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## Networks in Archaeology and History

*Aline Deicke (Academy of Sciences and Literature, Mainz), Martin Stark (ILS Research Institute, Aachen), Marten Düring (DEIS, University of Luxembourg)*

Over the last decade, network analysis has made its way from a fringe theory to an established methodology in archaeological and historical research that goes beyond a purely metaphorical use of the network term. 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, physics) can be fruitfully applied to selected bodies of historical and archaeological sources. Yet in many of these initial studies, important methodological concerns regarding the underlying sources, missing data, data standardization and representation of networks in space and time have not been adequately acknowledged and sometimes even completely neglected.

In recent years, archeologists and historians – often in collaboration and in exchange with scholars from other disciplines – have taken on the challenge to address these methodological concerns and to adapt and refine formal network methods and network theory for archaeological and historical research. The aim of this session is to further develop such transdisciplinary collaboration between historians, archeologists and the EUSN research community.

The session invites contributions from researchers applying methods of formal network analysis in archaeological or historical research. A special emphasis of the session will be on the unique challenges that arise in the domain-specific application of these research methods. We welcome submissions on any period, geographical area or topic. The authors may be historians or archeologists as well as scholars from other disciplines working with historical or archeological data.

## Social Networks and Inequalities in Health

*Lea Ellwardt (University of Cologne), Markus Gamper (University of Cologne), Sylvia Keim (University of Rostock), Andreas Klärner (Thünen Institute of Rural Studies, Braunschweig)*

For several decades now, integration into social networks has been recognized as a non-neglectable social determinant of health. Researchers mostly agree on a positive association between social networks and health, as empirical evidence has shown consistently across populations, time, age and gender. Yet, little is known about 1.) the direct and indirect mechanisms underlying this association, and 2.) about the socio-economic factors influencing social networks. Likewise, policy makers have been calling for recommendations on intervention strategies to reduce health inequalities rooted in differences in social integration.

Our session is devoted to discussing social networks as drivers, modifiers and outcomes of health inequalities. Contributions may address, but are not limited to, functional and structural characteristics of whole social networks as well as personal networks (egonets). The analytical unit of interest may include individuals, groups (for example, doctor-patient relations) or organizations (for example, hospital networks).

There is no a priori focus on qualitative or quantitative contributions or theoretical concepts. Instead, precedence will be given to novel and interdisciplinary theoretical or empirical work that combines perspectives from the social sciences within the medical field. We aspire to address the questions listed below and beyond:

- Which are useful theoretical models that offer explanations for the link between social networks and physical and mental health?
- Does the role of social networks for health change over the life-course? Are there variations in the impact of social networks across age groups?
- What is the position of non-kin networks, perhaps also compared to kin-networks?
- What do we know about social networks of groups with different social or socio-economic status (e.g., migrants, jobless persons, persons of older age). Do differences in their social networks relate to inequalities in health?
- How can current knowledge be translated into policy implications? If inequalities in social networks are risk factors, through which kind of interventions can they be reduced?

### Abstract submission

Please hand in your abstract via the conference management tool **CONVERIA** and indicate the name of the session: "Social Networks and Inequalities in Health". Abstract submission deadline is **March 31**. (<http://www.eusn2017.uni-mainz.de/abstract-submission/>)

## Social networks and learning analytics

*Amit Rechavi (Tel Aviv University), Carmel Kent (University of Exeter, UK)*

Social learning analytics focus on how learning communities create knowledge together. MOOCs (massive open online courses) and other web-based learning endeavors are based on collaborative learning, which in turn is built on the combination of individual knowledge and skills, the collaborative environment, and on the ability to work together. Hence, group processes of knowledge construction are critical to the understanding of the learning process. Networked-based learning focuses on community's collective knowledge thus, modelling and analyzing learning constructs and processes using Social Network Analysis techniques offers a new research disciplinary view and set of insights.

In order to make sense of learning as a networked process, we suggest combining the analysis of the individual learner (a micro-level analysis) with the analysis of the network's statistics (a mezzo and macro analysis). Our session aims to put the spotlight on the emerging concept of using social networks analysis as a learning analytics tool.

Examples of appropriate topics include, but are not limited to:

1. Topological analysis of the leading nodes in the learning community (moderator or students) and their learning analytics parameters.
2. Analysis of learning groups, their topological characteristics, their inner-learning processes and their relations with the network.
3. Analysis of the topology of different learning communities, entailing different designs and teaching methods.
4. Visualizing the learning dynamics and knowledge diffusion in learning networks.
5. Presenting the multiplex network consisting of digital and real-life presence, communication and activities.

We welcome quantitative, qualitative and mixed research designs, targeting formal as well as informal learning case studies. In addition, we suggest a hands-on experience with Ligilo, a unique learning analytics and network analysis tool. The use of Ligilo will be offered to the session's members free of charge during the EUSN2017 conference and can support connecting EUSN2017 concepts, data and people to a sole network.

## Network Analysis of Political Power

*Alina V. Vladimirova (Russian Academy of Sciences)*

This session is organized jointly with IPSA Research Committee on Political Power (IPSA RC36) in order to provide a room for a broad discussion on opportunities and challenges of network analysis in political power studies. We invite contributions that share a commitment to rigorous conceptual analysis of power but focus on distinct form of power in networks, which include, but are not restricted to, power-as-control and power-as-access, networking power, network power, networked power and network-making power. We are interested in attracting papers that show how to deal with different pitfalls of power audit, like infamous problem of inconsistent measures associated with relative and relational nature of political power. We encourage potential participants to introduce solutions and insights provided by methods of network analysis.

We believe network analysis can help us to understand how and why power is used by different actors while taking into account changing conditions of domestic and international politics. Power is a central concept for social and political sciences yet one of the most troublesome in terms of empirical research. Thus, we are expecting our session participants to present papers that link theory to practice, propose systematic testing of theoretical models with network data and demonstrate original network approaches to political power analysis.

## Climate change networks

*Bettina Lelong (ILS Research Institute, Aachen), Britta Rösener (RWTH Aachen University), Marco Schmitt (RWTH Aachen University), Martin Stark (ILS Research Institute, Aachen)*

The challenges of climate change are a multi-level network problem. Coping with climate change requires joint efforts and cooperation between state, businesses and civil society on a global, national or local level. However, these joint efforts often fail due to missing interfaces and differences in the underlying logic of the actions of the involved actors. So social networks in climate change indeed seem to be an particular rich field of study for network analysts. Not surprisingly, a lot of discipline specific research on climate change networks has been done in recent years.

Therefore, a survey and systematization of all these different endeavours is much needed. Furthermore, the complexity of most research questions in this rather new thematic field seems to require at least some degree of transdisciplinary cooperation and an undogmatic combination of quantitative and qualitative research methods and data.

The aim of the proposed session is to provide an overview of the current state of research on climate change networks across the disciplines, the used methods and the underlying data. The session also seeks to enhance the necessary transdisciplinary collaboration in this complex and exciting new field of research.

The session on climate change networks invites contributions from researchers of all disciplines working on social networks in climate change, be it on the global, national, local or urban level, be it about climate change protection (mitigation) or climate change adaption. Covered network modes and topics may include personal, complete or multi-modal networks, policy and discourse networks, social movements, social media, organizational networks, innovation and socio-technical transitions.

## Socio-semantic networks

*Nikita Basov (St. Petersburg State University), Iina Hellsten (University of Amsterdam), Adina Nerghees (VU Amsterdam), Camille Roth (Sciences Po, Paris), Johanne Saint-Charles (University of Quebec at Montreal)*

In recent years, research jointly considering semantic and social network data has expanded, and options to relate those have been explored theoretically and methodologically. Advanced analytical methods and the increasing availability of large data sets, in particular social media data, have been mutually reinforcing and catalyzing research into combining semantic and social networks. Prior work has shown that both the structure of social relationships and discourse/meaning sharing contribute to the emergence and spread of knowledge and culture. The innovation resides in the contribution that social network analysis offers for studying the relationships between social structures and the discursive/meaning structures that individuals or communities share.

One trend has been to consider similarities between people's discourse as a specific form of social ties. The resulting socio-semantic network can then be combined and contrasted with other types of social networks based on friendships, advice, influence and other type of social relationships. Another trend is to jointly consider social actors, concepts and relations between them as forming multilevel networks. In both trends, discourse and social ties are expected to coevolve as actors share meanings or differ in those while their social ties transform.

In this emerging field, theoretical and methodological questions abound. For example: Which discourses and communities should be analyzed with regard to a particular research context and question(s)? How does the method chosen to assess similarities in discourses/meanings (topic/theme analysis, semantic fields, concepts and lines between them, exact words) impact the results? What are the ways to analyze the coevolution of social and semantic networks? To what extent can social network measures be applied to semantic and socio-semantic networks? How can statistics of those networks be compared? Which socio-semantic network configurations can be used in statistical models (e.g., ERGMs)? What kind of theorizing is triggered by research of socio-semantic networks?

Interested participants are invited to submit theoretical, methodological or empirical papers, contributing new perspectives on the questions how, when, and under what conditions social relationships, content and meaning structures can be connected via network research; or what approaches are suitable to strengthen the understanding of the connections between the structure of social relations and meaning.

Papers should fall into one or several of the following thematic areas:

- *Theorizing about relationships between meaning structure, content structure and social structure*
- *Qualitative and quantitative methods to relate meaning structure and social structure*
- *Multilevel and multimode socio-semantic networks*
- *The relationship between semantic similarity and social ties*
- *Joint semantic network analysis of message content and social network analysis of information channels - Applying social network analysis techniques to semantic and socio-semantic networks*
- *Using semantic network data to capture social structures between actors*
- *Semantic structuring throughout conversations in networks*

## Social Networks and Social Support

*Christiane Kellner (TU München)*

The UN-Convention on the Rights of Persons with Disabilities which was ratified by the German Federal Government in 2009 targets the full and effective participation and self-determination of persons with impairments. Nations which ratify it must either have reached the target or be seen to constructively work toward the target.

The German Federal Government Report on Participation with Regard to the Circumstances of Persons with Impairments emphasize the importance of social networks for the realization of that aim. The social networks of persons with disabilities differ from those of persons without disabilities, in both quantitative and qualitative terms. Although, persons with disabilities are more dependent on formal networks because they need more help e.g. in form of support in everyday activities. Also social networks can improve the social participation in ones surrounding.

In this session we would like to stimulate a research exchange concerning the social networks of persons with impairments and these networks' role in bringing about successful participation in the society. Questions can be: "Which relationships or contacts are supportive and which are not? Why are they supportive and what characterize them?"

Topic areas can also include methodological and epistemological issues arising from quantitative and qualitative network research as well as findings concerning the structural and functional characteristics.



## Methodological Advances in the Study of Corporate Networks Fracturing and Concentration

*Eelke M. Heemskerk (University of Amsterdam), Lasse F. Henriksen (Copenhagen Business School)*

For long corporate control has been organized in dense networks of interlocking directorates and shared ownership. Such corporate networks integrate corporate elites within the board of the most powerful companies, in tightly knit 'inner circles'. But at the turn of the century networks of corporate control started to decline (Heemskerk 2007). More recently, Mizruchi's (2013) argued that for the American corporate elite, the structure of 'command and control' in a highly concentrated, and thus hierarchical, corporate network no longer exists and that the corporate elite is now fractured. Chu and Davis (2016) register the ongoing thinning of the US network of board interlocks and come to the sweeping conclusion that 'the findings of classic studies—on elite socialization and class consciousness, on political unity and pragmatism, and on corporate learning and isomorphism—no longer hold'. As a consequence, 'previously discovered "facts" need reconfirmation'.

The fracturing thesis thus leads to pressing questions in scholarship. We take the fracturing thesis and the conjectures of its proponents seriously but also question the validity of its claims. First of all, the burgeoning research comparing the structure and function of corporate networks in different countries and regions highlight the difference in network trajectories (Scott 1991; Kogut 2012; David and Westerhuis 2014). The relevance of the fracturing thesis may well be limited to the US (Cárdenas 2016; Heemskerk, Fennema and Carroll 2016). Second, in those places where corporate networks have been in decline it is indeed essential to reconfirm previous scholarship on for instance political unity and corporate learning. Different social structures may well foster elite socialization and group consciousness, albeit in a different manner than before. This is a particularly prominent question given the fundamental changes in national and international politics we face today. And third, there is growing evidence of concentration of corporate control in the hands of a few actors such as through passive investment funds (Fichtner et al 2016) and to some extent sovereign states.

This panel aims to address these pressing issues concerning concentration or fracturing. In particular it calls for papers that use novel methodological and analytical techniques, fully exploring the potential we have today to develop new answers to old questions, and generate new questions on the role of corporate elites in today's global political economy.

### **Suggested topics:**

Papers may be inspired by questions such as:

- *How widely applicable is the corporate fracturing thesis, and what cases provide support for it vs. contradicts it?*
- *How does a network process of fracturing vs concentration look when detailed data is available to model it?*
- *What might explain fracturing and disintegration vs enduring concentration and centralized control;*
- *What are the exogenous and endogenous mechanism at play in driving fracturing vs concentration?*
- *What techniques, models and visuals can help illuminate the underlying mechanisms of fracturing and concentration?*
- *Retesting the findings of some key contributions in the corporate network literature on its consequences, using novel techniques and methods.*

## Social Networks in Healthcare

*Francesca Pallotti (University of Greenwich), Elisabeth West (University of Greenwich), David Barron*

Networks are growing in importance within healthcare systems around the globe. Despite their considerable diversity, national health care systems are all encouraging coordination, communication, cooperation and diffusion of best practices in healthcare in an attempt to improve outcomes and reduce costs. Against traditional hierarchical models of leadership, networks are increasingly emerging as a new approach to innovation, change, and quality improvement of health services by combining knowledge, and resources. However, empirical evidence demonstrating the impact of networks in healthcare is still weak. On one hand, there is scant knowledge about the broader ecology of network forms existing in healthcare, ranging from formal and often bureaucratic network to informal, self-managed models. On the other hand, gaps exist in terms of how networks work to improve patient, organizational and system-level outcomes.

The purpose of this session is to share ideas and encourage discussion about the structure, dynamics, and consequences of networks in healthcare from a theoretical, analytical and empirical perspective. The session Social Networks in Healthcare encourages a wide range of proposals using multiple sources of data at different levels (including intra- and inter-organizational levels) and diverse methodological approaches.

## Theory and Methods of Multiplex Network Analysis

*Giuseppe Giordano (University of Salerno, Italy), Giancarlo Ragozini (University of Naples Federico II, Italy), Maria Prosperina Vitale (University of Salerno, Italy)*

A multiplex network might be defined as a set of nodes interacting in more layers, each reflecting a distinct type of connection linking pairs of nodes. For instance, in the social network setting, examples of multiplex networks consist of same individuals connected through different types of social ties (i.e.: friendship, trust, collaboration, acquaintance, family relationships, etc.).

This session will focus both on recent methodological developments in statistical techniques to handle multiplex network data, including summarizing and analyzing multiplex networks through clustering and community detection algorithms, network measures and modelling, and on substantive applications originated in several fields. More specifically, topics for this session can include:

- 1. Developments in statistical methods to handle multiplex network data;*
- 2. Extension of network measures and modelling to multiplex networks;*
- 3. Survey methods for the collection of multiplex network data;*
- 4. Applications of multiplex networks in different empirical settings;*
- 5. Software development for multiplex networks.*

## Psychological perspectives on social network analysis

*Holger von der Lippe (MSB Medical School Berlin)*

This session invites theoretical or empirical analyses of networks of relationships, which are conducted from a psychological stance. Contributions are welcome that transgress – but not necessarily exclude – the established notion of “support” by delving further into the multiplex and diverse realm of network structure. Presentations treating complete or ego-centric networks, quantitative or qualitative approaches, theory, methods or empirical findings are equally welcome. The overall objectives of this session are to illustrate, discuss, and advance a potential cross-fertilization of genuine psychological theorizing and social network analysis.

## Social Networks and Regional Economic Development

*Johannes Glückler (University of Heidelberg), Robert Panitz (University of Heidelberg)*

As much as the evolution of social networks has a spatial dimension, the economic development of regions depends on the structure and dynamics of these networks. These two research fields –network and regional research– have long coexisted without major cross-fertilization. While social network studies have tended to sometimes ignore the role of space, scholars in regional research have often sought categorical rather than relational explanations of unequal regional development. Recently, however, researchers have discovered the potential of combining both networks and space to better understand the interdependencies between the spatial evolution of networks and the effects of social structure on regional development. Special issues such as in *Social Networks* (Doreian and Conti 2012) and the *Journal of Economic Geography* (Glückler and Doreian 2016) have pointed to ways in which interaction between the two research streams can lead to a better understanding of the spatiality of networks and the network foundations of regional development.

This session aims to continue such dialogue and invites papers that take an active interest in how networks of people and organizations affect regional development, and, conversely, how geography interferes with the evolution of social networks. We invite theoretical, methodological and empirical contributions which shed light, among a broad range of possible topics, on the following issues:

- The spatial structure and evolution of social and organizational networks
- The impact of organizational networks on regional economic development
- Concepts and methods for the relational analysis of regions and the spatiality of organizations
- The dynamics of intra- and inter-organizational networks in and across space
- Network approaches to the analysis of inter-regional and global relations
- The relational structure of markets at regional and global scale

### References

Doreian P, Conti N (2012) Social context, spatial structure and social network structure. *Social Networks* 34 (1): 32-46.

Glückler J, Doreian P (2016) Editorial: Social network analysis and economic geography – positional, evolutionary and multi-level approaches. *Journal of Economic Geography* 16 (6): 1123–1134.

## Networks and the Labour Market

*Joan-Miquel Verd (Univesitat Autònoma of Barcelona), Oriol Barranco (Univesitat Autònoma of Barcelona), Dafne Muntanyola (Univesitat Autònoma of Barcelona), Mireia Bolibar (Universitat Pompeu Fabra & Johns Hopkins University)*

Since Granovetter's work on the importance of weak ties to find a job, the role of social networks in the labour market has attracted widespread attention. The importance of non-family relations in the labour market outcomes and economic performance has been partially addressed by using the concept of social capital, despite its multiple meanings. From Coleman's individualism to Putnam's nostalgia, and through the work by Bourdieu, Burt and Portes just to name a few, social networks analysis tackles two complex theoretical themes related to social capital and the labour market: the definition of what constitutes a tie, its strength and content, on the one hand; and the methodological gap between the relational mechanisms of social networks and the social attributes of market structure and labour trajectories. Moreover, since the last two decades, the evolution of personal networks along labour trajectories has constituted a new field for research.

Within these debates several issues can be developed further: The presence of weak and/or strong ties in the mobilization of contacts, the strategies of agents in looking for relevant information in a job search, the inequality gap in social capital that makes class, gender and age relevant factors in considering how agents mobilize their personal networks, the sense of agency that comes with (dis)possession of social capital in the form of personal networks more or less activated towards the job market, the permanence or disappearance of latent or hidden ties in the trajectory that might be part of weak or strong ties mobilized for work, or the type of job trajectories that correspond to these different types and structures of personal networks.

If you are interested in these questions, please consider submitting an abstract on any of these following topics, but not limited to them:

- Employment and social networks
- Bonding and bridging social capital and finding a job
- Social contacts and labour trajectories
- Migrant populations and labour networks
- Social networks, class and gender as factors of inequality in job search
- Social status attainment and social networks
- The use of social networking and social media as a strategy for job seeking
- Social networks and informal economy

## Corporate Networks around the Globe

*Joshua Murray (Vanderbilt University), Eelke Heemskerk (University of Amsterdam)*

Corporate networks are among the most studied social networks, being used both as a method for tracing the power structure of capitalist societies and as a causal factor in explaining the behavior of corporate elites. This track brings together scholarly work from around the globe to investigate corporate networks, with particular interest in networks at the level of corporate governance: interlocking directorates, ownership, and corporate policy networks. The papers examine the political, economic and sociological consequences of the network ties and/or treat network ties as a phenomenon to be explained, visualized or set in historical perspective. While the track is focused analytically on corporate networks, the national and regional contexts in which the proposed papers examine these networks vary greatly. This provides a rich opportunity for cross-national comparative thinking across papers and sessions, within our track.

## Analysis of longitudinal personal and small social network analysis

*Luisa Barthauer (TU Braunschweig), Matthew Sitch (University of Chichester), Lisa Handke (TU Braunschweig), Elena Stasewitsch (TU Braunschweig)*

We live in a globalized world with changing surroundings. The times of living in a city or village with a fixed circle of people accompanying us the majority of our personal and professional lives is long gone (Wellman, 1982). Even though ties to close friends and family may remain stable, it is impossible to not meet new people when we move to a new city, join the gym, or change jobs; whilst simultaneously losing old contacts in the process. Interpersonal relationships are a complex system evolving over time. Hence, temporal processes play a crucial role in understanding individual, as well as small groups' dynamics (e.g. McGrath & Tschan, 2004; Salas, Fiore, & Letsky, 2013). However, research has not yet profoundly studied the mechanisms by which changes influence individuals' surroundings. Accordingly, this symposium aims to begin to address central questions such as: (1) Does the assumption that our personal surroundings are subject to constant change hold true? (2) What are the personal implications of a constantly changing social environment? (3) What happens with highly dynamic team that only work together for a short specific part of an entire project, and might not even meet each other in person, but work and interact together digitally?

So far, there are not many answers on these questions above since not much research has focused on the longitudinal analysis of egocentric or small social networks. This lack of research may be due to the fact the longitudinal collection and analysis of personal and small network data is challenging. For example, often, the analysis is a question of quantity or quality, implying that a high number of personal networks gathered online over a period of several years mostly does not allow specificity on who is actually a member of the personal network due to anonymity requirements. Moreover, to some extent participants always provide information on their network retrospectively when reflecting which contacts are new and which have been dropped. This is exacerbated when multiple perspectives of small team are provided retrospectively on the same setup of people.

Another challenge in the assessment of personal and small social networks over a time relates to the application of network measures. Considering that individuals are a part of complex systems, it makes little sense to study isolated individual measures alone. If we study changes in individual network parameters by controlling for group-level equivalents, what does this tell us about the changes of all individuals in the network over time? For example, how is the change in person A's centrality specifically related to person B's (and C's, D's, etc.) change in centrality over time? Therefore, changes in individual parameters should not be regarded out of context of their nesting within a group (such as in SNA) or the relationships within one ego (PNA). Accordingly, network analysis requires some form of hierarchical linear/multilevel modelling. Combined with longitudinal approaches such as cross-lagged methods, the analysis is not necessarily trivial (Snijders, Spreen, & Zwaagstra, 1995).

Therefore, we would like to meet with researchers who work on similar topics to exchange ideas, methods, and experiences. We welcome researchers to submit their empirical or theoretical work concerning the longitudinal analysis of personal and small social networks to this session to join the discussion on how to best analyze personal and small social networks gathered at more than two or three measurement occasions. We also specifically welcome different kinds of methodological approaches for longitudinal personal and small group network analysis. Topics that could be discussed in this symposium are the dynamic of how ego-alter and alter-alter ties change; are ties added or lost? Were these changes intentional or did they happen randomly? And if changes take place, does it go along with a different availability of resources (e.g., information, support)? And are those available resources related to a different structure in the network, the characteristics of the ties, or the characteristics of the alters? And if the resources or the overall structure of a network changes, how does this



relate to a person's career success or the motivation to do sports? These are just some topics at hand and other issues are open for discussion. Abstracts should not exceed 3 000 characters and paper selection will be made by the organizers of the session.

## References

McGrath, J. E., & Tschan, F. (2004). *Temporal matters in social psychology: Examining the role of time in the lives of groups and individuals*. American Psychological Association.

Salas, E., Fiore, S. M., & Letsky, M. P. (Eds.). (2013). *Theories of team cognition: Cross-disciplinary perspectives*. Routledge.

Snijders, T., Sreen, M., & Zwaagstra, R. (1995). The use of multilevel modeling for analysing personal networks: Networks of cocaine users in an urban area. *Journal of quantitative anthropology*, 5(2), 85-105.

Wellman, B. (1996). Are personal communities local? A Dumptarian reconsideration. *Social networks*, 18(4), 347-354.

## Social Networks and Intergroup Relations: New Questions and Challenges

Lars Leszczensky (MZES, University of Mannheim), Hanno Kruse (MZES, University of Mannheim), Clemens Kroneberg (University of Cologne)

In recent years, researchers increasingly have applied social network analysis to study intergroup relations. Both cross-sectional (ERGM) and longitudinal (SAOM) methods led to similar conclusions; that students' friendship networks are segregated along ethnic, cultural and religious lines, even net of relative group size effects.

However, researchers only have begun to exploit the potential of social network analysis for understanding the causes and consequences of such ethnic, cultural, and religious segregation. Taking this next step involves theoretical and methodological challenges, both of which we intend to address in this session.

Numerous follow-up questions have arisen from earlier research. Do, for example, the preferences of immigrants and natives for interethnic contact differ? And how do actors' contact preferences depend on contextual characteristics? Under what circumstances do youth consider themselves as members of a particular group in the first place? A *central theoretical challenge* is to tackle these questions systematically, for example by relying on more general theoretical approaches, such as a social boundary making perspective or theories of identity formation.

Social network analysis provides the tools to tackle these questions empirically. Studying intergroup relations, however, implies complex model specifications that include interaction effects. Interpreting the results of such models almost always requires additional efforts. Most notably, evaluating the respective contrasts of theoretical interest often makes it necessary to calculate and test specific linear combinations of lower- and higher-order effects. This *methodological challenge* is ignored in much applied research, even though addressing it is crucial to understand network dynamics from the perspective of various groups.

In this session, we therefore welcome theoretical, methodological, and empirical contributions to the study of intergroup relations from a network perspective. This includes, but is by no means limited, to work that

- addresses current research puzzles regarding the causes and consequences of ethnic, cultural, or religious segregation, or
- examines how respective hypotheses, especially about group differences in network formation, can be tested empirically. **Abstract submission:** Please submit your abstract via <http://www.eusn2017.uni-mainz.de/abstract-submission/>. The deadline for submission is **March 31**.

## Political Networks

Sponsored by the ECPR (European Consortium of Political Research) standing group on Political Networks

*Manuel Fischer (Swiss Federal Institute of Aquatic Science & Technology – Eawag), Dimitris Christopoulos (MODUL University Vienna)*

Political network studies focus on structural and relational patterns related to different issues and elements of politics. Political processes at the individual, group, state or international level automatically involve many different (types of) actors. They all have some influence on outputs and outcomes, but the influence of their behavior and strategies is often the result of a complex process of interactions. A network perspective focuses on how individuals and organizations interact beyond formal and traditionally hierarchical political procedures. A network perspective on politics is therefore especially important. Such a perspective can include many different types of political actors (individuals, organizations and/or institutions), and network ties can consist of exchanges of resources, information, as well as of conflict, collaboration and communication that may occur both on- and offline. A network approach to politics is thus important as it allows political scientists to disentangle how political actors mobilize and exchange resources, how they coordinate actions, and how relational performance shape decision-making and outputs.

Questions involving network aspects in political science abound: How do actors in policy processes coordinate and influence policy-making within coalitions or in the role of policy brokers? How do actors in networks deal with uncertainties, and what are their strategies of gathering and dispersing information? How do different types of networks between actors and natural resources contribute to the management of natural resources in an integrated way? How does the perceived network environment and interdependence between issue sectors shape actors' strategic behavior? How do networks among individuals influence group dynamics such as mobilization within social movements? What is the effect of online communication on individuals' political preferences and behavior? Some of these questions have been discussed in the literature for some time, whereas others have rarely been examined systematically. Yet, re-examining older questions is crucial, given the rapid development of new methods in the field of network analysis, which could lead to new insights and questions.

The session welcomes both theoretical work and empirical applications of network theories and social network analysis to any question related to politics. It is open for scholars in public policy analysis, international relations, political sociology, political economy, and other domains of political sciences. Similar sessions at the 2014 EUSN conference in Barcelona and the 2016 EUSN conference in Paris were composed of three to four panels, containing presentations and discussions on highly diverse, interesting and qualitatively excellent work. The previous sessions were very well attended. Although we will finalize the list of panels depending on paper submissions, indicatively we envisage panels in the following areas: policy networks, political leadership, environmental politics, social media, social movements and collective action, etc.

## Networks for Learning

Marc Sarazin (University of Oxford), Martin Rehm (University Duisburg-Essen; Maastricht University), Dominik E. Froehlich (University of Vienna)

This session focuses on papers that use social network analysis to understand how individuals involved in activities related to education and learning (pupils, students, teachers, school management, policy makers etc.) are affected by or use their social networks for educational purposes or in educational settings. The session's papers will build on the assumption that actors are embedded within social networks which provide opportunities and constraints, in turn affecting individuals' behaviours and attitudes (Monge & Contractor, 2003, Emirbayer & Goodwin, 1994 Borgatti & Halgin, 2011). Within this framework, the session welcomes papers that seek to make empirical, methodological and/or theoretical contributions to understandings of social networks in learning and education. These could include papers on:

- The importance of social networks for the social and learning environments of students (Heidler et al., 2014) and educational professionals (e.g. teachers) (e.g. Rehm & Notten, 2016a,b)
- Theoretical processes underlying social networks, as well as the antecedents and consequences of networks (e.g. Rehm, 2016)
- Discussions of the particularities of educational settings from a social network perspective
- Methodological innovations for studying social networks in learning and education (e.g. algorithms to describe and explain social and learning environments, combinations of different methodological approaches (e.g. Domínguez & Hollstein, 2014; Froehlich, 2016), etc.).
- Social networks of educational policy-makers (e.g. Ball & Junemann, 2012, Rhodes, 2000)
- Other topics within the above remit

Contributions from all fields (Education, Sociology, Computational Social Science, Psychology, Organisation Science, Anthropology, Statistics, etc.) are welcome, including interdisciplinary endeavours combining insights from educational or learning sciences with social network perspectives. The session welcomes research using qualitative, quantitative, and mixed methods.

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## The role of social networks to explain political behaviour and attitudes

Nadine Meidert (Zeppelin University)

A branch within political sociology examines individual political behaviour and opinion formation. Relevant research questions within this field are for example the following: Why do individuals vote? Which factors determine the individual vote for a special candidate or party? How do people participate in the political process? What influences the individual political opinion formation process?

Already in the 1940s, the so-called *Columbia school* focused on the meaning of influence and social interaction determining the individual vote decision in the presidential elections (Lazarsfeld et al. 1948; Katz and Lazarsfeld 1966; Berelson et al. 1968). Nevertheless, *rational choice* approaches were dominating the field a long time. Since the 1990s, studies in spirit of the *Columbia school* have emerged to a greater extent (e.g. Huckfeldt and Sprague 1993; Huckfeldt et al. 1995; Mutz 1992) and since the 2000s, studies focusing on the meaning of political discussions, social interactions, and various influence mechanisms are an essential component in the literature examining political behaviour and attitudes (e.g. Baldassarri 2009; Baldassarri and Bearman 2007; Scheufele et al. 2004; Beck 2002). In contrast to the early works of the *Columbia school*, recent studies benefit from the methodological progress and the availability of data from different sources.

The session welcomes both theoretical and empirical studies on the meaning of social interaction and influence in explaining political behaviour and political opinion formation. We also invite studies examining the role of (social) media within the interplay between social interaction and opinion formation.

**Keywords:** Political science, political sociology, influence, political discussion, political behaviour, voting, participation, public opinion formation, attitudes

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## Social Networks and Spatial Embedding

*Olaf Rank (University of Freiburg), Kerstin Sailer (University College London, UK)*

In recent years, research on social networks has begun to increasingly consider the contexts in which relational ties between actors are formed. Rather than just focusing on the relational structures of networks, the 'spatial turn' in the social sciences has finally reached network research, and questions of the spatial embedding of actors have gained momentum. However, an interest in spatial contexts is clearly not new: Georg Simmel for instance has contributed to our understanding of cross-cutting social circles and the spatial nature of these. In this essay on the modern metropolis he argues that spatial proximity in cities does not automatically result in social closeness. On the contrary, in our modern mobile society it seems that social networks of strong ties have increasingly 'stretched' across greater geographical distances, so that the lack of proximity does not necessarily mean ties cease to exist.

There is ample evidence for the importance of proximity on tie creation at various levels ranging from collaborative interactions among employees in multinational companies (MNCs) with subsidiaries and corporate entities all around the world to increased levels of interaction among co-located employees within single office buildings. However, independent from the specific level addressed, modern means of communication available today are likely to have altered the importance of spatial distance when interacting with others. In other words, employees can be expected to have become increasingly used to interact with colleagues and partners from other organizations independently from where their partners are physically located. This raises the question, whether spatial proximity between actors still plays the dominant role that extant research long has suggested. Instead, it could be argued that other forms of closeness among actors may step by step replace spatial proximity as a dominant driver of tie creation. In other words, whether or not actors are socially close (strong ties), physically close (proximity), or conceptually and psychologically close (homophily) creates multiple layers of complexities in network research.

With a focus on intra-organizational networks and the multi-layered geographies of proximity, we propose to highlight existing and potential future research at the intersection of social networks, organizational science and architectural research. We invite submission that address the relationship between different types of closeness (i.e., spatial, social, and psychological) on the embeddedness of individuals in social networks. Submissions may address but are not limited to the following research questions:

- Does the importance of spatial proximity vary systematically with scale? In other words, are the impacts of spatial proximity the same for local, regional, or even global social networks?
- To what extent do different types of closeness interact with respect to their effect on the tie creating behavior of employees?
- Are there any temporal relationships between the different types of closeness? In other words, may a specific type of closeness represent an antecedent to another, which ultimately influences actors' embeddedness in social networks?
- Has the importance of the different types of closeness changed over time? What are the drivers of these changes?
- What are organizational strategies to counteract the potentially negative effects different forms of distance may have on employees' tie creating behavior?



## Negative Ties and Signed Graphs

*Patrick Doreian (University of Ljubljana and University of Pittsburgh), Alexandra Gerbasi (University of Surrey), Giuseppe (Joe) Labianca (University of Kentucky), Joshua Marineau (North Dakota State University), Károly Takács (MTA TK "Lendület" Research Center for Educational and Network Studies (RECENS), Budapest), Filip Agneessens (University of Surrey)*

Researchers are now increasingly aware of the co-existence of positive and negative ties in networks and the need to study them together so as to get a more accurate portrait of the networks' contents and dynamics, as evidenced by an upcoming special issue on the topic at Social Networks journal. We invite abstracts for presentations on all aspects of studying signed networks, including theory, methods, and applications, to one or more sessions at the upcoming 3rd European Conference on Social Networks (EUSN) at the Johannes-Gutenberg-University in Mainz, Germany.

We encourage a wide range of submissions. Example works includes (but are not limited to): Methods and measures pertaining to negative ties and signed graphs; understanding how threats within a network create needs for allies, and the implications for nodal power; examining where bullying emerges in schools or organizations; how perception of negative ties poses unique challenges in organizational research; and how subgroup fault lines affect intra- and inter-group conflict.

Please submit your abstract by March 31, 2017, and limit your abstract to 250-500 words.

During the submission process, please place a note referring to "Negative Ties and Signed Graphs" sessions.

The conference website (<http://www.eusn2017.uni-mainz.de/>) provides additional information.

We look forward to your submissions.

## Sport and Networks

*Raphael Heiberger (University of Bremen), Tom Töpfer (University of Bremen)*

Sport is a phenomenon that touches almost all members of society and can be viewed from very different angles. So far, only little work has been conducted on sport using a social network methodology even though social network analysis (SNA) might be used to explore many interaction processes of and within sport teams: Intra group relations of team members, game situations (e.g. passes, assists) as well as relations to opponents can give us fundamental insights in cooperation strategies and group-constituting mechanisms of sport teams and organizations. Players share attributes, experiences or backgrounds, relating to basic network questions of, for instance, homophily. Besides the game itself, sport can be regarded as a field of inter-organizational relations. Athletes as well as clubs are interconnected with their environment and have relations to other sport organizations, associations, sponsors, fans, the government or agents. SNA can be applied to analyze these organizational relations, enlighten managerial recruitment strategies or supply networks of sport actors.

The many subject areas of sport research provide various fields of application using a SNA conceptual orientation or methodological techniques. Especially in the light of current debates on processes of globalization, professionalization, medialization, technization, economization or individualization within sports we are looking for contributions that investigate sports with a social network perspective. As sport research is an interdisciplinary area we like to invite scholars with multiple backgrounds and from different disciplines like medicine, history, sociology, management and economics, media science, education, psychology or computer science. We welcome abstracts within sport research that explore, illustrate and analyze ego networks, whole networks, two-mode networks or social capital with an empirical or theoretical emphasis.

### **Abstract Submission:**

Please hand in your abstract via the conference management system CONVERIA (<http://www.eusn2017.unimainz.de/abstract-submission/>) and indicate the name of the session: "Sport and Networks". Abstract submission deadline is March 31.

## Multilevel Network Perspectives in and around Organizations: Theory, Structure and Dynamics

*Spyros Angelopoulos (Università della Svizzera italiana), Francesca Pallotti (University of Greenwich), Paola Zappa (Università della Svizzera italiana)*

The multilevel nature of organizations creates a complex ecosystem where individuals, groups, units, practices as well as other organizations are entangled. Such entanglement shapes organizations in a dynamic way, and affects organizational outcomes at multiple levels. This session focuses on recent advances in modeling and understanding networks in and around organizations from a multilevel perspective. We welcome both theoretical as well as empirical contributions that address the various aspects and implications of the multilevel nature of networks. We are also interested in presentations of software development in this area.

Possible examples of networks include, but are not limited to the following:

- Corporate networks
- Communities of practice networks
- Entrepreneurial networks
- Innovation networks
- Collaboration networks Investments networks Online networks
- While a non-comprehensive list of perspectives is:
  - Multilevel network analysis
  - Multilevel analysis of networks
  - Dynamics of Multilevel networks
  - Diffusion processes in multilevel networks

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- Multilevel network analysis
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- Diffusion processes in multilevel networks

## Varieties of Qualitative Perspectives in Social Network Analysis

*Stefan Bernhard (IAB), Andreas Herz (University of Hildesheim), Luisa Peters (University of Hildesheim), Inga Truschkat (University of Hildesheim)*

Qualitative approaches in Social Network Analysis (SNA) are a rapidly growing field of expertise. A variety of methodological traditions and theories inspire this research, including conversation analysis, ethnography, small story research, field theory, social world theory and interactionism. In empirical studies diverse qualitative methods are applied and different kinds of data are taken as qualitative data material including interviews, observations and visualizations. Fundamental to the qualitative approaches is a close entanglement of theory and method in the sense of a methodical holism. Their internal coherence is essential since theoretical assumptions orient methods and vice versa.

In this session we want to engage in a discussion on how different traditions and schools of thought orient qualitative research on social networks. We invite participants to present their empirical approaches and to discuss how they integrate theory, methodology and method in their research.

Contributions may tackle questions such as the following:

- How do qualitative methodical procedures relate to methodological and theoretical positions and how can they be integrated for analyzing social networks?
- What do the various strands of qualitative research offer for the analysis of social networks?
- What are the comparative (dis-)advantages of different qualitative perspectives (such as narrative inquiry or ethnography) for analyzing social networks?
- How do we integrate qualitative research strategies with perspectives taken from (quantitative) structural analysis and how can this be done in a theoretically and methodologically consistent manner?

## The relevance of space, distance and mobility for egocentric networks

*Sören Petermann (Ruhr-University Bochum)*

Spatial locations of social actors are meaningful in shaping social networks. The geography of actors, spatial distances between them, as well as mobility of actors are opportunities or constraints for egocentric networks. Even though, analysing spatial aspects is not new to social network research, some contemporary debates and thoughts in the social sciences might enhance the repertoire of spatial analysis of social networks. For example, distance might be an irrelevant constraint in network formation due to the rise of modern transport and communication technologies. The mobility of actors extends the feasible set of contacts and partners but restricts the opportunities for more in-depth network ties. Another examples are increasing personal and economical inter-relations due to Europeanization and globalization. Furthermore, there is a turn from place-related to space-related approaches in spatially oriented social sciences in recent years. Steering towards relational concepts of space can and should be fruitful for social network research.

The session aims to discuss theory-driven empirical research on spatial connections in research related to personal or egocentric networks. Presentations should address places as foci for network formation, spatial distance as instances of inclusion and exclusion in social networks, relevance of mobility for social networks, consequences of modern transport and information technologies in shaping and maintaining social networks, border-cutting and transnational ties, and worldwide connections of people or organizations.

## Modeling Network Dynamics

*Tom A.B. Snijders (University of Groningen; University of Oxford), Christoph Stadtfeld (ETH Zürich), James Hollway (Graduate Institute of International and Development Studies, Geneva)*

Important insights into social networks can be obtained with the help of longitudinal observation designs. Such designs can be of a varied nature. Panel data is the structure used traditionally for self-reported networks; regular time series and time-stamped data can be obtained from official or automatic records; but this does not exhaust the types of longitudinal network designs. Corresponding to these differences in data collection, a variety of longitudinal methods of analysis have been developed, such as continuous-time actor-oriented and tie-oriented models for panel and time series data, network autoregressive models for time series at regular intervals, and network event models for data with a fine-grained time resolution. Some of these methods are based on actor-oriented models, others on tie-oriented models.

This session will be open to methodological as well as applied presentations about models for network dynamics. Papers can have a mathematical, statistical, theoretical, or empirical subject-matter focus, as long as they are relevant for empirical social science.

**Keywords:** network dynamics, longitudinal networks, actor-oriented models, network event models, Dynam, LERGM, TERGM, Siena, relevant, goldfish.

## Social Influence

*Tom A.B. Snijders (University of Groningen; University of Oxford), Christian E.G. Steglich (University of Groningen)*

A central topic in social network analysis is the issue of social influence. The empirical study of influence using longitudinal network-and-behavior designs has become more and more important with the availability of methods, software, and data; this has also led to deeper and more extensive research questions. A large portion of network research in this area has been about peer influence, often applied to adolescents' friendship networks, where a basic question is to distinguish between peer influence and peer selection. There are a lot of other topics concerned with influence; for example, influence between organizations, where influence based on equivalence (ties to similar others) has been proposed in some cases to be theoretically better justifiable than influence based on cohesion (direct ties). The question about who in a network influences whom is still a very open question. But questions of influence are not restricted to network-and-behavior studies. Network-network influence, where one network defines what is the relevant basis for influence being exerted, and the other network indicates what is being influenced, is also an important structure, such as for co-evolution studies of friendship, dislike, and bullying; and for activities (that are being influenced) represented in a two-mode network.

This session will be open to methodological, theoretical, and empirical studies of influence in social networks. Papers can be mathematical, statistical, theoretical, and/or empirical in their focus, as long as they are relevant for empirical social science.

**Keywords:** social influence, contagion, diffusion, selection and influence, co-evolution, socialization, multiplex networks, two-mode networks, Siena

## Network Science & Law

*Wolfgang Alschner (University of Ottawa, Canada), Urška Šadl (European University Institute, Florence, Italy), Fabien Tarissan (CNRS, University Paris-Saclay, France)*

Scholars from a variety of disciplines increasingly use network analysis to study law and courts. Still, the diversity of the methods applied is overwhelming and the value of the approach compared to traditional legal research remains difficult to assess. In this session we aim at exploring the promises and perils of a network analysis of law, combining insights from legal scholarship and perspectives from computational social sciences.

In particular, we are interested in studies analyzing the networks of those **who participate in the making of the law**, that is the (social) networks of counsels, judges or law-making states or institutions. Possible questions includes:

- Lawyers, judges and lawmakers are often perceived as societal elites. Is that reflected in the networks they form? How susceptible are these networks to change?
- Are institutional barriers or biases entrenched in legal networks?
- How do ideas and expertise diffuse through legal networks?

We are also interested in studies exploring the web of law, that is networks composed of norms, articles, bills and treaties linked through explicit or implicit references. In that perspective, possible topics can be:

- What are explicit (e.g. cross-references) and implicit (e.g. semantic) ties between legal documents and how can they be measured? What do they tell us about the law or lawmaker?
- How the language of courts, through implicit citations, can reveal its perception of legal concepts?
- How do courts differ in their use of citations? What explains these differences?
- What makes a case important in law? How can we use citation networks to identify such cases or search for relevant precedent?
- Can citation networks reveal how law develops, changes and adapts to its context?

The session welcomes both theoretical work and empirical studies of network theories and social network analysis to any question related to the legal domain such as the ones suggested above.



## Contemporary Research in Social Network Analysis (Open Sessions)

*Marina Hennig, Katharina Kunißen (Johannes Gutenberg University Mainz)*

The open sessions cover different areas of social network analysis. The focus is not on specific issues but on an illustration and discussion of contemporary research in the field. In the sessions, we would like to highlight the contribution of social network analysis to tackling challenges in various spheres of contemporary society.

Presentations may address specific research questions, illustrate results, reflect methods or introduce research projects. We especially invite contributions with an innovative and/or critical perspective.

Depending on the number of suitable submissions, we will offer two or more open sessions.

Please specify up to three keywords at the beginning of your abstract.