Relational Spatial Methods 16.-17.09.2022













CRC 1265 Re-Figuration of Spaces - Technische Universität Berlin • Universität Potsdam • Université Paris Saclay

Organisers: Séverine Marguin, Christian Schmidt-Wellenburg, Hannah Wolf

Space is a central concept for the analysis of both reproduction and change of social phenomena, acknowledging that these processes always involve the refiguration of socio-spatial orders (Löw/Sayman/Schwerer/Wolf 2021). The jux-taposition of territory and place, as modernity's spatial 'idée directrice', has been complemented by spatial figurations such as networks, trajectories, fluid space, amongst others (Löw 2020; Mol/Law 1994). However, there is no consensus on how to analytically scrutinize socio-spatial processes nor which methodologies and methods to apply. This lacuna calls for methodological reflection and development (Baur et al. 2014). The conference will contribute to these methodological discussions by bringing together researchers from different theoretical standpoints applying relational methods in research projects with a spatial dimension in order to discuss their respective potentials.

The focal questions of this conference, pertinent in current socio-spatial debate, are:

- (1) How can we consider geographical and material dimensions of space in quantitative and mixed methods analyses beyond a mere metaphorical use of notions of social space?
- (2) In what way can we go beyond the documentation of the territoriality of space and analytically take into account the spatiality of sociality and social processes?

As organisers of the conference and the summer school "GDA and SNA – Relational Spatial Analysis", we are particularly interested in the discussion of the potentials of geometric data analysis and social network analysis in relation to other spatial methods such as GIS, mapping, or cartography. We see GDA and SNA especially well equipped to give exciting impulses to bridge at least three common methodological gaps. First, both GDA and SNA call for the methodological and practical integration of qualitative and quantitative methods. Second, both methodologies bridge disciplinary boundaries due to their anchoring in a variety of social sciences such as sociology, political science, communication studies, social and human geography, as well as gender and migration studies. Third, both perspectives advocate research designs that reflexively interrelate statistical–mathematical procedures, qualitative–interpretative understanding and visual–spatial representations, allowing for mutual irritation, creative insight and more encompassing analyses.

References

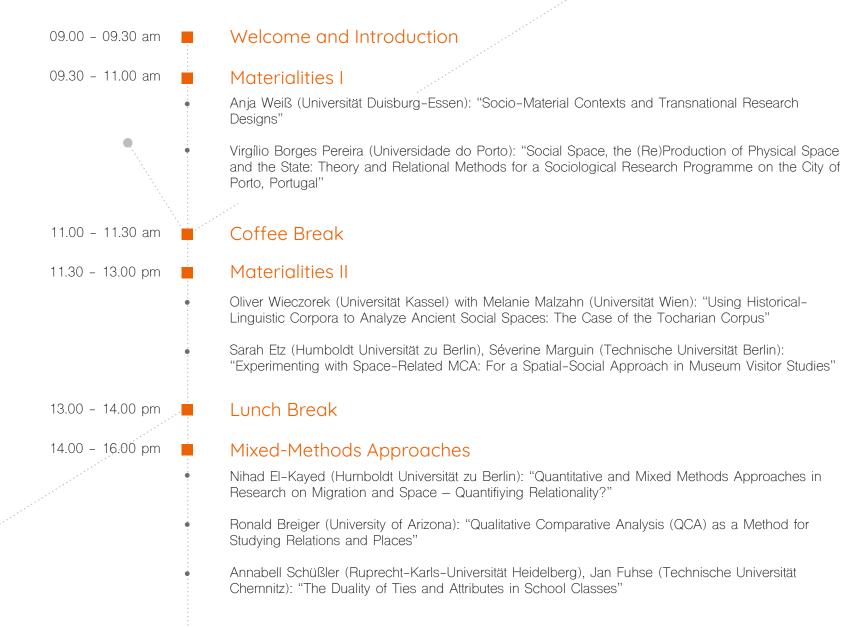
Baur, N., Hering, L., Raschke, A.L. & Thierbach, C. (2014). Theory and Methods in Spatial Analysis. Towards Integrating Qualitative, Quantitative and Cartographic Approaches in the Social Sciences and Humanities. Historical Social Research 39(2), 7-50.

Löw, M. (2020). In welchen Räumen leben wir? Eine raumsoziologisch und kommunikativ konstruktivistische Bestimmung der Raumfiguren Territorialraum, Bahnenraum, Netzwerkraum und Ort. In J. Reichertz (Hrsg.), Grenzen der Kommunikation – Kommunikation an den Grenzen (S. 149–164). Velbrück.

Löw, M., Sayman, V., Schwerer, J. & Wolf, H. (Hrsg.) (2021). Am Ende der Globalisierung. Über die Re-Figuration von Räumen. Transcript.

Mol, A., & Law, J. (1994). Regions, Networks and Fluids: Anaemia and Social Topology. Social Studies of Science 24(4), 641-671.

FRIDAY



16.00 - 16.30 pm Coffee Break

16.30 - 18.00 pm Computational Social Methods

Andreas Schmitz (Universität Bonn; GESIS): "Reconstructing the Social Space in the Digital Realm – From Practical Problems and Methodological Considerations to Theoretical Advancements"

Annie Waldherr (Universität Wien), Daniela Stoltenberg (Freie Universität Berlin), Daniel Maier (German Cancer Consortium), Alexa Keinert (Freie Universität Berlin), Barbara Pfetsch (Freie Universität Berlin): "Translocal Networked Public Spheres: Spatial Arrangements of Metropolitan Twitter"

from 18.00 pm Get together in a Berlin beergarden

SATURDAY

09.00 - 10.30 am

Application Field I: Sociology of Science

Kristoffer Kropp (Roskilde Universitet): "National Differences and Transnational Communalities - Studying Homologies between Fields Using Topic Modeling and MCA"

Christian Schmidt-Wellenburg (Universität Potsdam): "French Economists and the Symbolic Power of Post-National Academic Capital: Transnationalizing National Academic Spaces?"

Coffee Break 10.30 - 11.00 am 11.00 - 13.00 pm Application Field II: Global Inequalities Michael Storper (London School of Economics; University of California): "Frontier Work and the Long Run Geography of Inequality" Jan Goebel (DIW Berlin), Maria Norkus (Technische Universität Berlin), Nicole Oetke (Technische Universität Berlin): "Conceptualizing and Operationalizing the Spatiality of Inequality Beliefs" Emanuel Deutschmann (Europa-Universität Flensburg): "Roads, Rails, and Checkpoints: Assessing the Permeability of Nation-State Borders Worldwide" Lunch Break 13.00 - 14.00 pm 14.00 - 16.00 pm Application Field III: Research on Elites Mike Savage (London School of Economics): "'The Life and Times of Field Analysis" Thierry Rossier (London School of Economics; Université de Fribourg): "Effective Agents in the Field of Power. How the Swiss Elite Core Evolved between 1910 and 2000?" Christoph Ellersgaard (Copenhagen Business School): "How to Compare the Social Backgrounds of the Economically Powerful? Preliminary Results from the World Elite Database (WED)"

Abstracts

Qualitative Comparative Analysis (QCA) as a Method for Studying Relations and Places

Breiger, Ronald (University of Arizona)

One of the most promising and highly influential strategies for moving beyond the unfortunate dichotomy of "qualitative" vs. "quantitative" analyses is the Qualitative Comparative Analysis (QCA) approach developed by Charles Ragin. As Cairns et al. (2017, doi: 10.1111/AREA.12327) point out, a major benefit of QCA is that it can handle complexity by exploring different pathways that generate the same outcome, which is useful for much spatial and place-based research. The basic argument put forward in this presentation is that how QCA works—the mechanism of the method—is closely and informatively related to techniques of two-mode data analysis, including lattice analysis, geometric data analysis (GDA), and two-mode network analysis. The benefit for QCA includes new and helpful search procedures for discovering multiple QCA solutions that identify key configurations of variables while also indicating the sets of cases for which each configuration is relevant. In this talk I illustrate these contentions by means of reanalysis of several datasets that have previously been studied by developers of QCA, including a study of how qualities of places influence health resilience, and a study of comparative success of left-libertarian parties in eighteen established democracies.

Roads, Rails, and Checkpoints: Assessing the Permeability of Nation-State Borders Worldwide

Deutschmann, Emanuel (Europa-Universität Flensburg), with Lorenzo Gabrielli (Consiglio Nazionale delle Ricerche Pisa), Ettore Recchi (Sciences Po, CNRS Paris), Michele Vespe (European Commission, JRC Ispra)

The permeability of nation-state borders determines the flow of people and commodities between countries and has thus enormous influence on many aspects of human development from trade, economic inequality, and security to migration and the ethnic composition of societies globally. While past research on the topic has focused on border fortification (walls, fences, etc.) or the legal dimension of border controls, we take a different approach. We argue that transport infrastructure (paths, roads, railroads, ferries) together with political checkpoints can be used as valuable indicators for the permeability of borders worldwide: More (and better) transport infrastructure increases permeability,

whereas checkpoints create political capacity for reducing it. Using automatized computational methods combined with extensive manual checks, we parse data from OpenStreetMap, Harvard WorldMap and the World Food Programme to detect cross-border transport infrastructure and checkpoints. Based on this information, we define an index of border permeability for 312 land borders globally. Subsequent analyses show that independently of degree of closure enforcement at checkpoints, Europe and Africa have the most permeable and the Americas the least permeable borders worldwide. Regression models reveal that border permeability is higher in densely populated areas and that economic development, by far the most relevant explanatory factor, has a curvilinear relationship with border permeability: Borders of very rich and very poor countries are highly permeable, while those of moderately prosperous nation-states are significantly harder to cross. Implications of this remarkably clear pattern are discussed.

Quantitative and Mixed Methods Approaches in Research on Migration and Space – Quantifying Relationality?

El-Kayed, Nihad (Humboldt Universität zu Berlin)

Migration is a process of movement in and through space(s) — most commonly defined as moving from one national context to another. Connected to this is the question of how this migration process affects the social chances and status of migrants and their descendants at their new place of residence — including how they achieve access to crucial resources. Studies examine this question on various spatial scales — national, regional, or local — and often operate with the assumption of a container space (Wimmer/Glick Schiller 2003), meaning inter alia that they research social processes, people and social relations as if they were 'naturally' bound to national, regional or local spatial boxes. This is especially the case in quantitative studies as they rely on clearly defined spatial boundaries and it is often difficult to operationalise aspects like fuzziness, overlap, movement, patterns of mobility, or other kinds of relations between different locations, or places. Nonetheless, there are a number of approaches that try to go beyond these typical limits of quantitative studies. This presentation reviews different approaches that a) research the effect of place or spatial configurations on resource access or social inequality quantitatively, and at the same time b) try to overcome the typical limitations of quantitative approaches regarding relational conceptions of place and space, either by extending the capacities of quantitative frameworks or by using mixed methods.

How to Compare the Social Backgrounds of the Economically Powerful? Preliminary Results from the World Elite Database (WED)

Ellersgaard, Christoph (Copenhagen Business School) with Paul Lagneau-Lymonet (Paris Dauphine)

The World Elite Database (WED) consists in a unified conceptual framework, shared methodological skills and interoperable datasets. WED allows social scientists to formalize the empirical layout of power inequalities and elite formations situated in time and space as comparable structures, i.e. systems of dissymmetric relations between unequal positions to which organizational and individual characteristics are commonly attached. By systematically comparing the forms of differentiation, the principles of hierarchy and the modes of coordination that characterise national power structures, WED provide empirical arguments to answer this crucial question for academics, policy–makers and activists: is there a relationship between the main features of national power structures and the contemporary legitimacy crisis of those who exercise that power? Christoph Ellersgaard (Copenhagen Business School) will first present the WED infrastructure and then provide preliminary results on the social backgrounds of the economically powerful in 12 countries.

Experimenting Space-Related MCA: For a Spatial-Social Approach in Museum Visitor Studies

Etz, Sarah (Humboldt Universität zu Berlin), Séverine Marguin (Technische Universität Berlin)

Museum spaces and exhibition design follow a long history of established spatial and aesthetic arrangements inscribing cultural values. However, visitor experience and reception has long been analyzed by its social but rarely by its spatial contingency. With focus on a science exhibition in Berlin, we investigate the role of museum space using an experimental mixed-methods-approach with which we seek to combine a social-spatial perspective: in three different architectural settings of the same museal space, we conducted a) a movement tracking of the visitor paths through the exhibition; b) a standardized visitor survey including, besides basic social-demographic data, their perception and practices of the museal space; and c) ethnographic observations of visitors within the exhibition. We integrated these heterogenous data in a space-related multiple correspondence analysis (MCA) and distinguish different groups of visitors according to their spatial knowledge and spatial practices of museum space.

Conceptualizing and Operationalizing the Spatiality of Inequality Beliefs

Goebel, Jan (DIW Berlin), Maria Norkus (Technische Universität Berlin), Nicole Oetke (Technische Universität Berlin)

Despite social inequalities rising, citizens' attitudes and policy preferences towards them vary considerably. Some previous work suggests that an individual's beliefs about and their personal experiences with social inequalities impact their attitudes and preferences towards them, with those believing in meritocracy and reporting fewer experiences with inequalities in their everyday lives being less supportive of redistributive policies (García-Castro et al. 2020). Overall, however, results regarding inequality beliefs are mixed, partly due to variations of the context factors included (Mijs 2018). Relatedly, space has seldom been considered and even then only in terms of a singular container space, such as the neighborhood (Minkoff/Lyons 2019). Arguably, a nuanced understanding of urban (and rural) spaces is required to grasp how individuals form inequality beliefs. Therefore, we will discuss how the formation of inequality beliefs within and across spaces can be understood and conceptualized by drawing on previous work on inequality beliefs and the spatial figures developed within the CRC (Löw/Knoblauch 2021). To do so, we will explore how individuals form beliefs about the causes of inequalities based on their experiences within and across trajectories, networks, and places, relative to their respective composition (Mijs 2018). Moreover, we will examine how these concepts can be operationalized for a quantitative analysis based on a combination of geographical data and survey data drawn from the German Socio-economic Panel (SOEP) and provide preliminary considerations regarding possible analytical strategies for the combined analysis of these data sources.

National Differences and Transnational Communalities - Studying Homologies between Fields Using Topic Modeling and MCA

Kropp, Kristoffer (Roskilde Universitet)

Social studies of economics have been dominated by case-oriented approaches. With this paper we suggest and show the advance in adding a quantitative field theoretical approach. More concretely we outline a perspective studying economics as a social field by focusing on the homology between research topics and the resources and characteristics of their authors. We focus on the Swiss case, where the discipline is highly internationalised and integrated into national elite networks. Our study relies on the combination of two data sources: The Swiss National Science Foundation (SNSF), which provides abstracts of funded projects since 2008, and the Swiss Elite Database, which contains extensive prosopographical data on all tenured economics professors in the Swiss universities. In a first analytical part, we build the space of topics based on n=637 abstracts through a topic modelling technique (Latent Dirichlet Allocation. We identify a set of recurring topics, which are then projected into a geometric space through multiple correspondence analysis. We identify three main factors of differentiation between topics: 1) financial market vs. research in labour and behaviour economics topics; 2) macroeconomics vs. microeconomics topics; and 3) public economics vs. labour

economics topics. In a second part, we map the most frequent used terms in relation to the profiles of the n=647 applicants (including n=156 economics professors). Our findings highlight a homology between the space of topics and the space of individual positions. Research in macroeconomics is linked to scientific and academic prestige, unlike microeconomics topics. Other individual properties and resources, such as related to public expertise, corporate networks, or gender, are linked, respectively, to the study of state and public concerns and market surveillance, corporate governance, and gendered inequalities at the workplace. This article provides an original and reproducible quantitative and computational approach that will help us expand social studies of economics and history of economic thought to new and promising research avenues.

Social Space, the (Re)Production of Physical Space and the State: Theory and Relational Methods for a Sociological Research Programme on the City of Porto, Portugal

Pereira, Virgílio Borges (Universidade do Porto)

The relational and comprehensive sociological investigation proposed by Pierre Bourdieu in "Distinction" allowed, through the concept of social space and the analytical framework it calls upon, to reframe the way in which social classes are sociologically conceived, among other implications. Although it is not always remembered when discussing the sociological legacy of Bourdieu's work, the relationship with the socially produced and appropriated physical space is inscribed in this author's conceptualisation of social space. Together with other analytical relations, such as the one that refers to the relevance of the bureaucratic field and the state field in the definition of social space and of the socially produced and appropriated physical space itself. Bourdieu's sociological work can thus be mobilised for the development of in-depth theoretical-empirical research in each of these specific fields and their respective relations. Exploring the implications of this sociological work, over the last two decades I have been developing in the city of Porto, and in adjacent alternative contexts in northwestern Portugal, a research programme that places social space at the centre of the research agenda and in different modalities. With recourse to geometric data analysis and extensive ethnographic work informed by that methodology, in different waves of enquiry and within the framework of specific problematisations, it has been possible to demonstrate the heuristicity of the concept of social space, opening lines of analysis and producing bodies of substantive results. In this presentation I propose to reconstitute the theoretical and methodological work that has been developed in this regard and demonstrate the analytical potential associated with it, recovering, among already published research and research in progress, fundamental analytical milestones that account for the research potential contained herein.

Effective Agents in the Field of Power. How the Swiss Elite Core Evolved Between 1910 and 2000?

Rossier, Thierry (London School of Economics; Université de Fribourg)

Elites can either be seen as a coordinated homogeneous "class" or as a heterogeneous and conflictual group. First, different elites, identified through their position at the top of the structure of the main institutional orders, coordinate through vast and complex organizational networks. At the very centre of these networks lays a multisectorial core, that sometimes takes the form of a "power elite" (Mills 1956), formed of the individuals who occupy key positions and take "important" decisions. The members of this very interconnected group are affiliated to a small number of institutions and share similar psychological and moral values. Second, elites own a variety of transferable capitals, resources and assets, which make them occupy a particular position in the social space and oppose to one another, among others according to the volume and composition of economic, cultural and social capitals they own. The dominant individuals of all fields are organized into the field of power (Bourdieu 1996 [1989]), where the specific capital of the field confers power over the various kinds of capital. In this field, the effective agents (Bourdieu 2005 [2000]) detain and exert this form of capital. Through their multi-positionality they bind various fields and act as brokers in the negotiation of the relative strength of different forms of power. In this sense, we argue that the elite network's core and the effective agents of the field of power mostly overlap and are composed of the same individuals.

We build upon a collective prosopographical project on Swiss elites identified through their institutional affiliation to the main sectors of power (politics, state administration, expert committees, companies and business associations, unions, academia, other interest associations, and the military generals) on five historical cohorts for a total of 1,832 institutions and 14,784 individuals. We follow a two-step analytical strategy. First, through a slightly modified version of a methodology used to study Danish elites (Larsen/Ellersgaard 2017), we apply to each of the five networks a k-shells decomposition procedure and identify the Swiss elite network's core for each date (n: 1910=76, 1937=103, 1957=211, 1980=197 and 2000=96). We are able to show the changing composition of the core of the network in terms of proportions of the main sectors represented as well as gender, geography, language, age, social background (through father's occupation), family ties within the elites, diplomas and international ties. Second, through a certain number of effective resources measured through economic integration, cultural certifications, network indicators, careers and inherited assets, we establish the main oppositions among those effective agents in the field of power by means of multiple correspondence analysis. Preliminary results show that the integration to the economic order, related to a large amount of inherited and organizational economic capital, increase in importance during the historical period, while cultural certifications and other forms of cultural capital are becoming less central in structuring the field.

The Life and Times of Field Analysis

Savage, Mike (London School of Economics)

Mike Savage will review the success of Bourdieu inspired field analysis during the past twenty years in re-invigorating the analysis of social stratification and inequality, notably in providing a methodologically rigorous way of transcending variable-based demographic studies, and in being attuned to the need to link cultural and structural analyses. Mike will reflect on the value of MCA methods in allowing the consolidation of this work, but will then reflect on his arguments from his recent 'The return of inequality' to draw out the need for an historical analysis of field development and also possible decline with capital accumulation. Drawing on his recent research on UK 'non-domiciled' tax payers, he will explore how transnational connections require a more temporally informed rendering of field analysis.

French Economists and the Symbolic Power of (Post)National Academic Capital

Schmidt-Wellenburg, Christian (Universität Potsdam)

Academic economists regularly engage in public debates over the current state and future of the economy, economic policy and economics as a discipline. In France, following the 2008 world economic crisis, this public engagement lead to a surge in open letters, signed editorials for presidential candidates and the founding of new economic associations. Such position–takings are political in more than one way: Opting for more 'international', 'transnational' and 'global' conceptions or more 'national' solutions are stakes in struggles over the economy and its regulation as well as stakes in struggles over academic hierarchies, symbolic weights and material impacts of economists' differing academic practices. The paper argues that economists' discursive position–takings should be understood with respect to their positions in the field of economists, especially as regards the relative national or post–national anchorage of such positions.

This hypothesis is investigated using a prosopographic dataset of 144 selected French economists engaging in controversies over the EURO and Eurodebt, the French political-economic model, and/or French economics as discipline. A dataset is constructed from publicly available curriculum vitae information in order to trace engagement in crisis controversies and to depict the academic context of those engaged. Multiple correspondence analysis is then used to (re)construct a field of economists: This allows to lay open the field's hierarchies, the diversity of its academic practices, and its linkages to other fields, making it possible to locate the influence of national and different post-national forms of academic capital. In an adjoint step, position-takings are passively projected onto the reconstructed field uncovering correspondences between different position-takings and between discursive positions and field-positions. It is shown that different forms of post-national academic capital are used to initiate change as much as to defend the status quo in the field, but always strategically according to the economists' positions.

Reconstructing the Social Space in the Digital Realm – From Practical Problems and Methodological Considerations to Theoretical Advancements

Schmitz, Andreas (Universität Bonn; GESIS)

In this paper, I discuss insights gained from an ongoing cooperative project in the field of computational social sciences (a sociological reconstruction of Reddit as space) as well as previous works that applied Bourdieu's theory and methodology to digital interaction and communication contexts (online partnership formation). The recourse to the Bourdieusian paradigm is based on the interplay between theoretical considerations and empirical observations so that informative questions can be addressed to the empirical material (digital interactions, communications, and text). This, however, requires fundamental methodological and methodical (re)considerations concerning the selection and preparation of categories, the appropriate type of geometric modelling, dimensionality, iterative construction, and the crucial role of interpretative and reconstructive operations. In the spirit of the collective continuous consolidation and refinement of Bourdieu's theoretical apparatus, this approach enables us to propose a series of considerations concerning the further development of fundamental theory and methodology.

The Duality of Ties and Attributes in School Classes

Schüßler, Annabell (Ruprecht-Karls-Universität Heidelberg), Jan Fuhse (Technische Universität Chemnitz)

Our research addresses the questions: What kinds of ties form between what kinds of school children, and how do different kinds of ties relate to each other? We examine a network survey in ten school classes with 205 students that cover a wide range of individual attributes and network ties. These include friendships in general, but also whether the students would want to collaborate in mathematics and in sports settings, and how they see each other's motivations and capabilities. We also have data on foci-of-activity outside school like shared neighborhood and leisure activities. This allows us to examine the interrelations between different kinds of network ties statistically, but also what kinds of ties form between students with what attributes, and around which foci. Since we do not expect monocausal relationships, we conduct multiple correspondence analysis with directed network ego-alter ties as cases. These are analyzed with regard to the correspondence between kinds of network ties. We interpret these correspondences as parts of the "phenomenology" – how do different kinds of relating correspond to each other? These are secondly analyzed with regard to which kinds of ties are influenced by which kinds of attributes, attribute combinations (e.g., same-sex and cross-sex relations) and foci-of-activity. The resulting two-dimensional space reflects the rules for tie-formation around attributes and social space (opportunities for contact).

Frontier Work and the Long Run Geography of Inequality

Storper, Michael (London School of Economics; University of California) with Dylan Connor (Arizona State University), Tom Kemeny (Queen Mary, University of London)

In recent decades, after a long period of decline, income inequality between people and between places in the United States has steadily risen. This paper considers the role of new types of work in driving these forms of inequality. Over a period spanning 120 years, we explore the nature and geography of 'frontier' work — the new work that is most tightly linked to key new technologies. Using full count and public use extracts of the Decennial Census and American Community Survey between 1900 and 2019, we create and apply new routines to identify frontier workers, and then analyze their role in the labor market, and their shifting geography. Frontier work tends to be well remunerated and distinctively geographically concentrated in initial decades of its existence, and through this it contributes to rising spatial and interpersonal inequality. As technologies mature, related frontier work may lose its distinctiveness, reducing both its wage premiums and spatial concentration, as happened ultimately to cities such as Manchester and Detroit. Subsequently, new centers that concentrate new waves of highly-paid frontier work eventually arise. Identifying the geographies of new frontier work contributes to finding the 'origin story' of how episodes of the spatial polarization of earnings unfold.

Translocal Networked Public Spheres: Spatial Arrangements of Metropolitan Twitter

Waldherr, Annie (Universität Wien), Daniela Stoltenberg (Freie Universität Berlin), Daniel Maier (German Cancer Consortium), Alexa Keinert (Freie Universität Berlin), Barbara Pfetsch (Freie Universität Berlin)

In this study, we theoretically conceptualize and empirically investigate translocal spatial arrangements of networked public spheres on social media. In digital communication networks, actors easily connect with others globally, crossing the borders of cities, nations, and languages. However, the spatial notions evoked in public sphere research to date remain largely territorial. We propose a theoretical framework drawing on Low's (2016) sociology of space which highlights the relational and translocal nature of spatial arrangements. In a case study of the translocal interaction network of Berlin Twitter users, we demonstrate how this framework can be leveraged empirically using network analysis. Despite the overall network of Berlin's Twittersphere spanning the whole world, we find territorialized as well as deterritorialized translocal communities. This points to the simultaneity of territorial and networked spatial logics in digital public spheres.

Socio-Material Contexts and Transnational Research Designs

Weiß, Anja (Universität Duisburg-Essen)

Access to enabling contexts structures the capabilities of persons. An understanding of context relations and socio-spatial autonomy thus is necessary for the study of global inequalities (Weiß 2017), especially where notions of (inter)national container space fail to understand context relations.

The paper will start with a closer look at potentially transnational contexts and context relations. An abstract typology based on Simmel shows how some contexts make use of the territory, others are implicitly dependent on material infrastructures – and some are distinctly non-territorial in nature.

Understanding the social form of contexts and context relations enables us to – in a second step – discuss how research design can take account of territory-related context relations: Standard methods follow Simmel's ideal-type of "state" and focus on the location of body-persons in container spaces. I will shortly address methods that follow the ideal-type "city" by studying socio-material access to enabling contexts. The paper then presents ongoing research on the glocalization of professional medical knowledge in the project GloPro that was guided by Simmel's ideal-type "guild".

GloPro studied citation networks and their impact on explicit professional knowledge in the form of (national) treatment guidelines (Liu et al. 2020). We also observed implicit professional knowledge in four university hospitals strategically chosen to maximize "guild-type" differences. By studying the impact of complex network relations from the perspective of "receiving nodes" the project's research design offers an alternative to the "following the linkages" approach.

Using Historical-Linguistic Corpora to Analyze Ancient Social Spaces: The Case of the Toharian Corpus

Wieczorek, Oliver (Universität Kassel) with Melanie Malzahn (Universität Wien)

Usually, methods of geometric data analysis and, in particular, of relational sociology are applied to questions that are located in the present or the near past. However, how society develops – in the classical Weberian sense – or to what extent there are aspects of culture that have been preserved (albeit transformed) over time, is naturally left out. Our contribution aims to move away from the present–tense of most sociological approaches and to show the potential of using such corpora for the historical analysis of social and physical spaces with the help of a historical–linguistic, multimodal corpus of the Tocharian language. These modern corpora, prepared with the help of data sciences and digital humanities, provide semantic annotations, links to sites, and image data alongside the text, which can be analyzed together using geometric data analysis methods. This in turn enables the analysis of the meaning of language as well as its linkage back to social roles, concrete locations, and socially constructed space.

First findings based on multiple correspondence analysis and network analysis show relationships between the literary testimonies found in the archaeological excavations (e.g. religious texts, prose), their sites, as well as the architectural design of addressed public spaces. Beyond the individual sites, persons and places are addressed in the archeological sources, which gives an insight into the emergence and formation of a society that emerged between today's China and today's India and had to find its place in social space.