sozialisten“ her.

40 Neue Wege 1931(3), 123.

41 Ragaz 1938.

42 Bauer und Ragaz 1938.

43 Otto Bauer: Fragen an „Herbst“. undatiert (nach 1953), VGA Wien, Nachlass Otto Bauer, Karton 1, Mappe 21: Manuskriptfragmente. Dieses Dokument wurde mir freundlicherweise von Marco Russo, Innsbruck, zur Verfügung gestellt.

44 Gardiner 1978, 101.

45 Scheidegger 2010.

46 Leichter 1995.

Des „kleinen“ Bauers zentrale Stellung für das österreichische Netzwerk wird auch im Vergleich zu den Verbindungen zwischen der Schweiz und der Tschechoslowakei sichtbar: Auch nach dort bestanden Kontakte, doch eine „Kettenmigration“ wie im Falle Bauers und des österreichischen Netzwerks kam nicht zustande. Keine der mit dem „Gartenhof“ in Verbindung stehenden Netzwerkpersonen aus der Tschechoslowakei flüchtete mit dessen direkter Unterstützung ausser Landes.

Otto Bauers hervorragende Rolle resultierte aus seiner Position im präexistierenden Netzwerk Österreichs und aus seiner engen Verbindung zum Gartenhofnetzwerk, was sich auch in seinem hohen Zentralitätswert ausdrückt. Bei diesen Verbindungen handelte es sich in den meisten Fällen um starke, nicht um schwache Beziehungen: Entweder waren sie „multiplex“, weil sie wie im Falle von Bauer und Ragaz gleichzeitig freundschaftlich, politisch und kooperativ bedingt waren.⁴⁷ Oder es handelte sich um politische Beziehungen, die in einer im Untergrund aktiven Kaderorganisation, in der Otto Bauer mit praktisch der ganzen Führungselite der „Revolutionären Sozialisten“ in Kontakt stand, besonders eng waren und auf Vertrauen und Verlässlichkeit beruhten.⁴⁸

In der Theorie wird eine Person mit einer Stellung, wie sie Bauer im hier untersuchten Netzwerk einnahm, als „Broker“ bezeichnet, der die erwähnten „strukturellen Löcher“ von Netzwerken überbrückt.⁴⁹ Eine solche Position wird von der Netzwerktheorie üblicherweise mit Steuerungs-, Kontroll- und Informationsvorteilen für den Inhaber dieser Stellung in Verbindung gebracht.⁵⁰ Für Otto Bauer galt dies nicht, weil das „Brokern“ von der Theorie unterstellte Bedürfnis nach Maximierung individueller Autonomie oder ökonomischen Nutzens nur eine von vielen möglichen Valenzen darstellt, entlang derer sich Netzwerke bilden.⁵¹ Das Beispiel Otto Bauers stützt im Gegensatz dazu das Postulat Burchardts, wonach „auch Empathie und Solidarität“ in die Netzwerkanalysen einzubeziehen sind.⁵² Weil sie Teil eines Solidaritätsnetzwerkes waren, zog nämlich nicht er, sondern sein Umfeld Vorteile aus seiner Stellung im Netzwerk.⁵³ Er trug dabei vermutlich in doppelter Weise dazu bei, dass die RS-Kreise und über sie in Form einer Kettenmigration auch die Familie Mattersdorf den Weg zur „Auskunftsstelle für Flüchtlinge“ fanden: Einmal dürfte er seine politischen Verbündeten über den „Gartenhof“ und seine Tätigkeit informiert haben. Zweitens dürfte er bei der Familie Ragaz

47 Avenarius 2010.

48 Ebert 1984; Sozialistische Front 1956 [1936], 215-226; Matthias 1956, 278-280.

49 Fuhse 2016, 59-68.

50 Scheidegger 2010, 146-149.

51 Zum Begriff der Valenzen, die in Netzwerken zum Tragen kommen: Elias 2014, 12-39.

52 Burchardt 2011, 443-444.

53 Smith 2009; Moulaert und Oana 2005.

für die Unterstützungs- und Vertrauenswürdigkeit seiner Genossinnen und Genossen aus dem Untergrund eingestanden sein.

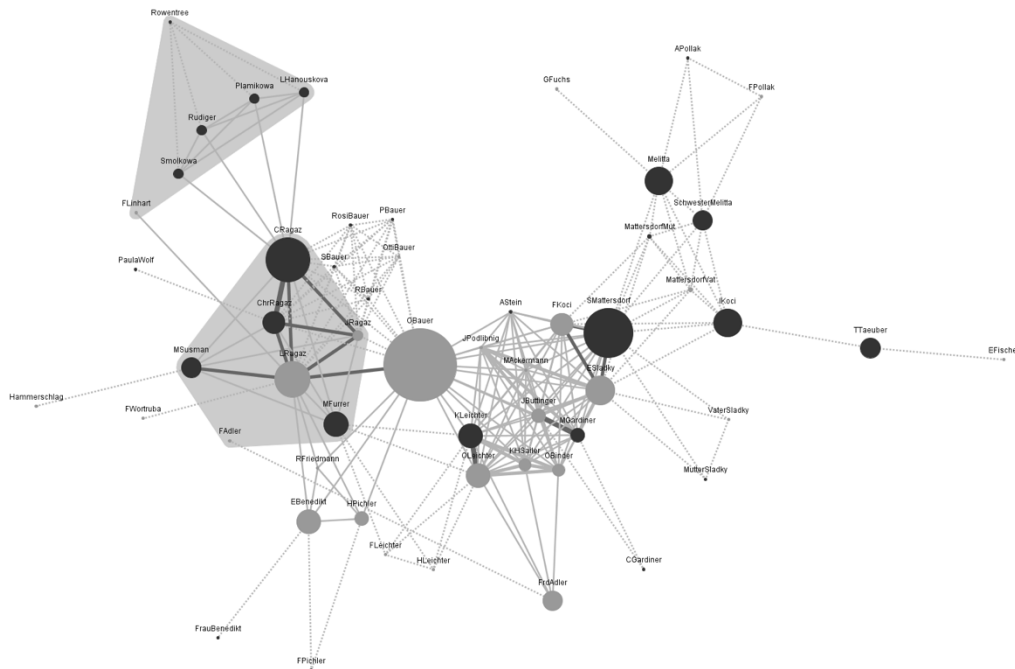


Abbildung 2: Beim dichten Netz in der Mitte handelt es sich um das bereits dargestellte präexistierende Netzwerk in Österreich. Zusätzlich sind hier die Verbindungen zur Tschechoslowakei und zur Schweiz um 1938 dargestellt. Netzwerkpersonen, die vor 1938 in der Schweiz oder in der Tschechoslowakei wohnhaft waren, sind zu Gruppen zusammengefasst (Schweiz: Mitte links; Tschechoslowakei: links oben). Die Grösse der Punkte drückt das Zentralitätsmass (standardisierte Betweenness) der von der Netzwerkkarte erfassten Personen aus. Die Stärke der Verbindungslinien misst die Multiplexität der Beziehungen. Sonst sind die Netzwerkpersonen und ihre Beziehungen wie in der Netzwerkkarte in Abbildung 1 dargestellt.

Dass der „Anschluss“ Österreichs ans nationalsozialistische Deutschland zu einer Kollision zwischen dem österreichischen RS-Netzwerk und dem Gartenhofnetzwerk führte, erklärt sich somit aus der Struktur und Zusammensetzung der kollidierenden Elemente. Wie die Flucht anderer vom „Anschluss“ betroffener Personen zeigt, gab es alternative Fluchtwege. Als Beispiel kann etwa die Flucht von Vertretern und Vertreterinnen des österreichischen Adels oder Bürgertums oder diejenige von Künstlerinnen und Künstlern erwähnt werden. Sie bildeten andere präexistierende Netzwerke und stiessen auch bei der Flucht auf andere Unterstützungsnetzwerke.⁵⁴

54 Goldner 1977; Goldner 1983; Hoerschelmann 1997.

3 Kompositionsphase

In der „Kompositionsphase“ erreichen die flüchtigen Relationen der Kollisionsphase nach Henning Laux einen gewissen „Strukturwert, sobald es ihnen gelingt, sich zu verflechten, weitere Elemente einzubinden und Narrationen zu etablieren.“ Dieser Prozess ist umkämpft und ähnelt einem Laboratorium, „denn hier werden Identitäten und Differenzen beobachtet, beeinflusst, zugeschrieben, getestet, abgelehnt, revidiert, kontrolliert, verhandelt, nachgeahmt, zerstört und postuliert.“ Die Assoziation koexistierender Elemente und flüchtiger Relationen wird dadurch überschaubarer und gegenüber Veränderungen resistenter, doch bleibt sie noch immer flüssig und von Kontingenz geprägt. Erst am Ende der Kompositionsphase wird sie zerstört oder institutionalisiert sein.⁵⁵ Nach Henning Laux setzt die Kompositionsphase dann ein, wenn nach der Kollision eine gewisse Faktizität eintritt. Diese war im vorliegenden Fall erstens damit gegeben, dass die Flüchtlinge in der Schweiz eingetroffen waren und unter keinen Umständen wieder zurück wollten. Faktizität entstand zweitens dadurch, dass die Flüchtlinge in der Schweiz auf Menschen stiessen, die sich mit ihnen solidarisierten und ihnen Unterstützung gewähren wollten.⁵⁶ Sowohl Flüchtende als auch Unterstützende setzten sich damit in Gegensatz zur restriktiven Flüchtlingspolitik der Schweiz, die darauf ausgelegt war, möglichst wenige Personen in der Schweiz aufzunehmen und – liess sich eine Einreise nicht vermeiden – die Eingereisten sobald als möglich zur Ausreise in ein anderes Land zu bewegen.⁵⁷ Die folgenden Abschnitte zur Kompositionsphase stellen das präexistierende Netzwerk in der Schweiz in den Mittelpunkt. Auch dieses war von der Kollision mit den Flüchtlingen aus Österreich betroffen: Das politische Netzwerk, das es bisher in erster Linie gewesen war, wurde zum Unterstützungsnetzwerk. Dabei stand zunächst die unmittelbare Hilfe an die Flüchtlinge im Zentrum. Erst nach und nach kristallisierte sich in dieser Phase heraus, wie sich das Unterstützungsnetzwerk festigen konnte. In Reaktion auf die restriktive Flüchtlingspolitik sowie den Ausbruch des Zweiten Weltkrieges entwickelte es dabei kreative Formen der sozialen Arbeit. Dabei entstand ein „Netzwerk von Netzwerken“,⁵⁸ was ich als Verflechtung zwischen dem Netzwerk der Unterstützenden und demjenigen der Flüchtenden bezeichne. Eine solche Verflechtung zeigt sich in der Kommunikation, bei finanziellen Aspekten sowie in der Internationalisierung der Unterstützungsarbeit. In der Kompositionsphase bleibt eine Verflechtung im Fluss.

55 Laux 2014, 163-166.

56 Kocher 1996; Arnold 1997.

57 Picard 1997; Unabhängige Expertenkommission Schweiz - Zweiter Weltkrieg 2001.

58 Neidhardt 1985.

3.1 Ein präexistierendes Netzwerk in der Schweiz

Bis zum Eintreffen der österreichischen Flüchtlinge 1938 war der „Gartenhof“ der Familie Ragaz in erster Linie eine Einrichtung gewesen, die sich der Politik sowie der Bildungs- und Öffentlichkeitsarbeit verschrieben hatte.⁵⁹ Getragen wurde diese Arbeit von einer Reihe politischer Organisationen, die dem sozial-religiösen Milieu zuzurechnen sind, wie etwa die „Religiös-soziale Vereinigung“, die „Freunde der ‚Neuen Wege‘“, die „Zentralstelle für Friedensarbeit“ sowie der Schweizer Ableger der „Internationalen Frauenliga für Frieden und Freiheit“. Nach meiner Rekonstruktion zählte das präexistierende Netzwerk 63 Personen (vgl. Netzwerkkarte in Abbildung 3). Davon waren 44 Prozent männlichen, 56 Prozent weiblichen Geschlechts. Zwar spielte beim „Gartenhof“ wie bei anderen Settlements jener Zeit auch die soziale Nachbarschaftsarbeit eine Rolle.⁶⁰ Zudem öffnete der „Gartenhof“ bereits seit 1933 seine Türen auch für Flüchtlinge, die ihr Herkunftsland aus politischen oder religiösen Gründen hatten verlassen müssen.⁶¹ Doch stand die soziale Arbeit in dieser Phase noch nicht im Zentrum. Sie rückte erst nach und nach und vollends mit dem Ausbruch des Zweiten Weltkriegs in den Mittelpunkt. Gerade zur restriktiven Flüchtlingspolitik der Schweiz hatte man noch 1938 einen öffentlichen Aufruf lanciert, in dem gegen die harte Politik gegenüber jüdischen Flüchtlingen protestiert und eine offenere Haltung eingefordert wurde.⁶² Die „Neuen Wege“, die am „Gartenhof“ redigiert wurden, galten als eine der konsequentesten und mutigsten Stimmen für eine offene Schweiz und gegen die Militarisierung.⁶³ Dass die politische Arbeit eher in den Hintergrund und die Flüchtlingsarbeit eher in den Vordergrund trat, hatte zunächst mit der veränderten politischen Situation in Europa und in der Schweiz zu tun, welche der oppositionellen Politik des „Gartenhofs“ und seines Umfeldes enge Grenzen setzte. Wie sich an der Aktion des „Gartenhofs“ gegen die Verdunkelungsübungen zeigt, konnte eine antimilitaristische Haltung in den unmittelbaren Vorkriegsjahren nur noch geringen öffentlichen Rückhalt finden und wer mitmachte, wurde sanktioniert.⁶⁴ Später wurde die Zeitschrift „Neue Wege“ der Vorzensur unterworfen, so dass sie nur noch verdeckt und mit wenig Breitenwirkung erscheinen konnte.⁶⁵ Dazu aber trat nun zusätzlich die Kollision des präexistierenden Netzwerks des „Gartenhofs“ mit den Flüchtlingen aus Österreich. Diese führte u. a. auch dazu, dass nun am „Gartenhof“ eine offizielle

59 Buess und Mattmüller 1986, 153-178.

60 Epple 2013a; Epple 2013b.

61 Aufruf von Clara und Leonhard Ragaz (Neue Wege 1933(4), 205-206).

62 Kundgebung 1938.

63 Spieler, Brassel und Howald 2009; Kocher 1996.

64 Erklärung von Clara und Leonhard Ragaz (Neue Wege 1937(9), 371-375).

65 Spieler, Brassel und Howald 2009.

„Auskunftsstelle für Flüchtlinge“ gegründet wurde und sich das vorwiegend politische zum Unterstützungsnetzwerk wandelte.⁶⁶ Unter den gegebenen Umständen entwickelte dieses Unterstützungsnetzwerk innovative Formen der sozialen Arbeit.

3.2 Innovative Sozialarbeit

Nach dem „Anschluss“ Österreichs verschärfte die Schweiz ihre restriktive Flüchtlingspolitik noch.⁶⁷ Damit wurde vielen Flüchtlingen der legale Grenzübertritt oder ein langfristiger Aufenthalt in der Schweiz verwehrt oder zusätzlich erschwert.⁶⁸ Die Flüchtlingspolitik verfolgte das „Transitprinzip“, das auf eine rasche Weiterreise eingereister Flüchtlinge drängte.⁶⁹ Der Ausbruch des Zweiten Weltkriegs führte darüber hinaus dazu, dass das nationalsozialistische Regime, welches das präexistierende Netzwerk in Österreich dekonstruiert hatte, rasch auf weitere Länder Europas ausgedehnt wurde. Die relative Sicherheit, welche die Flüchtlinge mit Unterstützung der „Auskunftsstelle“ am „Gartenhof“ in der Schweiz, in Frankreich, in England oder in Schweden gefunden hatten, erwies sich als ausgesprochen prekär. Die unterstützten Personen mussten die Flucht fortsetzen oder sich auf andere Art mit der herannahenden Bedrohung arrangieren. Den meisten gelang die Fortsetzung der Flucht, wozu erneut die „Auskunftsstelle“ ihren Teil beitrug.

Auch das Unterstützungsnetzwerk der „Auskunftsstelle“ musste sich den neuen Gegebenheiten anpassen: Die restriktiveren Bedingungen inner- wie ausserhalb der Schweiz liessen es in vermehrtem Masse zu illegalen Unterstützungsformen greifen und brachten es dazu, sich in konspirative Praktiken einzuüben. Seine soziale Arbeit wurde dadurch innovativer und kreativer. Weil der legale Grenzübertritt in die Schweiz für Flüchtlinge zunehmend schwieriger wurde, nahm im Unterstützungsnetzwerk des „Gartenhofs“ und der „Auskunftsstelle“ die Bereitschaft zu, illegale Grenzübertritte vorzusehen und dazu beispielsweise mit dem Fluchthelfernetz im St. Galler Rheintal zusammenzuarbeiten, das sich um Paul Grüninger und Werner Stocker gebildet hatte.⁷⁰ Es gibt keine direkten Hinweise darauf, welche Personen, die von der „Auskunftsstelle“ unterstützt wurden, mit Hilfe der Fluchthelfer im St. Galler Rheintal über die Grenze kamen. Aber die Möglichkeit

66 Kocher 1996, 128-129, 544.

67 Unabhängige Expertenkommission Schweiz - Zweiter Weltkrieg 2001, 97-113.

68 Unabhängige Expertenkommission Schweiz - Zweiter Weltkrieg 2001, 133-184.

69 Arnold 1997.

70 Keller 1993; Bürgi 2011; Unabhängige Expertenkommission Schweiz - Zweiter Weltkrieg 2001, 147-168.

illegaler Grenzübertritte in die Schweiz wurde sowohl in Wien⁷¹ als auch in Zürich erwogen: Als es etwa um die Flucht von Vater Mattersdorf ging, zeigte sich Christine Ragaz gut über die illegalen Grenzübertritte informiert und sie und Steffi Mattersdorf waren sich darin einig, dass man im Notfall auf die Dienste Werner Stockers zurückgreifen wolle.⁷²

Frauen spielten im Unterstützungsnetzwerk eine wichtige Rolle, was sich nicht nur in dessen Zusammensetzung, sondern auch im Engagement der Netzwerkpersonen zeigt (vgl. Abbildung 3): Christine (ChR) und Clara Ragaz (CR) waren die Hauptstützen der „Auskunftsstelle“ und leisteten die vielfältigste Unterstützungsarbeit. Sie waren auch bereit, Risiken einzugehen. Auf der rechten Seite des Zentrums findet man in der Abbildung an dessen Peripherie Millicent Furrer, die sich insbesondere der Familie Leichter annahm und beispielsweise auch am illegalen Grenzübertritt eines Kleinkindes beteiligt war.⁷³ Auch Regina Kägi-Fuchsmann, welche die Flüchtlingsarbeit der „Sozialdemokratischen Partei der Schweiz“ und der Gewerkschaften koordinierte, fällt auf. Über sie liefen Verbindungen zu den engagiertesten Männern des Netzwerks.⁷⁴ Diese bewegten sich an dessen Rand und kamen insbesondere dann zum Zuge, wenn es um illegale Grenzübertritte ging. Werner Stocker und Hans Nägeli gehörten zum Umfeld des illegal tätigen Fluchthelferkreises im St. Galler Rheintal,⁷⁵ das die Protektion und Unterstützung von Paul Grüninger und mindestens zeitweise auch von Regierungsrat Valentin Keel genoss.⁷⁶ In der Kompositionsphase geht der Übergang vom politischen zum Unterstützungsnetzwerk somit mit einer Verlagerung zu Aktionsformen einher, die ein grösseres Engagement und höhere Risikobereitschaft voraussetzen.

71 Gardiner 1978, 99.

72 Chr. Ragaz an St. Mattersdorf, 08.03.1939 (A); St. Mattersdorf an Chr. Ragaz, 11.03.1939 (B).

73 Gardiner 1978, 101-102; Kremos 1977.

74 Kaegi-Fuchsmann 1968; Häslar 2008, 197-199.

75 Wichers 1994, 106, 123; Keller 1993, 24.

76 Unabhängige Expertenkommission Schweiz - Zweiter Weltkrieg 2001, 147-168.

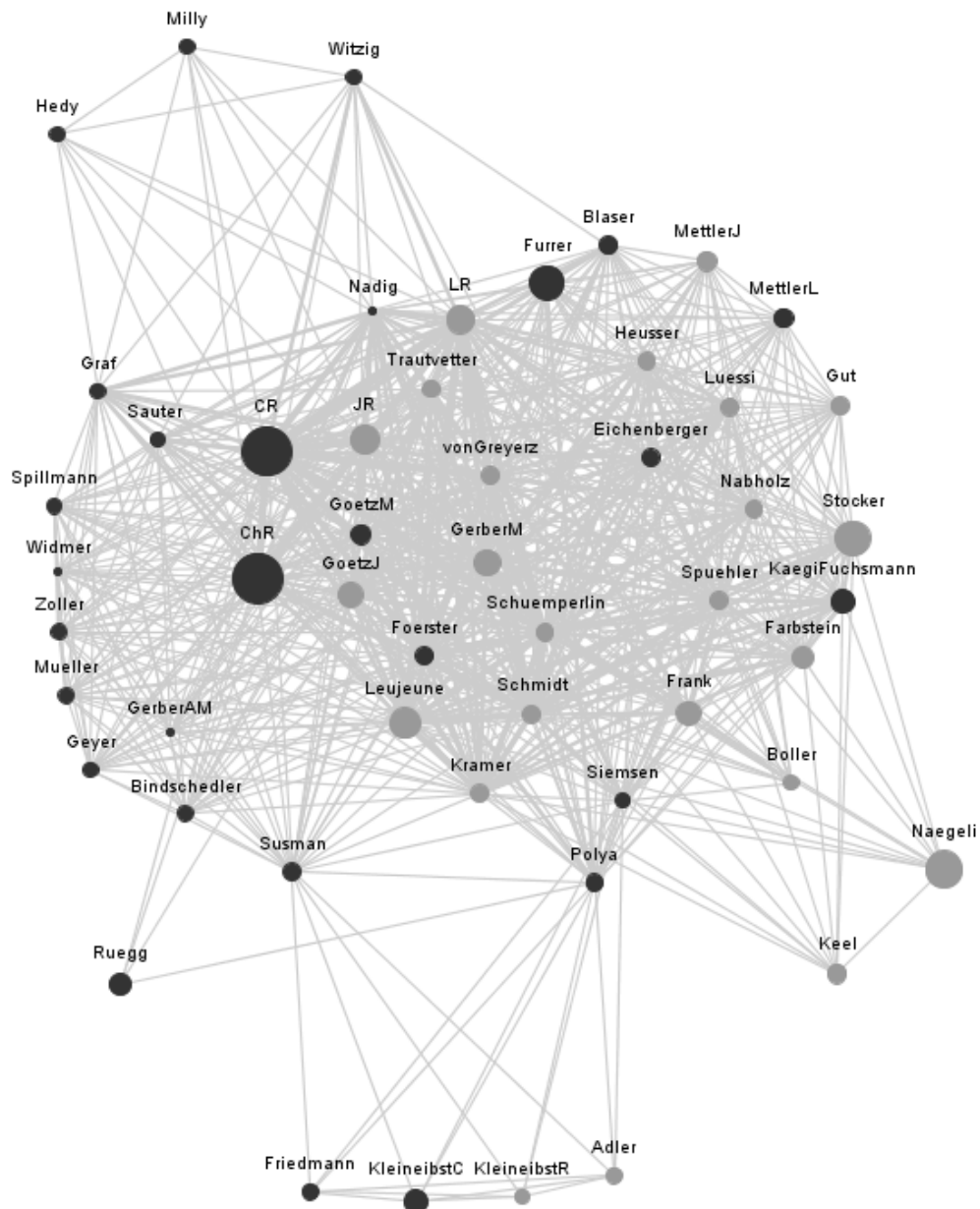


Abbildung 3: Die Netzwerkkarte zeigt das Engagement der Netzwerkpersonen, die dem Unterstützungsnetzwerk angehörten. In der Grösse der Punkte drücken sich Umfang und Risiko der Unterstützungsarbeit der betreffenden Netzwerkperson aus: Je vielfältiger das Engagement war und je grösser die Risiken waren, die eine Unterstützungsperson einging, desto grösser fällt ihre Darstellung in der Netzwerkkarte aus. Männer sind hell-, Frauen dunkelgrau gezeichnet.

3.3 Unterstützung als Verflechtung

Die geographische Expansion des präexistierenden österreichischen Netzwerks, die mit der Flucht begann, in vielen Fällen über die Schweiz führte und von der „Auskunftsstelle für Flüchtlinge“ in Zürich begleitet wurde, belastete die Beziehungen zwischen den Flüchtlingen in hohem Masse. Die Verbindungen mussten erstens über zunehmende Distanzen aufrechterhalten werden. Zweitens traten immer wieder Störungen durch kriegerische Ereignisse auf. Drittens schliesslich musste auf die Überwachung durch Repressionsapparate Rücksicht genommen werden.⁷⁷ Wie gleich zu zeigen sein wird, spielten sich zwischen den beiden Netzwerken, die in der Kollisionsphase aufeinandergestossen waren, unter diesen Umständen Formen der Zusammenarbeit und Verflechtung ein. Das Unterstützungsnetzwerk wurde sowohl in die Kommunikation als auch in die ökonomischen Transaktionen und die Aktivität des expandierenden Netzwerks einbezogen. Zudem musste es seine Unterstützungsarbeit internationalisieren. Eine Institutionalisierung dieser Verflechtungen liessen die kriegerischen Ereignisse und die Fortsetzung der Flucht allerdings nicht zu. Eine solche setzte erst ein, als der Kern des Netzwerks die USA erreichte.

3.3.1 Klandestine Kommunikation

Direkte persönliche Kontakte waren über grosse Distanzen und unter den Bedingungen des Krieges nicht mehr oder nur noch selten möglich. Sie beschränkten sich auf diejenigen Personen, die das gleiche Ankunftsland erreicht hatten und in der Nähe wohnten. Das galt beispielsweise für die Führungskreise der „Revolutionären Sozialisten“ (RS), die sich zunächst in und um Paris niedergelassen hatten.⁷⁸ Die Verbindungen über weitere Entfernungen wurden hauptsächlich auf postalischem Weg aufrechterhalten. Im Zentrum stand dabei der Brief. In Ausnahmefällen kam auch das Telegramm zum Einsatz.⁷⁹ Zudem nutzte man jede sich bietende Gelegenheit, Nachrichten von Kurieren überbringen zu lassen. Wer immer aus der Schweiz nach Frankreich, England, Schweden oder zurück nach Österreich reiste, nahm durch Vermittlung der „Auskunftsstelle“ Dokumente, Pakete oder Geld mit oder überbrachte mündliche Botschaften.⁸⁰ Die „Auskunftsstelle für Flüchtlinge“ in

77 St. Mattersdorf an Chr. Ragaz, 05.10.1939 (B); Chr. Ragaz an St. Sladky, 22.10.1939 (A); Chr. Ragaz an St. Sladky, 19.11.1939 (A); Chr. Ragaz an St. Sladky, 22.01.1940 (A).

78 Weinzierl, Pfoser-Schewig und Schwager 1984; Leichter 2003 [1939].

79 Chr. Ragaz an St. Sladky, 15.09.1942 (A); Chr. Ragaz an St. Sladky, 30.06.1940 (A); Chr. Ragaz an St. Sladky, 25.08.1940 (A).

80 Chr. Ragaz an St. Sladky, 12.11.1939 (A); Chr. Ragaz an St. Sladky, 31.10.1939 (A); Chr. Ragaz an St. Sladky, 19.11.1939 (A); St. Mattersdorf an Chr. Ragaz, 30.11.1939 (B); Chr. Ragaz an St. Sladky,

Zürich wurde unter diesen Umständen zu einem zentralen Umschlagsplatz für Informationen, die im Netzwerk der österreichischen Flüchtlinge zirkulierten (vgl. Abbildung 4).

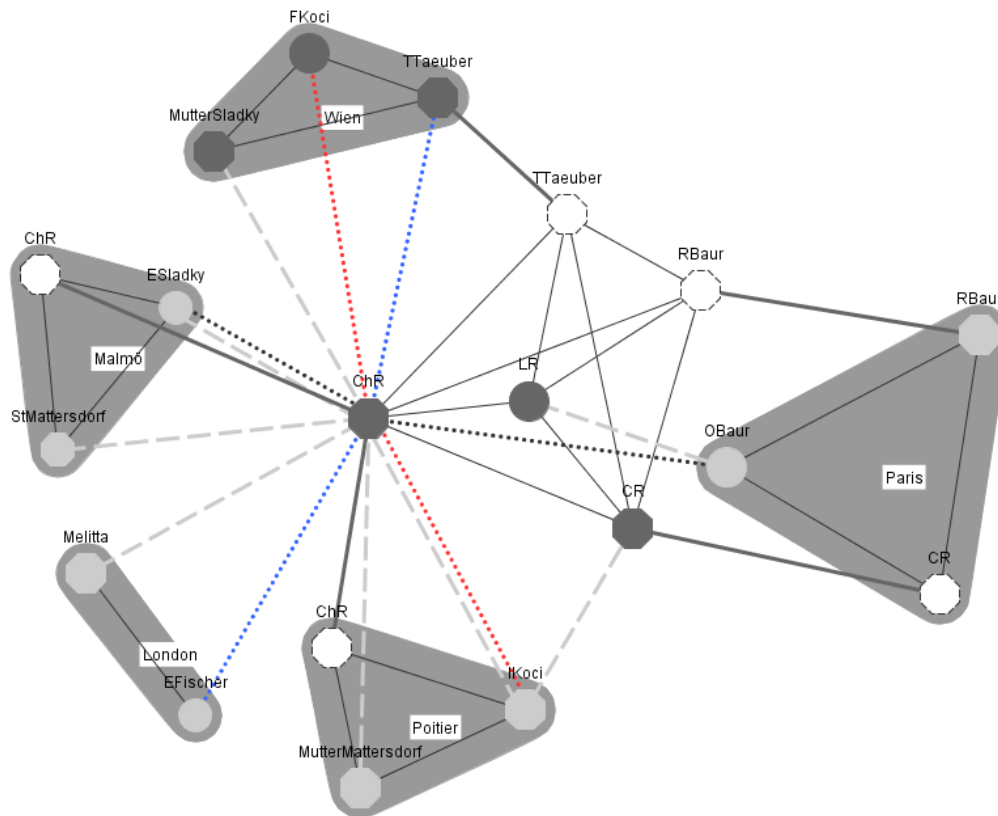


Abbildung 4: Vom „Gartenhof“ in Zürich, d.h. von Christine (ChR), Clara (CR) und Leonhard Ragaz (LR) aufrechterhaltene Kommunikationsbeziehungen. Flüchtlinge sind hellgrau, in Österreich zurückgebliebene oder der Schweiz wohnhafte Netzwerkpersonen dunkelgrau ausgefüllt. Männliche Personen sind rund, weibliche als Achteck gezeichnet. Face-to-face-Beziehungen sind fein und schwarz markiert. Ausgezogene Verbindungen wurden durch Kurierinnen hergestellt. Am vorübergehenden Aufenthaltsort sind diese weiss dargestellt. Bei gestrichelten Verbindungen handelt es sich um normalen Briefverkehr, der nur teilweise verschlüsselt wurde. Bei punktierten Verbindungen diente der „Gartenhof“ als Deckadresse, um die Verbindung zu verbergen. Die Farbe kennzeichnet, welche Personen dadurch in Verbindung gebracht wurden. Solche Briefe gingen via Kurier weiter oder wurden verschlüsselt.

Den Mitarbeiterinnen der „Auskunftsstelle“ stand das Recht zu, Briefe, die den „Gartenhof“ erreichten, um von dort aus weiter geleitet zu werden, nicht

03.12.1939 (A); Chr. Ragaz an St. Sladky, 12.04.1939 (A); Chr. Ragaz an St. Sladky, 30.06.1940 (A).

nur neu zu adressieren, sondern – mindestens teilweise – auch zu lesen.⁸¹ Damit war sicher gestellt, dass mit Briefen, die ihr Ziel nicht erreichen konnten, nicht auch die darin enthaltenen Informationen verloren gingen. Zudem erlangte die „Auskunftsstelle“ einen hohen Informationsstand, von dem sowohl Flüchtlinge wie Unterstützungspersonen profitierten. Die Flüchtlinge brachten der „Auskunftsstelle“ ein ausgesprochen grosses Vertrauen entgegen. Dieses ging hin und wieder so weit, dass Clara und Christine Ragaz auch in sehr private Angelegenheiten einbezogen wurden. Umgekehrt bemühten sich die Mitarbeiterinnen der „Auskunftsstelle“ um grosse Diskretion und wenn es ihnen zu viel wurde, versuchten sie sich abzugrenzen. Dies war zum Beispiel der Fall, als ein nach England geflohener Flüchtling sein Verlöbnis mit der in Österreich zurückgebliebenen Verlobten lösen wollte, um sich mit einer ebenfalls nach England geflüchteten Frau liieren zu können.⁸²

Um Verbindungen zwischen Flüchtlingen gegenüber den Zensurbehörden zu verbergen, diente die „Auskunftsstelle“ nicht nur als Vermittlerin von Post, sondern auch als Deckadressatin. So liess etwa der in Österreich zurückgebliebene Franz Koci seiner nach Frankreich geflüchteten Frau Irene Mitteilungen zukommen, indem er diese so formulierte als wären sie persönlich an Christine Ragaz gerichtet.⁸³ Diese leitete die Informationen dann nach Frankreich weiter.⁸⁴ Den Zensurbehörden blieb damit verborgen, dass das Ehepaar Koci noch miteinander in Verbindung stand. Ein anderes klandestines Verfahren bestand darin, Decknamen zu verwenden oder die Botschaften zu verschlüsseln. So hiess Franz Koci in der Korrespondenz mit Steffi Mattersdorf lange Zeit „der Schwager“ und später „Burli“.⁸⁵ Und ein Verzeichnis von Personen, die ihre Flucht aus Frankreich über Spanien und Portugal fortsetzen mussten, deckte die „Auskunftsstelle“ als Liste der Teilnehmer eines vergnüglichen „Seeausflugs“ und verschlüsselte Namen so, dass sie nur Eingeweihten etwas sagten.⁸⁶

81 Chr. Ragaz an St. Sladky, 03.12.1939 (A); Chr. Ragaz an St. Sladky, 03.12.1939 (A).

82 Chr. Ragaz an St. Sladky, 26.11.1939 (A); St. Mattersdorf an Chr. Ragaz, 03.12.1939 (B); Chr. Ragaz an St. Sladky, 31.03.1941 (A); Chr. Ragaz an St. Sladky, 03.08.1941 (A).

83 St. Mattersdorf an Chr. Ragaz, 15.01.1939 (B).

84 Ein ähnliches Verfahren wählte Otto Leichter, um mit seiner in Wien bei der Gestapo einsitzenden Frau kommunizieren zu können. Er schrieb sogenannte „Pflegeterbriefe“, die sich an Helene Kux richteten, aber für Käthe Leichter gedacht waren. Während sein in Briefform an Käthe geschriebenes Tagebuch die Adressatin nie erreichte, gelangten die verschlüsselten „Pflegeterbriefe“ an ihr Ziel (Leichter 2003 [1939], 297–322).

85 Chr. Ragaz an St. Sladky, 12.11.1939 (A); Chr. Ragaz an St. Sladky, 26.11.1939 (A); St. Mattersdorf an Chr. Ragaz, 03.12.1939 (B).

86 Chr. Ragaz an E. Sladky, 01.08.1940 (A).

In meinem Brief an Emil habe ich ihm die Liste der Freunde versprochen, die für unseren Seeausflug fest angemeldet sind. Ausser diesen gibt es noch solche, die uns weniger nahe stehen und einige die wir nur mitnehmen, wenn nicht zu viele Anmeldungen sind. Fest angemeldet sind James, Georg, Harry, Robert, Tom, Dorothy, William, Richard, der alte Willy, Charles, das Kaninchen, der kranke Fridolin, Dick, Peter, Robert, Förderationsheinz. Nachdem, was ich höre, werden alle ihre Angehörigen mitbringen, so dass wir eine lustige Gesellschaft sein werden.⁸⁷

3.3.2 Kreative Finanztransaktionen

Verflochten waren Flüchtlinge und Unterstützungspersonen aber nicht nur kommunikativ, sondern auch finanziell. Die Finanzierung der Flucht oder des Aufenthalts im Ankunftsland stellte ein zentrales Problem dar. Die wenigsten der von der „Auskunftsstelle“ begleiteten Flüchtlinge verfügten über ausreichende finanzielle Mittel, um Reise und Aufenthalt zu bestreiten. Einige verfügten über etwas Erspartes, andere wurden von den Gewerkschaften oder vom den Sozialdemokraten nahe stehenden sogenannten „Mattiotikomitee“ unterstützt. Mattersdorf und Sladky hatten das Glück, in Schweden rasch Arbeit zu finden.⁸⁸ Die Fortsetzung der Flucht, die über die Sowjetunion, den Pazifik und Kuba führte, überforderte aber auch sie.⁸⁹ Zudem verlangten viele Länder, die als mögliche Destinationen in Frage kamen, häufig auch hohe Garantiesummen, die zu leisten viele Flüchtlinge nicht in der Lage waren.⁹⁰

Die Vermittlung und Beschaffung von Geld war deshalb eine wichtige Aufgabe, welche die „Auskunftsstelle“ für die österreichischen Flüchtlinge übernahm (vgl. Abbildung 5). Das konnte zunächst darin bestehen, dass die „Auskunftsstelle“ im Rahmen ihrer sehr beschränkten Mittel selbst Reise- und Aufenthaltskosten oder Garantieleistungen übernahm.⁹¹ Eine andere Möglichkeit bestand darin, dass man den Flüchtlingen Arbeit vermittelte, was solange möglich war, als diese sich in der Schweiz aufhielten,⁹² oder dass man handwerkliche Produkte, die diese herstellten, in der Schweiz vertrieb. So flocht Irene Koci in Frankreich modische Damengürtel aus Hanfschnur. Die „Auskunftsstelle“ verfügte über Muster, die sie bewarb, nahm Bestellungen

87 Chr. Ragaz an St. Sladky, 05.08.1940 (A). Teilweise sind die Klarnamen bekannt: Isenberg 2010, 150-151.

88 St. Mattersdorf an Chr. Ragaz, 15.01.1939 (B); St. Mattersdorf an Clara Ragaz, 28.03.1939 (B); St. Mattersdorf an Chr. Ragaz, 25.12.1939 (B).

89 Chr. Ragaz an St. Sladky, 31.03.1941 (A); St. Mattersdorf an Chr. Ragaz, 08.03.1940 (B).

90 Chr. Ragaz an St. Sladky, 12.02.1940 (A).

91 Chr. Ragaz an St. Sladky, 25.02.1940 (A); St. Mattersdorf an Chr. Ragaz, 05.10.1939 (B); Chr. Ragaz an St. Sladky, 03.12.1939 (A); Chr. Ragaz an St. Sladky, 22.06.1941 (A).

92 St. Mattersdorf an Chr. Ragaz, 29.04.1939 (B).

entgegen und verkaufte die Gürtel in der Schweiz.⁹³ Für Steffi Mattersdorf verkaufte die „Auskunftsstelle“, in der Schweiz zurückgelassenes Gold.⁹⁴ Zudem nahm sie Zahlungen entgegen, die zwischen Flüchtlingen und zurückgebliebenen Verwandten fließen sollten.⁹⁵

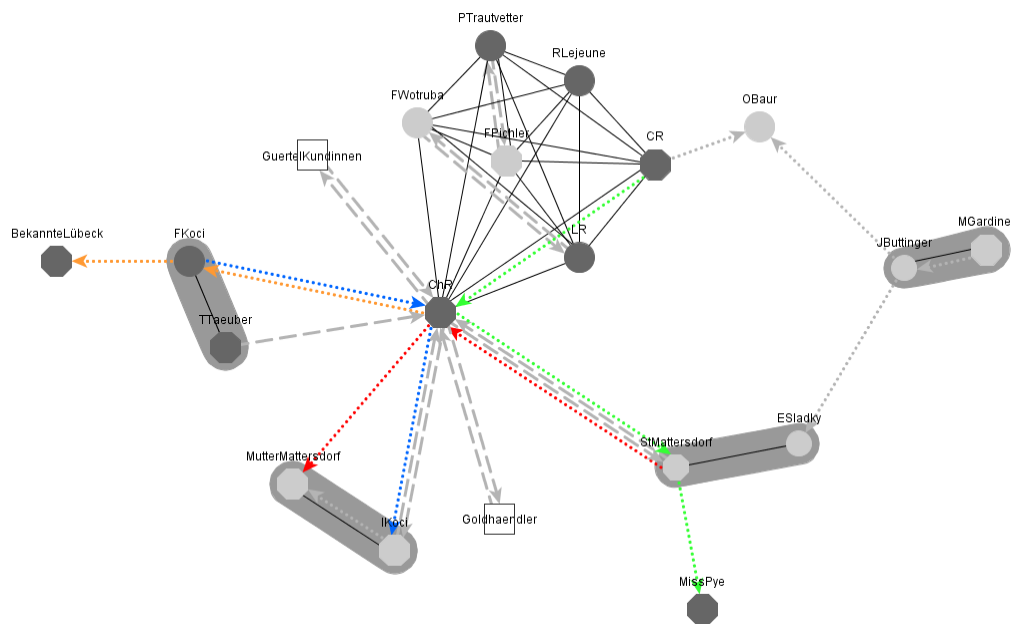


Abbildung 5: Über den „Gartenhof“ vermittelte wirtschaftliche Beziehungen. Flüchtlinge sind hellgrau, in Österreich zurückgebliebene oder der Schweiz wohnhafte Netzwerkpersonen dunkelgrau ausgefüllt. Männliche Personen sind rund, weibliche als Achteck gezeichnet. Kollektive oder Organisationen sind als Vierecke dargestellt. Face-to-face-Beziehungen sind fein und schwarz markiert. Über gestrichelte Verbindungen werden Vermögenswerte oder Produkte gegen Geld oder Arbeit gegen Lohn ausgetauscht. Letzteres geht mit face-to-face-Beziehungen einher und findet nur in Zürich statt. Punktierte Verbindungen bezeichnen finanzielle Unterstützungen. Wo sie über Zwischenstationen laufen, kennzeichnen die Farben, wer entsendende, wer empfangende Person ist. Nicht immer fließt tatsächlich Geld. Oft werden im Ausland getätigte Zahlungen vom „Gartenhof“ als Guthaben verbucht oder mit seiner Zahlung an eine andere Person verrechnet.

93 Chr. Ragaz an St. Sladky, 06.06.1939 (A); Chr. Ragaz an St. Sladky, 10.03.1939 (A); Chr. Ragaz an St. Sladky, 06.06.1939 (A).

94 Chr. Ragaz an St. Sladky, 08.03.1939 (A); Chr. Ragaz an St. Sladky, 22.03.1939 (A).

95 St. Mattersdorf an Clara Ragaz, 28.03.1939 (B); St. Mattersdorf an Chr. Ragaz, 11.03.1939 (B); Chr. Ragaz an St. Sladky, 11.09.1939 (A); Chr. Ragaz an St. Sladky, 01.09.1940 (A).

Solche und andere Einnahmen überwies die „Auskunftsstelle“ aber nicht sofort oder in vollem Umfang an die im Ausland weilenden Flüchtlinge, sondern behielt diese zunächst in der Schweiz als Guthaben zurück. Sozusagen als kleine Privatbank verwaltete die „Auskunftsstelle“ in verschiedenen Büchsen und auf diversen Bankkonti Guthaben der von ihr begleiteten Flüchtlinge, über die sie akribisch Buch führte.⁹⁶ Diese Mittel waren damit einigermaßen gesichert und standen den Flüchtlingen auf Abruf zur Verfügung. Irene Koci erhielt beispielsweise regelmässig Zahlungen aus der Schweiz, die aus dem Gürtelverkauf oder von Franz Koci aus Österreich bei der „Auskunftsstelle“ eingegangen waren.

Um Spesen und Aufwand zu sparen, wurden dabei auch Zahlungsketten installiert.⁹⁷ So liefen etwa Zahlungen über Franz Koci in Österreich an eine Bekannte der Familie Ragaz in Deutschland. Was Koci innerhalb Grossdeutschlands überwies, wurde ihm auf seinem Konto in der Schweiz gutgeschrieben, aus dem die „Auskunftsstelle“ dann wiederum die Zahlungen an seine Frau in Frankreich bestritt.⁹⁸ Auch zwischen Mattersdorf/Sladky in Schweden und der Familie Ragaz in Zürich gab es vergleichbare Gegengeschäfte. So verwaltete Steffi Mattersdorf ein Guthaben von rund 2000 Kronen, das die Familie Ragaz im Ausland gesichert haben wollte. Sie legte es zunächst in Schweden an.⁹⁹ Als Schweden selbst in Gefahr geriet, von Deutschland angegriffen zu werden, transferierte sie es in Absprache mit Zürich nach England.¹⁰⁰

Im Falle der österreichischen Flüchtlinge, die mit Unterstützung der „Auskunftsstelle“ geflohen waren, wurde die angespannte finanzielle Situation immer wieder dadurch entschärft, dass sie auf die Grosszügigkeit von Muriell Gardiner zählen konnten.¹⁰¹ Als Gardiner und Buttinger die USA erreicht hatten, bemühten sie sich nicht nur intensiv um Affidavits und Visa für ihre noch in Europa verbliebenen Genossinnen und Genossen, sondern sie kamen in

96 Chr. Ragaz an St. Sladky, 15.09.1942 (A); Chr. Ragaz an St. Sladky, 19.11.1939 (A); Chr. Ragaz an St. Sladky, 01.09.1940 (A); Chr. Ragaz an St. Sladky, 08.05.1940 (A); Chr. Ragaz an St. Sladky, 01.09.1940 (A).

97 Vergleichbare Transaktionen sind auch aus aktuellen Migrationszusammenhängen bekannt (Monsutti 2005).

98 Chr. Ragaz an St. Sladky, 24.09.1939 (A); Chr. Ragaz an St. Sladky, 12.11.1939 (A); Chr. Ragaz an St. Sladky, 31.10.1939 (A); St. Mattersdorf an Chr. Ragaz, 14.11.1939 (B); Chr. Ragaz an St. Sladky, 22.06.1941 (A); Chr. Ragaz an St. Sladky, 24.09.1939 (A).

99 Chr. Ragaz an St. Sladky, 22.03.1939 (A); St. Mattersdorf an Chr. Ragaz, 09.01.1940 (B).

100 Chr. Ragaz an St. Sladky, 12.04.1939 (A); St. Mattersdorf an Chr. Ragaz, 05.10.1939, 09.01.1940 und Ende Januar 1940 (B).

101 Chr. Ragaz an St. Sladky, 03.12.1939 (A); Chr. Ragaz an St. Sladky, 25.02.1940 (A); Chr. Ragaz an St. Sladky, 24.11.1940 (A); Chr. Ragaz an St. Sladky, 20.04.1941 (A).

zahlreichen Fällen auch für die Reisespesen, Einreisegebühren und Aufenthaltskosten auf.¹⁰² Ohne das grosse Engagement von Gardiner wäre die starke Konzentration dieser Flüchtlingsgruppe in den USA nicht möglich geworden.¹⁰³

3.3.3 Internationalisierung von Unterstützung

Die restriktive Flüchtlingspolitik der Schweiz und die Ausdehnung des Einflussbereichs des nationalsozialistischen Deutschlands in Europa bewirkten, dass die geographische Expansion des Netzwerks der österreichischen Flüchtlinge anhielt (vgl. Tabelle 1). Hatten sich um 1939 noch 12.5 Prozent der 40 Flüchtlinge, für die der Aufenthaltsort festgestellt werden kann, in der Schweiz und 67.5 Prozent im europäischen Ausland aufgehalten, so zeigte sich ein Jahr später eine ganz andere Verteilung. In der Schweiz hielten sich noch etwas über fünf, im übrigen Europa 27 Prozent auf. Immerhin aber beinahe der Hälfte war die Flucht in die USA gelungen.¹⁰⁴ Die Expansion des Netzwerks betraf allerdings nicht nur diejenigen Personen, denen die Flucht gelungen war, sondern auch diejenigen, welche in Österreich zurückgeblieben waren. Auch deren Zahl nahm ab, weil Repression und Verfolgung dazu führten, dass sie innerhalb des deutschen Einflussbereichs deportiert wurden: Käthe Leichter gelangte ins Konzentrationslager von Ravensbrück,¹⁰⁵ wo sie ermordet wurde.¹⁰⁶ Felix Pollak musste sich nach seiner Befreiung aus dem Lager in Polen aufhalten.¹⁰⁷

¹⁰² Isenberg 2010, 127-144.

¹⁰³ Chr. Ragaz an St. Sladky, 30.06.1940 (A); St. Mattersdorf an Chr. Ragaz, 08.03.1940 (B).

¹⁰⁴ Chr. Ragaz an St. Sladky, 15.09.1940 (A); Chr. Ragaz an St. Sladky, 01.09.1940 (A); Chr. Ragaz an St. Sladky, 09.09.1940 (A); Chr. Ragaz an St. Sladky, 01.09.1940 (A); Chr. Ragaz an St. Sladky, 28.07.1940 (A).

¹⁰⁵ Steiner 1973, 199-209.

¹⁰⁶ Chr. Ragaz an St. Sladky, 18.05.1942 (A).

¹⁰⁷ Es gibt Hinweis darauf, dass Pollaks Entlassung aus dem KZ auf Interventionen von Christine Ragaz zurückzuführen war (St. Mattersdorf an Chr. Ragaz, 24.06.1939 (B); St. Mattersdorf an Chr. Ragaz, 01.04.1940 (B); Chr. Ragaz an St. Sladky, 08.04.1940 (A); Chr. Ragaz an St. Sladky, 12.05.1940 (A)).

	A	CH	D	F	GB	PL	S	USA
um 1939	17.5	12.5		45.0	15.0		7.5	2.5
um 1940	13.5	5.4	2.7	8.1	16.2	2.7	2.7	48.6

Tabelle 1: Die Aufenthaltsorte der Personen des präexistierenden Netzwerks in Österreich um 1939 (N=40) und um 1940 (N=37) in Prozent (A: Österreich, CH: Schweiz, D: Deutschland ohne Österreich, F: Frankreich, GB: Grossbritannien, PL: Polen, S: Schweden, USA: Vereinigte Staaten von Amerika). Eigene Berechnungen.

Flüchtlingsarbeit, wie sie von der „Auskunftsstelle für Flüchtlinge“ in Zürich in solidarischer Absicht geleistet wurde, konnte sich unter solchen Umständen nicht auf die Schweiz beschränken. Sie musste sich auch in dieser Hinsicht anpassen und sich international vernetzen. Dazu aktivierte die „Auskunftsstelle“ erstens internationale Verbindungen, über die sie bereits vorher verfügt hatte. Zweitens verband sie sich mit anderen Organisationen, was am Beispiel der Verbindungen mit Schweden dargestellt werden kann. Die enge Verflechtung des Unterstützungsnetzwerks mit dem Netzwerk der österreichischen Flüchtlinge zeigt sich auch hier, denn wie das Beispiel von Murielle Gardiner und Josef Buttinger belegt, wurden auch die Flüchtlinge selbst als Unterstützende aktiv.¹⁰⁸

Das Unterstützungsnetzwerk für die österreichischen Flüchtlinge, die nach Schweden gelangt waren, wiesen Verbindungen nach insgesamt sechs Ländern auf. Dazu gehörten neben der Schweiz und Schweden Grossbritannien, Dänemark, Norwegen und die USA. Seine Struktur zeigt sich allerdings nur, wenn man es einer Clusteranalyse unterzieht.¹⁰⁹ Dabei treten mit den Quäkern, der Arbeiterbewegung und der „Auskunftsstelle“ drei Komponenten in Erscheinung, welche die organisatorische Struktur des international verflochtenen Unterstützungsnetzwerks der „Auskunftsstelle“ erhellen (vgl. Abbildung 6).

Zunächst wird deutlich, dass die „Auskunftsstelle“ eng mit den Quäkern und ihrer „Society of Friends“, dem internationalen Zusammenschluss dieser religiösen Gemeinschaft, verbunden war. Mit ihr hatte die „Auskunftsstelle“ gerade auf internationaler Ebene immer wieder zu tun.¹¹⁰ Die Quäker und ihre

¹⁰⁸ Gardiner wie Buttinger wurden im „Emergency Rescue Committee“ aktiv, Buttinger später auch im „International Rescue Committee“ (Chester 1995; Isenberg 2010).

¹⁰⁹ Diese Analyse wurden mit verschiedenen Clusterverfahren für Netzwerke durchgeführt. Die Ergebnisse der Verfahren mit den höchsten Modularitätswerten stimmten darin überein, dass sich im Netzwerk drei Komponenten unterscheiden lassen. Die Aufteilung der Akteure auf die Komponenten stimmte weitgehend überein (Weidele und Brughmans 2015; Cellier 2015).

¹¹⁰ Brief von Cl. Ragaz an J. Ragaz, 30.09.1945 (C).

Organisationen waren nämlich in der internationalen Flüchtlingshilfe sehr aktiv und erhielten kurz nach Kriegsende u.a. auch für diese Arbeit den Friedensnobelpreis.¹¹¹ So standen die Mitglieder der tschechoslowakischen Sektion der „Internationalen Frauenliga für Frieden und Freiheit“ (IFFF), um die sich Clara Ragaz anlässlich der Krise um Sudetendeutschland Sorgen gemacht hatte,¹¹² mit einer englischen Quäkerin in Kontakt.¹¹³ Als Gerhard Fuchs, ein anderer „Schützling“ Clara Ragaz', mit Visum nach England reisen wollte, dort aber aus gesundheitlichen Gründen abgewiesen wurde, versuchte er die Quäker zu alarmieren. Dies gelang ihm nicht mehr rechtzeitig. Er konnte nicht verhindern, dass man ihn unverzüglich den Rückflug in die Schweiz antreten liess. An der „Auskunftsstelle“ hoffte man bei dieser Gelegenheit, dass „die englischen Freunde Sturm laufen“ würden.¹¹⁴

Ob auch Miss Pumphrey, an die sich Mattersdorf und Sladky gewandt hatten, Quäkerin war, liess sich nicht mit Sicherheit feststellen. Sie gehörte aber zu den wichtigen Kontaktpersonen der „Auskunftsstelle“ in England und wurde nicht nur in Visa-Angelegenheiten konsultiert.¹¹⁵

Auch Martä Jakobowsky, die von der „Auskunftsstelle“ wiederholt als Kontaktperson in Schweden angesprochen wurde,¹¹⁶ war im „Gartenhof“ als Quäkerin bekannt.¹¹⁷ Von ihr führten Verbindungen zu weiteren Kontaktpersonen des internationalen Netzwerks der „Auskunftsstelle“. In Schweden gehörte neben Anni Gunnarson beispielsweise der Historiker und Dozent Gunnar Bohlin dazu.¹¹⁸ Auch er wurde bei Visa-Angelegenheiten zugezogen, verfügte er doch seinerseits über eine Vertrauensperson in einem schwedischen Ministerium.¹¹⁹ Darüber hinaus korrespondierte er mit Leonhard Ragaz.¹²⁰ Sein Bruder Torsten war Theologieprofessor in Uppsala und hatte über Ragaz gearbeitet.¹²¹ Von Jakobowsky führten aber auch Verbindungen nach Deutschland. So war sie mit der Mutter eines jungen Militärdienstverweigerers

¹¹¹ Rubinich 2014; Jahn 1972 [1947].

¹¹² Chr. Ragaz an St. Sladky, 22.03.1939 (A).

¹¹³ Chadwick 2010, 8, 136.

¹¹⁴ „Die englischen Freunde“ hier vermutlich im Sinne der „Gesellschaft der Freunde“ gemeint. Chr. Ragaz an St. Sladky, 14.07.1939 (A).

¹¹⁵ Chr. Ragaz an St. Sladky, 25.02.1940 (A). Chr. Ragaz an St. Sladky, 27.04.1939 (A).

¹¹⁶ St. Mattersdorf an Chr. Ragaz, 19.05.1939 (B). St. Mattersdorf an Chr. Ragaz, 04.07.1939 (B). Chr. Ragaz an St. Sladky, 07.07.1939 (A).

¹¹⁷ Chr. Ragaz an St. Sladky, 28.01.1939 (A).

¹¹⁸ Nylund 2010.

¹¹⁹ Chr. Ragaz an St. Sladky, 10.03.1939 (A). Chr. Ragaz an St. Sladky, 07.07.1939 (A).

¹²⁰ Chr. Ragaz an St. Sladky, 20.08.1939 (A). Chr. Ragaz an St. Sladky, 05.11.1939 (A).

¹²¹ Bohlin 1929.

bekannt, der sich 1939 vorübergehend einige Wochen im Hause Ragaz aufgehalten hatte.¹²²

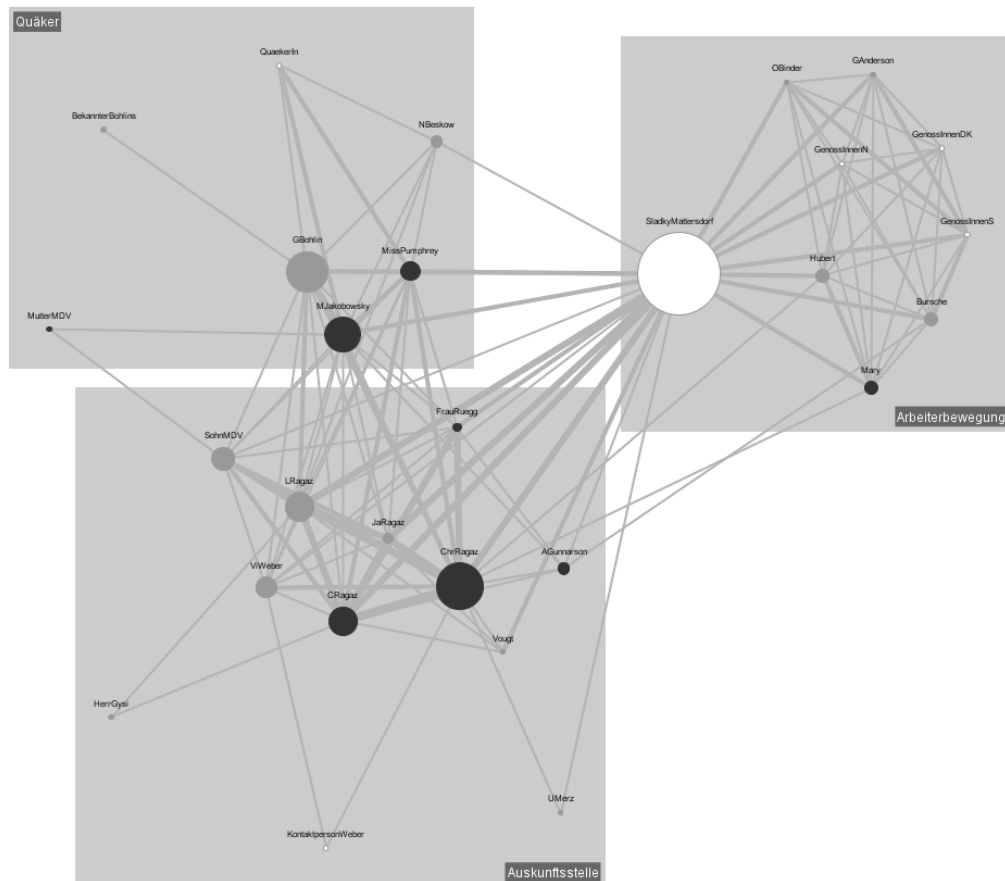


Abbildung 6: Die organisatorische Vernetzung der „Auskunftsstelle für Flüchtlinge“ am Beispiel des Unterstützungsnetzwerks in Schweden. Die Grösse der Punkte drückt das Zentralitätsmass (standardisierte Betweenness) der von der Netzwerkkarte erfassten Personen aus. Die Stärke der Verbindungslinien entsprechen der Multiplexität der Beziehungen. Männer sind hell-, Frauen dunkelgrau gezeichnet. Weiss sind Paare oder Personen gezeichnet, deren Geschlecht nicht bekannt ist.

Die „Auskunftsstelle“ konnte die österreichischen Flüchtlinge durch ihre internationalen Beziehungen unterstützen, indem sie diesen Verbindungen zu den ihrerseits hochgradig international verflochtenen Quäkern verschaffte. Das war deshalb wichtig, weil diese wie die „Auskunftsstelle“ selbst über eine Reihe

122 Chr. Ragaz an St. Sladky, 10.10.1939 (A); Chr. Ragaz an St. Sladky, 16.10.1939 (A); Chr. Ragaz an St. Sladky, 17.09.1939 (A).

schwacher, aber weitreichender Beziehungen verfügten. Diese fallen in der Netzwerkkarte als Peripherien in den Feldern der Quäker und der „Auskunftsstelle“ auf (vgl. Abbildung 6). Das Netzwerk der Arbeiterbewegung, in das Sladky/Mattersdorf ebenfalls eingebunden waren, weist keine vergleichbare Peripherie auf. Zwar war die Arbeiterbewegung in Schweden auch damals bereits einflussreich und Sladky/Mattersdorf konnten auch auf deren Unterstützung zählen.¹²³ Doch gehörten sie als „revolutionäre“ Sozialisten einer Fraktion an, die den Gewerkschafts- und Parteiapparaten gegenüber sehr kritisch eingestellt war und auf Distanz pochte.¹²⁴ Diese Position isolierte sie innerhalb der Arbeiterbewegung. Gleichzeitig erhöhte sie ihre Abhängigkeit von sogenannten „schwachen Verbindungen“, die ihnen die „Auskunftsstelle“ und die Quäker verschaffen konnten. Letztlich gelang ihnen die Weiterflucht in die USA aber dank der Unterstützung durch Muriell Gardiner („Mary“) und Josef Buttinger („Hubert“), die der gleichen Fraktion angehörten. Dabei blieb die „Auskunftsstelle“ eng in deren Bemühungen eingebunden.¹²⁵

4 Institutionalisation und Dekonstruktion

Der Kollisions- und Kompositionphase folgt in der Entwicklung von Netzwerken nach Hennig Laux als dritte Phase die „Institutionalisierung“. In dieser Phase ist die Form der Strukturierung „nicht länger variabel und umstritten, sondern klar bestimmt.“ Ihr „Programmcode“ schreibt sich „in Körper ein, [...] institutionalisiert sich und überlebt als inskribierte Erinnerung auch längere Phasen der Nicht-Aktualisierung“. Dabei verschwindet „die komplexe vielschichtige und prekäre Textur des Netzwerks [...] hinter Ideologien, anonymen Codes, Routinen, Automatismen und Standards“. Solche Strukturvorgaben erscheinen als „Selbstverständlichkeiten“.¹²⁶ Diese können erst in einer eventuell später eintretenden „Dekonstruktionsphase“ wieder „zersetzt, attackiert, infiltriert, erodiert und zerstreut“ werden, was Netzwerke zerstören oder in eine neue Kollisions- und Kompositionsphase führen kann.¹²⁷ Wie der folgende Abschnitt darstellt, gelangten auch die hier untersuchten Netzwerke in diese weiteren von Henning Laux vorgesehenen Entwicklungsphasen. Doch sollen diese hier nicht mehr näher untersucht,

123 St. Mattersdorf an Chr. Ragaz, 18.04.1940 (B); St. Mattersdorf an Chr. Ragaz, 24.04.1940 (B).

124 St. Mattersdorf an Chr. Ragaz, 24.06.1939 (B); St. Mattersdorf an Chr. Ragaz, 19.04.1940 (B); St. Mattersdorf an Clara Ragaz, 25.12.1939 (B).

125 St. Mattersdorf an Chr. Ragaz, 14.11.1939 (B); Chr. Ragaz an St. Sladky, 01.09.1940 (A); Chr. Ragaz an St. Sladky, 31.03.1941 (A); Chr. Ragaz an St. Sladky, 20.04.1941 (A); Chr. Ragaz an St. Sladky, 12.05.1941 (A); Chr. Ragaz an St. Sladky, 02.06.1941 (A); Chr. Ragaz an St. Sladky, 17.02.1941 (A).

126 Laux 2014, 166-170.

127 Laux 2014, 170-172.

sondern nur noch kurz skizziert werden. Die in der Kompositionsphase auftretende Verflechtung zwischen den beiden Netzwerken überdauerte nicht.

4.1 Zum Netzwerk der Flüchtlinge aus Österreich

Das Netzwerk der österreichischen Flüchtlinge, die von der „Auskunftsstelle“ unterstützt wurden, erfuhr eine gewisse Institutionalisierung, als die Personen aus seinem Hauptkern die USA erreicht hatten. Da man einander freundschaftlich, verwandtschaftlich und in politischer Solidarität verbunden war, brachen die Beziehungen nach der Flucht nicht ab. Das Hauptziel dieser Kräfte innerhalb der Arbeiterbewegung bestand während des Krieges darin, für das Überleben „revolutionärer“ Kräfte besorgt zu sein.¹²⁸ Aus tagespolitischen Angelegenheiten und Fraktionskämpfen im Exil hielten sie sich aus Rücksicht auf ihre „lange“ Perspektive weitgehend heraus.¹²⁹ Dabei zeigten sich starke Parallelen zur Argumentation der Bewegung „Neu Beginnen“, die sich nach der Machtübernahme der Nationalsozialisten 1933 in Deutschland herausgebildet hatte.¹³⁰ Einige Netzwerkpersonen wie etwa Otto Leichter oder Otto Binder kehrten nach dem Krieg nach Österreich zurück.¹³¹ Sie halfen dort beim Aufbau des sozialdemokratisch geprägten Nachkriegsösterreichs mit.¹³² Andere wie Josef Buttinger oder der „kleine“ Otto Bauer, die gegenüber der SPÖ kritisch waren, blieben in den USA, wo sie inzwischen Wurzeln geschlagen hatten.¹³³ Auch Steffi und Emil Sladky-Mattersdorf bürgerten sich in den USA, wo sie endlich hatten heiraten können, ein. Sie kehrten erst im hohen Alter nach Wien zurück.¹³⁴ Als politischer Akteur traten die „revolutionären Sozialisten“ Österreichs nicht mehr in Erscheinung. Die Institutionalisierung ihres Netzwerks im Exil ging nach und nach in eine endgültige Dekonstruktion über.

4.2 Zum Netzwerk der Unterstützenden in der Schweiz

Auch das Unterstützungsnetzwerk der „Auskunftsstelle für Flüchtlinge“ institutionalisierte sich nicht in der Weise, wie es sich in der Kompositionsphase herausgebildet hatte. Zwar blieb es für diejenigen österreichischen Flüchtlinge

128 St. Mattersdorf an Chr. Ragaz, 14.11.1939 (B).

129 Chr. Ragaz an St. Sladky, 22.06.1941 (A). Josef Buttinger hatte noch in Frankreich eine Broschüre über die Ziele der „revolutionären Sozialisten“ im Exil verfasst, die diese Politik begründete (Buttinger 1939).

130 Matthias 1956. Zur Perspektive des „kleinen“ Otto Bauer: Russo 2011.

131 Über die Nachkriegsbiographien der ehemaligen RS-Mitglieder orientiert das „Weblexikon der Wiener Sozialdemokratie“ (www.dasrotewien.at, Zugriff 7. 1. 2017).

132 Rathkolb 2015a.

133 Isenberg 2010; Russo 2011; Pelinka 1967.

134 Binder 1997, 175-176.

tätig, die in Europa verblieben waren. So konnten beispielsweise Franz und Irene Koci sowie die Familie Mattersdorf auch weiterhin auf die Unterstützung der „Auskunftsstelle“ zählen.¹³⁵ Doch trat diese Art der Unterstützung in den Hintergrund. Auch diese Neuausrichtung der Unterstützungsarbeit wurde vom Kriegsverlauf sowie von der restriktiven Flüchtlingspolitik der Schweiz erzwungen: Als die mit der Zeit von den Achsenmächten umklammerte Schweiz ihre „Transitstrategie“, welche die Möglichkeit zur Weiterreise von Flüchtlingen voraussetzte, nicht mehr weiterverfolgen konnte, entschieden sich ihre Behörden zur Internierung eines grossen Teils der eingereisten und noch einreisenden Flüchtlinge.¹³⁶ Die Internierung von Flüchtlingen im Süden Frankreichs und in der Schweiz drängte die Betreuung von Lagerinsassen ins Zentrum der Arbeit der „Auskunftsstelle“. In der Schweiz erfolgte diese Unterstützung oft im direkten Kontakt mit den Internierten.¹³⁷ Man suchte diese im Lager auf oder sorgte dafür, dass sie diese wenigstens zeitweise verlassen konnten.¹³⁸ Auch nach Frankreich unternahm man von der „Auskunftsstelle“ aus Reisen.¹³⁹ Doch hauptsächlich unterstützte man die Lagerinsassen dort mit sogenannten „Collis Suisse“, mit der regelmässigen Lieferung von Nahrungsmitteln, Kleidern und anderen lebensnotwendigen Gütern.¹⁴⁰ Nach dem Krieg erübrigte sich auch diese Art der Unterstützung. Die „Auskunftsstelle für Flüchtlinge“ half Lagerinsassen noch dabei, in ihre Herkunftsländer zurückzukehren. Doch mit der Zeit erübrigte sich auch dies. Ende der 1950er Jahre löste sie sich schliesslich auf.

5 Zusammenfassung und Schluss

Wie von Theorien zur Migration postuliert, so folgten auch im Zweiten Weltkrieg Fluchtbewegungen Netzwerkverbindungen. Aber nicht nur, wer flüchtete, auch wer Flüchtlinge unterstützte, war in Netzwerke verflochten. Kriegerische Ereignisse wie der „Anschluss“ Österreichs an das nationalsozialistische Deutschland 1938 unterwarfen Netzwerke Dekonstruktionsprozessen. Diese traten damit in Henning Laux' metaphorischer Sprache in eine „Kollisionsphase“ ein. Das präexistierende Netzwerk von „religiösen“ und „revolutionären Sozialisten“ in Österreich, das hier untersucht wurde, stiess zunächst mit den Bewegungen und

135 Chr. Ragaz an St. Sladky, 29.11.1942 (A); Chr. Ragaz an St. Sladky, 25.10.1942 (A).

136 Arnold 1997.

137 Chr. Ragaz an St. Sladky, 11.02.1943 (A).

138 Kocher 1996, 128-132; Hoerschelmann 1997, 175-186.

139 Chr. Ragaz an St. Sladky, 30.06.1940 (A); Chr. Ragaz an St. Sladky, 25.10.1942 (A).

140 Chr. Ragaz an St. Sladky, 31.03.1941 (A); Chr. Ragaz an St. Sladky, 13.04.1941 (A); Chr. Ragaz an St. Sladky, 14.12.1942 (A); Chr. Ragaz an St. Sladky, 24.01.1941 (A); Chr. Ragaz an St. Sladky, 22.06.1942 (A); Chr. Ragaz an St. Sladky, 15.08.1942 (A).

Repressionsapparaten zusammen, die den „Anschluss“ durchsetzten. Darauf reagierten die betroffenen Netzwerkpersonen mit der Flucht, einer geographischen Mobilität, die sie einerseits mit einem präexistierenden Netzwerk in der Schweiz in Berührung brachte und andererseits an die restriktive Flüchtlingspolitik des Nachbarlands im Westen prallen liess. Mit der Flucht in die Schweiz traten beide Netzwerke – das österreichische wie das schweizerische – in eine Kompositionsphase ein. Nicht mehr alles war offen, sondern es kristallisierten sich bereits gewisse Regelmässigkeiten heraus. Fest stand, dass die Flüchtlinge nicht nach Österreich zurück wollten und dass sie auf die Unterstützung des schweizerischen Netzwerks zählen durften, das sich als Solidaritätsnetzwerk verstand. Im Fluss blieb die geographische Verortung des Netzwerks der Flüchtlinge. Die restriktive Flüchtlingspolitik der Schweiz, die auf den Transit eingereister Flüchtlinge drängte, und der Kriegsverlauf, der das nationalsozialistische Regime auf weitere europäische Länder ausdehnte, hielten die Mobilität in Gang. Auch das Unterstützungsnetzwerk blieb in Bewegung. Es wandelte sich, um sich den veränderten Bedingungen laufend anzupassen. Dabei kam es zu einer Verflechtung der beiden Netzwerke, die sich erst in der Institutionalisierungsphase wieder lockerte. Weder das Netzwerk der Flüchtlinge noch das Netzwerk der Unterstützenden institutionalisierten sich in der Art, wie sie sich in der Kompositionsphase verflochten hatten. Die geographische Ausdehnung kam zum Stillstand, nachdem der Kern des österreichischen Netzwerks in die USA gelangt war. Das Unterstützungsnetzwerk verlagerte den Schwerpunkt seiner Tätigkeit auf die Betreuung von Flüchtlingen, die in der Schweiz oder in Frankreich in Lagern interniert waren. Beide Netzwerke lösten sich nach dem Zweiten Weltkrieg auf, in einen neuen Zyklus traten sie nicht mehr ein.

Die Überlegungen von Henning Laux zur Entwicklung von Netzwerken eigneten sich gut, um die Beschreibung der beiden hier untersuchten Netzwerke zu strukturieren. Sie rückten Netzwerkdynamiken in den Vordergrund und waren gleichzeitig auch offen gegenüber Ansätzen der herkömmlichen Netzwerkforschung wie den Überlegungen zu den „strukturellen Löchern“ oder zur Stärke „schwacher“ Beziehungen. Vermutlich wären auch weitere Überlegungen der „Akteur-Netzwerk-Theorie“ (ANT) von Bruno Latour, an die Laux anschliesst, in meinem Forschungszusammenhang fruchtbar. So ist ja die Bedeutung, die der „Gartenhof“ als Gebäude und damit als „Ding“ spielt, auch für die hier untersuchten Netzwerke zentral. Zu prüfen wäre auch, wie die restriktive Flüchtlingspolitik der Schweiz oder die Ausdehnung des nationalsozialistischen Einflussbereichs, die hier beide als Kontextbedingungen Berücksichtigung fanden, in eine konsequenter an der ANT orientierte Analyse eingebaut werden könnten. In diesem Zusammenhang würde sich möglicherweise ein strategisch-relationaler Strukturbegriff nach Bob Jessop und Colin Hay als anschlussfähig erweisen: Ohne dabei einer essentialistischen Sicht anheim zu fallen, würde man solche Kontextbedingungen ebenfalls als „Dinge“, die Wirkung haben, in die Analyse einbauen können, weil sie für die jeweiligen

Akteure in ihrer Zeit und an ihrem Ort als Strukturen „dinglichen“ Charakter annehmen.¹⁴¹

Das Beispiel der hier untersuchten Netzwerke von flüchtenden und unterstützenden Personenkreisen ergänzt die bisherige Forschung zur Migration, indem es die Dynamik und das Zusammenwirken der beteiligten Netzwerke beschreibt. Zur Forschung über „Hilfsnetzwerke“ zur Zeit des Nationalsozialismus fügt es eine Fallstudie zur Schweiz hinzu.¹⁴² Gleichzeitig unterstreicht die vorliegende Analyse die Bedeutung der politischen Rahmenbedingungen und anderer Kontextfaktoren. Dies gilt nicht nur für diejenigen Bedingungen, die zur Flucht treiben, sondern auch für diejenigen, welche die Unterstützungsarbeit prägen, was auch Bob Moore in seiner Arbeit über überlebende Jüdinnen und Juden in Westeuropa betont.¹⁴³ Die Rahmenbedingungen können die in Netzwerken verbundenen Personen dazu bringen, ihre Solidarität in innovative und kreative, und d.h. unter Umständen auch in illegale Unterstützungsformen umzusetzen.

References

Archivbestand

StAZH, Familienarchiv Ragaz (W I 67):

A. Chr. Ragaz an St. Sladky, 256.1

B. St. u. E. Sladky an Chr. Ragaz, 1938-1940, 257

C. Korrespondenz Clara Ragaz mit ihren Kindern 1905-1953, 250.2

Gedruckte Quellen

Bauer, Otto, und Leonhard Ragaz, *Neuer Himmel und neue Erde! Ein religiös-sozialer Aufruf*, Zürich 1938.

Binder, Otto, *Wien - retour: Bericht an die Nachkommen*, Wien 1997.

Bohlin, Torsten, Die Reich-Gottes-Idee im letzten halben Jahrhundert. *Zeitschrift für Theologie und Kirche* 10 (1929), 1–27.

Buttinger, Josef, *Probleme und Aufgaben der österreichischen sozialistischen Emigration*. Frankreich, Paris 1939.

—, *Am Beispiel Österreichs: Ein geschichtlicher Beitrag zur Krise der sozialistischen Bewegung*, Köln 1953.

¹⁴¹ Hay 2002; Jessop 2007.

¹⁴² Düring 2015.

¹⁴³ Moore 2010, 356–366.

- Gardiner, Muriel, *Deckname «Mary»: Erinnerungen einer Amerikanerin im österreichischen Untergrund*, Wien 1989.
- Gardiner, Muriel, und Josef Buttinger, *Damit wir nicht vergessen. Unsere Jahre 1934–1947 in Wien, Paris und New York*, Wien 1978.
- Gedye, Georg Eric Rowe, *Die Bastionen fallen. Wie der Faschismus Wien und Prag überrannte*, Wien 1947.
- Kägi-Fuchsmann, Regina, *Das gute Herz genügt nicht: Mein Leben und meine Arbeit*, Zürich 1968.
- Kundgebung: Gegen die Unmenschlichkeit in der Behandlung der jüdischen Flüchtlinge, in: *Neue Wege* 9 (1938), 385–388.
- Leichter, Henry O., *Eine Kindheit: Wien, Zürich, Paris, USA*, Wien 1995
- Leichter, Otto, *Zwischen zwei Diktaturen: Österreichs revolutionäre Sozialisten 1934–1938*, Wien 1968.
- , Briefe ohne Antwort – Aufzeichnungen aus dem Pariser Exil für Käthe Leichter 1938–1939, in: *Otto Leichter. Briefe ohne Antwort – Aufzeichnungen aus dem Pariser Exil für Käthe Leichter 1938–1939*, herausgegeben von Heinrich Berger, Gerhard Botz und Edith Sauer, Wien 2003 [1939], 51–322.
- Ragaz, Leonhard, Die Internationale Konferenz des Bundes religiöser Sozialisten, in: *Neue Wege* 7-8 (1938), 334–339.
- Sozialistische Front, Dokument 5: Erfahrungen in der illegalen Arbeit, in: *Der Untergang der Sozialdemokratie 1933. Dokumentation*, herausgegeben von Erich Matthias, 201–286, München 1956 [1936].

Sekundärliteratur

- Arnold, Jonas, *Vom Transitprinzip zum Dauerasyl. Die Schweizerische Flüchtlingshilfe 1933–1951*, Freiburg/Schweiz 1997.
- Aussermair, Josef, *Kirche und Sozialdemokratie: Der Bund der religiösen Sozialisten, 1926–1934*, Wien/München/Zürich 1979.
- Avenarius, Christine B., Starke und Schwache Beziehungen, in: *Handbuch Netzwerkforschung*, herausgegeben von Christian Stegbauer und Roger Häussling, Wiesbaden 2010, 99–111.
- Baur, Michael, *Visone - Software for the analysis and visualization of social networks*, Karlsruhe 2008.
- Bergier, Jean-François, *Die Wirtschaftsgeschichte der Schweiz: Von den Anfängen bis zur Gegenwart*, Zürich 1983.
- Bolbecher, Siglinde, Evelyn Adunka und Konstantin Kaiser, *Lexikon der österreichischen Exilliteratur*, Wien 2000.
- Bonacich, Phillip, Technique for Analyzing Overlapping Memberships, in: *Sociological Methodology* 4 (1972), 176–185.
- Borgatti, Stephen P., 2-Mode Concepts in Social Network Analysis, in: *Encyclopedia of complexity and systems science*, herausgegeben von Robert A. Meyers, New York 2009, 8279–8291.
- Borgatti, Stephen P., und Martin G. Everett, Network analysis of 2-mode data, in: *Social Networks* 19 (1997), 243–269.

- Buess, Eduard, und Markus Mattmüller, *Prophetischer Sozialismus: Blumhardt, Ragaz, Barth*, Freiburg (i.Ue.) 1986.
- Burchardt, Hans-Jürgen, Der Figurationsansatz: Neue Impulse für eine dezentrierte Gesellschaftsanalyse? In: *Leviathan* 39 (2011), 435–446.
- Bürgi, Markus, Stocker, Werner, in: *Historisches Lexikon der Schweiz* (HLS), herausgegeben von Stiftung Historisches Lexikon der Schweiz, Bern 2011.
- Burt, Ronald S., *Structural holes: The social structure of competition*, Cambridge, Mass. 1995.
- Cabanel, Patrick, Philippe Joutard, Jaques Sémelin und Annette Wieviorka, *La Montagne Refuge. Accueil et sauvetage des juifs autour du Chambon-sur-Lignon*, Paris 2013.
- Cellier, Jacques, *Visone: Une introduction*, Rennens 2015.. Zugriff am 13.12.2016 auf <http://visone.info/wiki/index.php/Tutorials>.
- Chadwick, William, *The Rescue of the Prague Refugees 1938-39*, Leicester 2010.
- Chester, Eric Thomas, *Covert network: Progressives, the International Rescue Committee, and the CIA*, Armonk, NY 1995.
- Diewald, Martin, und Sebastian Sattler, Soziale Unterstützungsnetzwerke, in: *Handbuch Netzwerkforschung*, herausgegeben von Christian Stegbauer und Roger Häussling, Wiesbaden 2010, 689–699.
- Düring, Marten, Hilfe für Verfolgte während des Nationalsozialismus: Ein systematischer Vergleich von Egonetzwerken, in: *Visuelle Netzwerkforschung: Qualitative, quantitative und partizipative Zugänge*, herausgegeben von Michael Schönhuth, Markus Gamper, Michael Kronenwett und Martin Stark, Bielefeld 2013, 317–330.
- *Verdeckte soziale Netzwerke im Nationalsozialismus: Die Entstehung und Arbeitsweise von Berliner Hilfsnetzwerken für verfolgte Juden*, Berlin 2015.
- Ebert, Teodor, Basisgruppen im revolutionären Prozess, in: *Ziviler Ungehorsam: Von der APO zur Friedensbewegung*, herausgegeben von Theodor Ebert, Waldkirch 1984, 70–104.
- Elias, Norbert, *Was ist Soziologie?* Weinheim 2014.
- Epple, Ruedi, Das erste Settlement der Schweiz, in: *Friedenszeitung* 6 (2013) 8–9.
- Die Berlin-Connection oder: Die Verbindung zwischen dem religiös-sozialen Milieu und der «Sozialen Arbeitsgemeinschaft Berlin-Ost», in: *Baselbieter Heimatblätter*, 78(4), 73–110.
- Freiplatzaktion Zürich 2015, in: *Die Welt ist unser Boot: 30 Jahre Freiplatzaktion Zürich. Zur Geschichte der Asylbewegung und der schweizerischen Migrationspolitik 1985-2015*, Zürich 2015.
- Fuhse, Jan Arendt, *Soziale Netzwerke: Konzepte und Forschungsmethoden*, Konstanz 2016.
- Gamper, Markus, und Tatjana Fenicia. Transnationale Unterstützungsnetzwerk von Migranten. Eine qualitative Studie zu Spätaussiedlern aus der ehemaligen UdSSR, in: *Visuelle Netzwerkforschung: Qualitative, quantitative und partizipative Zugänge*, herausgegeben von Michael Schönhuth, Markus Gamper, Michael Kronenwett und Martin Stark, Bielefeld 2013, 249–276.

- Gold, Steven J, Migrant Networks: a summary and critique of relational approaches to international migration, in: *The Blackwell companion to social inequalities*, herausgegeben von Mary Romero und Eric Margolis, Malden, MA 2005, 257–285.
- Goldner, Franz, *Die österreichische Emigration: 1938-1945*, Wien 1977.
- — *Flucht in die Schweiz: Die neutrale Schweiz und die österreichische Emigration 1938 bis 1945*, Wien/München/Zürich 1983.
- Han, Petrus, *Soziologie der Migration: Erklärungsmodelle, Fakten, politische Konsequenzen, Perspektiven*, Stuttgart 2010.
- Häsler, Alfred A., *Das Boot ist voll: Die Schweiz und die Flüchtlinge: 1933-1945*, Zürich 2009.
- Hay, Colin, *Political analysis: A critical introduction*, Basingstoke 2002.
- Hoerschelmann, Claudia, *Exilland Schweiz: Lebensbedingungen und Schicksale österreichischer Flüchtlinge 1938 bis 1945*, Innsbruck [etc.] 1997.
- Isenberg, Sheila, *Muriel's war: An American heiress in the Nazi resistance*, New York, N.Y. 2010.
- Jahn, Gunnar, Presentation Speech Nobel Peace Prize 1947 to the Quakers, in: *From Nobel Lectures. Peace 1926-1950*, herausgegeben von Frederick W. Haberman, Amsterdam 1972.
- Jecker, Hanspeter, Täufer, in: *Historisches Lexikon der Schweiz (HLS)*, herausgegeben von Stiftung Historisches Lexikon der Schweiz, Bern 2012.
- Jessop, Bob, *State power. A strategic-relational approach*, Cambridge 2007.
- Keller, Stefan, *Grüningers Fall: Geschichten von Flucht und Hilfe*, Zürich 1993.
- Kocher, Hermann, «Rationierte Menschlichkeit»: Schweizerischer Protestantismus im Spannungsfeld von Flüchtlingsnot und öffentlicher Flüchtlingspolitik der Schweiz 1933-1948, Zürich 1996.
- Kremos, Helene, Millicent Furrer-Proud, in: *Neue Wege* 9 (1977), 256–257.
- Laux, Henning, *Soziologie im Zeitalter der Komposition: Koordinaten einer integrativen Netzwerktheorie*, Weilerswist 2014.
- Matthias, Erich, Der Untergang der alten Sozialdemokratie 1933, in: *Vierteljahrshefte für Zeitgeschichte* 4 (3) (1956), 250–286.
- Monsutti, Alessandro, *War and migration: Social networks and economic strategies of the Hazaras of Afghanistan*, New York 2005.
- Moore, Bob, *Survivors: Jewish self-help and rescue in Nazi-occupied Western Europe*, Oxford 2010.
- Moorehead, Caroline, *Village of secrets: Defying the Nazis in Vichy France*, London 2014.
- Moulaert, Frank, und Oana Ailenei, Social Economy, Third Sector and Solidarity Relations: A Conceptual Synthesis from History to Present, in: *Urban Studies* 42 (11) (2005), 2037–2053.
- Nagel, Alexander-Kenneth, Vom Paradigma zum Pragma: Religion und Migration in relationaler Perspektive, *sociologia internationalis* 48 (2) (2012), 221–246.

- Neidhardt, Friedhelm, Einige Ideen zu einer allgemeinen Theorie sozialer Bewegungen, in: *Sozialstruktur im Umbruch: Karl Martin Bolte zum 60. Geburtstag*, herausgegeben von Stefan Hradil, Opladen 1985, 193–204.
- Nylund, Bo, *Lektor Gunnar Bohlin – Minnesbilder*. o.O. 2010. Zugriff am 02.12.2016 auf <http://bohlin-kolmodin.se>.
- Oesch, Corinna, Yella Hertzka (1873-1948): *Vernetzungen und Handlungsräume in der österreichischen und internationalen Frauenbewegung*. Innsbruck 2014.
- Oltmer, Jochen, *Migration im 19. und 20. Jahrhundert*, München 2013.
- Pelinka, Otto, Drei Jahrzehnte zu früh? Ein Gespräch mit dem «kleinen» Otto Bauer in New York, in: *Die Furche* 1967 (12.8.1967), 4.
- Pelinka, Peter, *Erbe und Neubeginn: Die revolutionären Sozialisten in Österreich 1934-1938*, Wien 1981.
- Peuker, Birgit, Akteur-Netzwerk-Theorie (ANT), in: *Handbuch Netzwerkforschung* herausgegeben von Christian Stegbauer und Roger Häussling, Wiesbaden 2010, 325–335.
- Picard, Jacques, *Die Schweiz und die Juden, 1933-1945: Schweizerischer Antisemitismus, jüdische Abwehr und internationale Migrations- und Flüchtlingspolitik*, Zürich 1997.
- Pries, Ludger, *Internationale Migration*, Bielefeld 2010.
- Rathkolb, Oliver, Die Zweite Republik (seit 1945), in: *Geschichte Österreichs*, herausgegeben von Christian Lackner und Tomas Winkelbauer, Stuttgart 2015, 525–594.
- , Erste Republik, Austrofaschismus, Nationalsozialismus (1918-1945), in: *Geschichte Österreichs*, herausgegeben von Christian Lackner und Tomas Winkelbauer, Stuttgart 2015, 477–524.
- Röder, Werner, Herbert Arthur Strauss, Sybille Claus, Daniel Niederland und Beatrix Schmidt, *Biographisches Handbuch der deutschsprachigen Emigration nach 1933*, München 1983.
- Rubinich, Hans, Fast vergessene Helfer. Quäker in den deutschen Kriegsjahren, in: *Neue Zürcher Zeitung*, 16.12.2014.
- Russo, Marco, Vom religiösen Sozialismus zum apokalyptischen Denken. Einblicke in das Denken des «kleinen» Bauer, in: *Politische Philosophie versus politische Theologie? Die Frage der Gewalt im Spannungsfeld von Politik und Religion*, herausgegeben von Wolfgang Palaver, Andreas Oberprantacher und Dietmar Regensburger, Innsbruck 2011, 339–364.
- Scheidegger, Noline, Strukturelle Löcher, in: *Handbuch Netzwerkforschung*, herausgegeben von Christian Stegbauer und Roger Häussling, Wiesbaden 2010, 145–155.
- Skoeries, Martin, *Das antimarianische Netzwerk. Ein Werkstattbericht zur Analyse des Beziehungsgefächts zwischen englischen Protestanten (1553-1558)*. Vortrag am sechsten Workshop Historische Netzwerkforschung. Dresden 2012. Zugriff am 30.04.2017 auf www.netzeundnetzwerke.de.
- Smith, Janel, Solidarity networks: What are they? And why should we care? In: *The Learning Organization* 16 (6) (2009), 460–468.

- Spieler, Willy, Zur Geschichte der religiös-sozialen Bewegung in der Schweiz, in: *Neue Wege* 6 – 11 (2006), 199–210, 249–258, 272–283, 315–325.
- Spieler, Willy, Ruedi Brassel und Stefan Howald, *Für die Freiheit des Wortes: Neue Wege durch ein Jahrhundert im Spiegel der Zeitschrift des religiösen Sozialismus*, Zürich 2009.
- Steiner, Herbert, *Käthe Leichter: Leben und Werk*. Wien 1973.
- Stelzig-Willutzki, Sabina, *Soziale Beziehungen im Migrationsverlauf: Brasilianische Frauen in Deutschland*, Wiesbaden 1973.
- Unabhängige Expertenkommission Schweiz-Zweiter Weltkrieg, *Die Schweiz und die Flüchtlinge zur Zeit des Nationalsozialismus*, Zürich 2001.
- Weidele, Daniel und Tom Brughmans, *Introduction to exporatory network analysis for archaeologists using Visone*. o. O. 2015, Zugriff am 13.12.2016 auf <http://visone.info/wiki/index.php/Tutorials>.
- Weinzierl, Ulrich, Kristina Pfoser-Schewig und Ernst Schwager, *Österreicher im Exil: Frankreich 1938-1945: Eine Dokumentation*, Wien 1984.
- Wichers, Hermann, *Im Kampf gegen Hitler: Deutsche Sozialisten im Schweizer Exil, 1933-1940*, Zürich 1994.