FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 22, No. 2, Art. 21
May 2021

The Re-Figuration of Spaces and Comparative Sociology: Potential New Directions for Quantitative Research

Wolfgang Aschauer

Key words: sociology of space; spatial analysis; re-figuration of spaces; survey research; quantitative research

Abstract: In this article I deal with current re-figurations of spaces and the corresponding challenges for quantitative research. Potential new directions for quantitative research are central, firstly in the search for adequate units of analysis with reference to the macro level—where supranational dynamics are gaining importance in the course of globalization—, secondly with regard to relational spatial concepts—which take into account the importance of translocal living realities—, and thirdly concerning the micro level—where technological advances make it possible to incorporate fine-tuned spatial characteristics to develop a spatially integrated methodology. I analyze the potentials and limits of quantitative (survey) research by means of illustrative examples from the sociology of European integration, transnational migration research, and urban studies. Witnessing booming approaches in comparative sociology (from multilevel analysis and social network analyses to geo-referenced survey research), critical aspects in data interpretation should not be neglected. To grasp the dynamics of current re-figurations of spaces, there is always a need for theory-guided research. Due to the complexity of the re-figuration of spaces, openness to quantitative and qualitative research approaches is imperative in order to further develop spatially oriented research.

Table of Contents

1. The Re-Figuration of Spaces and Challenges for Quantitative Research

In this article, potential new directions for quantitative research capable of capturing the re-figuration of space are reviewed and supplemented with notable examples of how to deal with the ongoing complexity in the social world. Before starting this discussion, it is necessary to point out that the various methods used to address new conceptions of space are still in their infancy, although several techniques are available to move towards a spatially integrated methodology. As KNOBLAUCH and LÖW (2020) put it, "[o]nly a few studies in sociological research refer to the spatial structure of their objects of investigation. In other

words, spaces are seen as social, but society is not perceived as spatial" (p.264). In this contribution, I will particularly focus on the challenges to adequately grasp space in quantitative research. One important issue is defining adequate units of analysis, because different spatial layers are always intertwined (e.g., BAUR, HERING, RASCHKE & THIERBACH, 2014, p.15). Of course, we could always start with the focus of our analysis at the micro level or small areas and move on to broader conceptions of space. But in quantitative research, we generally aim for broader generalizations and comparability and thus we often strive for a comparison of cities, regions, nation states, supranational units, or even cross-cultural findings on a global scale. The main objective of this article is to present potential methodological strategies on how to adequately address the re-figuration of space at various levels and to enrich those potential methodological solutions with illustrative examples. Going top-down from the macro to the micro level, this article aims to provide several ideas on

1. how to deal with new cleavages between major European regions from a supranational perspective;
2. how to grasp emerging transnational spaces that span across classic units used for conventional container models of space such as the nation state, and
3. how to address certain re-figurations of space summarized as polycontexturalization, mediatization, and translocalization at the micro-level. [1]

According to KNOBLAUCH and LÖW (2020), these processes reflect the main dynamics changing the social conceptions of space. With "polycontexturalization" (p.277), the authors referred to LUHMANN (1997) and tried to frame heterogeneous communication processes at certain locations that interact with each other. This means, for instance, that different norms and cultural habits are active in parallel at a single location. Let us focus on the illustrative example of tourism. When we look at popular tourist districts in European capitals, we immediately witness this polycontexturalization. Local shops, the souvenir industry, and global retail chains provide a shopping experience for foreigners, such as tourists or immigrants, and local inhabitants frequenting the streets. [2]

The term "mediatization" (KNOBLAUCH & LÖW, 2020, p.277) refers to the co-presence of media cultures within local spaces that are visible in different cultures. New media play an increasingly significant role in our actions and communications and are able to interfere with those actions in the real world (HAHN & STEMPFHUBER, 2015). Coming back to the example of popular urban districts, the people strolling around those tourist destinations are able to find their way using certain apps on their smartphones, and they can simultaneously interact with their relatives and friends at home by sharing their experiences via messages or snapshots via WhatsApp and Instagram. [3]

The mediatization of the social world is thus a key feature of dis-embedding, which is a vital characteristic of late modern societies (GIDDENS, 1991). This strengthens the connection between people in a translocal way. Today, transnational fields with regard to political or economic elites, families, or religious

groups are an important reality, in which theories and ideas circulate and build strong ties between different locations (PRIES, 2010). Paradoxically, this exchange in the realm of globalization leads to a renaissance of locality at the same time (ROBERTSON, 1994), where certain groups remain tied down to their local roots. Accordingly, re-figuration may also result in fragmented publics that are no longer connected sufficiently. This cleavage is also prominently addressed by BAUMAN (2007), and may pose crucial challenges for social cohesion.

> "The secession of the new elite (locally settled but globally oriented and only loosely attached to its place of settlement) from its past engagement with the local populace, and the resulting spiritual/communication gap between the living spaces of those who have seceded and those who have been left behind, are arguably the most seminal of the social, cultural and political departures associated with the passage from the 'solid' to the 'liquid' stage of modernity" (pp.78-79). [4]

These introductory remarks clearly demonstrate that polycontexturalization, mediatization, and translocalization (KNOBLAUCH & LÖW, 2020) are susceptible to certain ambiguities. The mobility paradigm (SHELLER & URRY, 2006) is best reflected when we consider tourism, commerce, or migration, where people are more and more interconnected in transnational social fields. We can state that globalization on the one hand and mediatization on the other hand foster the mobility of people and are congruent with a higher level of translocalization due to various intercultural connections. Polycontexturalization is the logical consequence of these processes when people, objects, and signs mingle at certain places. However, as mentioned above, we are also clearly witnessing counter-phenomena with locally embedded people highlighting their regional identity and their national pride. The overarching term of "re-figuration" is flexible enough to capture those contradicting developments, which reflect processes of social change and notable cleavages between centers and (regional) peripheries as well as between the privileged and unprivileged groups of society. [5]

It is obvious that these new constellations of spatial dynamics represent new challenges for quantitative research and make cross-cultural comparisons all the more important. We are confronted with hurdles in defining adequate units of analysis for research and in developing appropriate methods to capture those new (socially constructed) conceptions of space. Quantitative social research can only tackle these developments constructively if it aims to provide differentiated insights and if it is open to new developments in theory-building and interdisciplinary research. Of course, the spectrum of quantitative data is very broad and I can only refer to a small portion of the repertoire of methods here. A useful division is provided by process-generated data (e.g., administrative, business, or digital data), which is now gaining importance compared to classic interview and observational data (BAUR, 2011). In this contribution, I mainly refer to survey research. Surveys have always been the ideal tool kit for monitoring society (SCHEUCH, 1973) and have become a powerful, efficient tool for generating data on worldwide populations. Due to the rising open-access policy of large datasets, survey research still stimulates comparative "long-term observations" of societies and allows for flexible units of analysis and

sophisticated statistical techniques (BECKERS & ROSAR, 2010). The following figure is used to illustrate the *changing nature of space* (left column) and highlights *further demands for empirical social research* (center column). These future challenges may interfere with *predominant conceptions of space in conventional survey research* (third column), which demonstrates the necessity for potential new directions. [6]

We can see in the figure that—concerning the *macro level*—cross-national surveys are still effective in terms of addressing supranational dynamics. Monitoring social change with a sophisticated database is widely established and includes large-scale assessments of population-wide statistical and social indicators. Comparative research is always brought to the fore in sociology and can still be considered one of the main strengths of survey research. As Emile DURKHEIM (1982 [1895]) argued: "Comparative sociology is not a particular branch of sociology: it is sociology itself" (p.157). However, current survey tools primarily focus on *cross-national* comparisons but not on *cultural* comparisons. In survey research, "culture" is always implicitly equated with "nation," which can be seen as an outdated concept in an increasingly interconnected world (BECK & GRANDE, 2010; PRIES, 2010). Therefore, it should be noted that survey research often remains trapped in methodological nationalism and fails to grasp certain dynamics that extend absolutist concepts of space (e.g., transnational movements or relational conceptions).

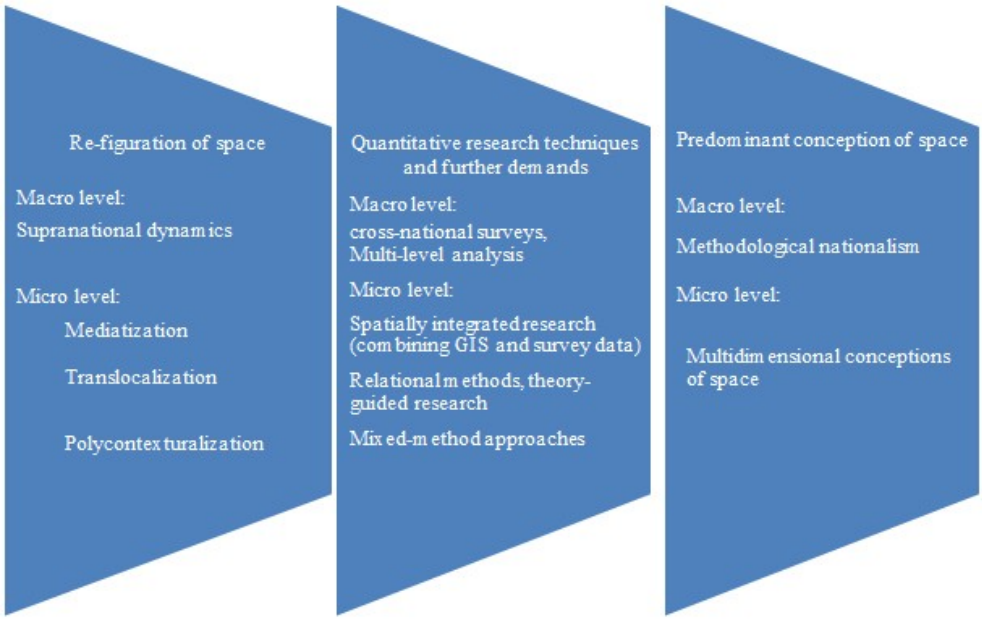

Figure1: The re-figuration of space and new directions for quantitative research [7]

Thus, we need to define new directions in quantitative research, especially when attempting to address the *micro level*. Surveys are also common in rural and urban spaces to gain information at the local level. Nevertheless, they mainly rely on *individual* observations in a given space. We have to strive for new methods that are not restricted to socio-structural variables or attitudinal and behavioral

characteristics but rather that take into account the structures of relations more precisely. In this context, I propose three main directions on how to deal with the re-figuration of space:

1. To address the process of translocalization, I recommend increasing the significance of relational methods in the social sciences (e.g., network analysis) and complementing those results with theoretical advancements on translocal realities.
2. The multidimensional conceptions of space coined by the term polycontexturalization should primarily be addressed using mixed-method approaches (KELLE, 2014; KUCKARTZ, 2014), mainly to adopt comprehensive approaches for complex relations.
3. While delineating methodological boundaries is an important first step, a second more important aim will be to look for fruitful intersections between disciplines. We should use mediatization (that is to say, advances due to digitalization) to include spatial information (e.g., from geographic information systems) in our survey data. This would pave the way towards a more advanced, spatially integrated social science. [8]

After shortly illuminating theoretical ideas in current conceptions of space (Section 2), I will draw on successful empirical examples to demonstrate how to grasp spatial re-figurations in a theoretically sound and methodologically advanced way (Sections 3-6). I will present several conclusions concerning new directions for quantitative research and conclude with a plea (Section 7) to question conventional quantitative procedures, to dismantle methodological boundaries (especially promoting an opening-up to qualitative research), and to further engage with interdisciplinary research and theory-oriented perspectives. This is particularly necessary in times of a growing fascination for data-driven science. [9]

2. Changes in Conceptions of Space: A Brief Overview of Theoretical Assumptions

If we review the achievements of the emerging sociology of space, there seems to be more progress in theoretical advancements than in the current practice of empirical research. BAUR et al. (2014) mentioned that "despite the long history and large quantity of empirical studies using space, there is no systematic debate on methodology and methods of spatial analysis" (p.8). Especially at the micro level, analyzing local and culture-specific contexts, there is a strong need for more space-sensitive research. In a *relational understanding of space* (KNOBLAUCH & LÖW, 2020), focus should be placed on the analysis of social networks, because individuals always interact in complex structures. SIMMEL (1995 [1908]), one of the forefathers of spatial sociology, described these processes using his concept of *Wechselwirkung* [interaction]. SIMMEL's primary concern in his analyses was to show how people shape space through their lifestyles (SCHROER, 2006). In a neo-Marxist conception of space, LEFEBVRE and NICHOLSON-SMITH (1991 [1974]) highlighted the social production of

space. Spaces have to be regarded in close connection with late capitalist production processes and mobility demands. LÖW (2001) focused on this relational understanding of space and advocated the understanding of space—following LEFEBVRE—predominantly as a social construct. This connotation of space appears far more valid for present phenomena (connections between small groups, organizations, the distribution of mass communication) than rather old-fashioned container models of space. [10]

This paradigm shift could potentially lead to a boom in new quantitative methods as well, although it is a necessity to develop them in line with theoretical ideas. One of those ideas is to use LUHMANN's (1997) notion of *polycontexturalization* and to deal with the social dynamics of space using various methods. He highlighted the specific productions of meaning that exist across space and time. The social order at certain places—not only according to the actors but above all according to their resources and relationships—reveals different layers of space that have to be disentangled from one another. The people on location act in different roles (as families, neighbors, workers, or consumers) and thus always contribute to structural changes. They communicate with each other through rituals, symbols, etiquette, and market regulations, which provokes a specific space-culture characterized by multidimensional "landscapes of meaning." Polycontexturalization is gaining visibility owing to the coexistence of heterogeneous milieus (especially in progressive urban spaces), and permanent re-figuration is a result of the current practice of fluid living (BAUMAN, 2003 [1999]). [11]

It is thus a real challenge to capture in empirical studies what constitutes the *identity* of diverse spaces. But often researchers even completely neglect the mention of space in their research. Space is seen as a given unit of analysis and is treated—especially in comparative research—as a *context* in which socially relevant attitudes or behaviors take place. This refers to the classic absolutist conception of space (LÖW, 2001). In this conception of a container, space serves as a background variable and is measured as an independent variable that influences our actions (SCHEIBELHOFER, 2011). Of course, this classic approach can also be useful and national or supranational units of research are justified, especially when it comes to comparing social phenomena that are clearly embedded in regional, national, or supranational contexts. However, we have to complement those classic units of research with new perspectives by analyzing the processes that emerge *alongside* national, regional, or local borders. This is best captured by the term *translocalization* (KNOBLAUCH & LÖW, 2020). The concept of multi- or translocality is popular in transnational migration research (originally GLICK SCHILLER, BASCH & BLANC, 1995) because—due to the transport and travel possibilities in information and communication technologies (ICTs)—new forms of social fields may develop without needing to be physically present (MAU, 2007). Various social practices evolve across time and space, which have been captured by the well-known term "time-space compression" (GIDDENS, 1995 [1984]). These reflections on translocalization in a mobile world were also elaborated further by HARVEY (1994), who referred to the paradoxes of late capitalist concepts of space. In

times when flexibility is commonplace and social integration is mainly achieved through individual achievement, people have a variety of options available for personal advancement. They may also increase their chances through cross-border mobility. But globalization also has a dark side, enforcing mobility due to precariousness (when we think of care migration for instance). In both cases, translocal activities of people on the move or notable countermovements against globalization can be seen as practices to secure social embeddedness. Thus, the overflowing freedom in a postmodern world may exert pressure not only on free-floating individuals but especially on those groups who are left behind with limited opportunities. The latter group are often considered *losers of modernity* (SPIER, 2010) and thus reacts more strongly to the challenges of societal change with anomie and renewed security needs (BAUMAN, 1999 [1997]). These discrepancies with regard to societal well-being in the Western world will now be discussed in the first empirical example, which represents an empirical macro analysis of current supranational developments among European regions. [12]

3. Supranational Dynamics: The Strengths and Weaknesses of a Multilevel Analysis

When we look at transnational research initiatives all over Europe, one central question is always how to deal with supranational dynamics on the one hand and highly diverse national characteristics on the other. All the critical events of recent years in Europe (the Eastern enlargement, the financial crisis in 2008, the ensuing European debt crisis, the conflict in Ukraine, the refugee crisis, and the current pandemic) place an enormous strain on the ability of the European Union to be an efficient community of states. In my empirical example, I use the concept of societal malaise as my explanandum (the dependent variable). This outcome variable should encompass a multiplicity of latent feelings that society is not in good health (ELCHARDUS & DE KEERE, 2012). It is of major interest which individual factors, country-specific characteristics, and supranational contexts influence the extent of societal well-being. It is possible to use a major cross-national survey in Europe to test the relevance of those explanatory variables at different levels. Here my analysis is based on the data from the European Social Survey in 2012. The European Social Survey has several advantages compared to other survey tools. The data quality represents the highest standards in survey research, which is demonstrated by the extensive documentation efforts, a high number of participating European countries (from 22 countries in the first wave up to 30 countries in more recent waves), large probability samples for each country (the minimum sample size is 1500), equal survey modes (in the form of face-to-face interviews), and a high target response rate (70%) (LYNN, HADER, GABLER & LAAKSONEN, 2007). Here, this example is based on data from 21 EU member states, which took part in the survey in 2012. In all countries, representative samples (consisting of n~2000 in each country) were drawn based on the high standards of the survey program. [13]

When trying to explain societal malaise in Europe, the second task in quantitative research (after operationalizing the concepts and defining the relevant variables) is to develop a concrete hypothesis. We may theoretically derive that these

feelings of social dissatisfaction are found mainly within social groups who have been left behind in society (CASTEL, 2000; STANDING, 2011). However, worries about societal functioning and concerns about the future may also become more common among the middle classes (BUDE, 2014; LENGFELD & HIRSCHLE, 2010), as evidenced by well-known studies dealing with current fears of social decline (NACHTWEY, 2016). We can also start developing further hypotheses on higher levels of data aggregation. We may use the classic national level to hypothesize that, in countries such as Ireland, Greece, Spain, Portugal or Cyprus, which were deeply affected by the financial crisis, the citizens are more susceptible to societal malaise. At a supranational level, we can assume that countries with more established welfare regimes are capable of mitigating certain effects of the crisis. It becomes clear that different units of analysis are necessary in order to reach sophisticated conclusions. We have to recognize that individuals are nested in regions, they belong to their countries but they are also embedded in certain welfare or policy regimes that influence their experiences of societal malfunctioning. [14]

I will now start with some theoretical approaches referring to the diversity of major European areas. I will then demonstrate that this theory-guided approach for those different levels of explanations can be empirically tested effectively using the sophisticated method of multilevel analysis. The empirical analysis of this example dates back to the year 2012, making it possible to highlight the effects of the economic crisis on societal well-being in particular. However, the data have a renewed high relevance for today because certain European regions may witness quite similar or even more dramatic societal effects due to the ongoing Covid 19 pandemic. [15]

While the financial crisis of 2008 dramatically increased the divergence in economic performance between Western and Southern European countries, the refugee crisis of 2015 clearly revealed the political and cultural cleavages between the old and new members of the European Union. From a historical perspective, these discrepancies emerged due to deeply rooted demarcation lines and center-periphery relations between European nation states and major European regions (ROKKAN, 2000). Adopting a post-colonial perspective, BOATCĂ (2010) suggested that to abandon the notion of a united Europe would propose a conception of *multiple Europes* with divergent paths to modernity (EISENSTADT, 2001). Adopting a post-colonial approach, BOATCĂ mentioned that Eastern Europe was always understood as a Christian region and was soon constructed as the other and incomplete part of Europe (TODOROVA, 1997). Simultaneously, Southern Europe was gradually excluded from the European center due to the weakening of the Spanish empire, the Moorish heritage, and its proximity to Northern Africa. According to BOATCĂ (2019), even today, it is possible to discern a dominant view of a heroic Western Europe (seen as the center of progress and modernization), a decadent Southern Europe (reflected by a loss of power), an epigone East (with a strong ambition to catch up to Western European standards of living), and a forgotten Europe, which is best reflected by the colonial possessions in the Caribbean that have never been included in the conceptions of European modernity. [16]

Aside from this postcolonial approach to reflecting cultural characteristics in Europe, it would also seem that regimes of capitalism and welfare are based on long-lasting developments and are thus quite resistant to social change. If we want to assess the consequences of the economic crisis, we must first and foremost focus our attention on welfare state arrangements, which afford different protections against the uncertainties of the market. This basic conception, which is illustrated in Figure 2, can be traced back to ESPING-ANDERSEN (1990) but has been expanded with current literature on other European regions. ESPING-ANDERSEN started to establish three worlds of welfare capitalism for Western states:

1. the liberal welfare states, such as the United Kingdom and Ireland, which emphasize the role of the free market and means testing;
2. the conservative or Bismarck welfare model (such as that found in Germany or France), which is based on linking social security to social status and employment relations;
3. the social-democratic welfare regimes of Scandinavia, which provide the most extensive protection from labor-market risks. [17]

Following him, many researchers tried to extend the typology to allow more substantial distinctions between European regions:

1. A fourth type of welfare regime has been suggested to reflect those structures that exist in Southern European states, which have been classified as rudimentary (LEIBFRIED, 1992), post-authoritarian (LESSENICH, 1995), or familistic (FERRERA, 1996).
2. Eastern Europe may constitute yet another type, as it cannot be easily accommodated as a group within ESPING-ANDERSEN's typology (KOLLMORGEN, 2009), and it may have to be separated into two additional welfare types, with the Baltic States exhibiting similarities to liberal welfare regimes and Bulgaria having a minimal level of social security needs.
3. The Visegrád countries of Poland, the Czech Republic, Slovakia, and Hungary, along with Slovenia, resembling more scaled-down versions of the Bismarck model. [18]

These differences allow us to categorize the six European regions (Figure 2) according to the welfare regime in place (for recent publications on this topic, see ASCHAUER 2016, 2017a).

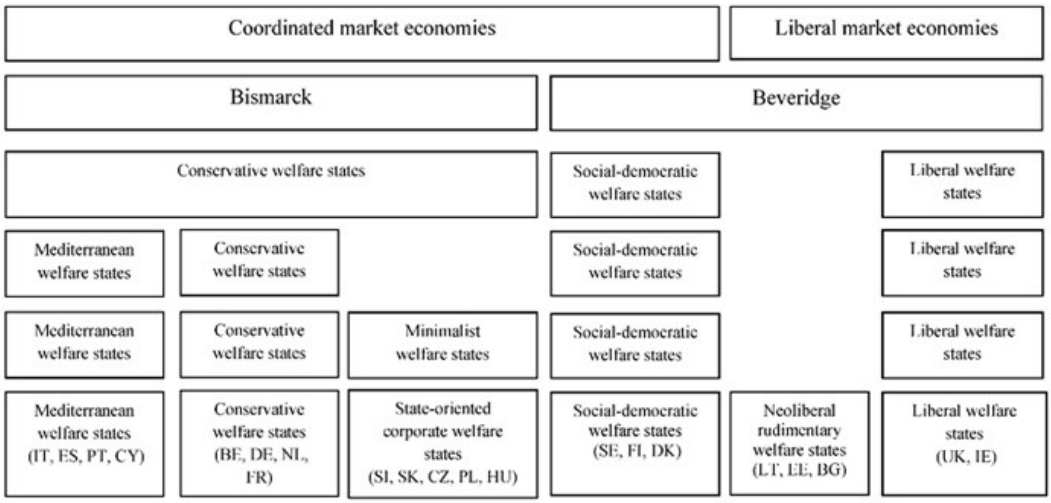

Figure 2: A typology of six European regions based on the varieties-of-capitalism approach and welfare-state research (modified and extended, based on SCHRÖDER, 2013, p.59) [19]

This theory-guided framework connecting causes of constraints in societal well-being (societal conditions in Europe at the supranational level), restrictions in living conditions (at the national level), and explanations of societal malaise at the individual level reflects a macro-micro-macro explanation, which is often illustrated by a bathtub model (COLEMAN, 1991; ESSER, 1993). Here, macro-level structures (e.g., the national or supranational context) have an impact on micro-level perceptions (societal malaise), which may be a powerful element in processes of societal change—for instance, a rise in ethnocentrism and populism (ASCHAUER, 2017b). [20]

In quantitative methodology, a multilevel analysis is best suited to disentangle effects at spatial levels. To put it simply, the method can be seen as an extension of a standard regression analysis. We still try to estimate the effects of explanatory variables on one outcome variable but we are able to extend that design. It is additionally possible to estimate the effects on the macro level independently of the individual effects and to focus on what are referred to as cross-level interactions. The multilevel analysis was first developed in educational research because here it is most obvious that pupils are nested in classes, classes in schools, schools in certain districts, regions, countries, and so on. But a necessary precondition to compute multilevel models is a sufficient sample size at the different levels. HOX (2010) recommended in his classic textbook that models should include at least 30 cases at the higher level. As more complexity is introduced, the sample size at higher levels should be increased to up to 100 cases. That is the reason why cross-national researchers generally strive to focus on only two levels (the individual level and the nation state) and keep their statistical models rather simple. The resulting reduced complexity in multilevel models from a European member states perspective makes it possible to propose valid generalizations, but often at the expense of comprehensive theoretical approaches. In my example, I was able to integrate the theoretically

driven supranational welfare state characteristics as an additional variable in the final model. Statistical modeling is a common procedure in multilevel analyses, which is normally practiced by applying a bottom-up strategy. [21]

The first step is to analyze whether there is sufficient variance at the country level. We can separate the dispersion in the dependent variable into variance among individuals and variance among countries. If there is considerable deviation (normally at least 5%) at the country level, a multilevel analysis is justified. In the first empty model (Model 1 in the table), only the intra-class coefficient is computed, indicating that 30% of the variance can be traced back to the country level. This is a clear indication that a multilevel analysis is needed and that we need to include predictors at the individual level and at the country level in order to explain societal malaise. The second model only includes predictors at the individual level. Here, it is common to use a fixed-effects model, assuming that all predictors are equally relevant in all countries. It is often necessary to set this precondition in cross-national studies due to the small n problem, which assumes that random coefficients (which can vary across countries) would increase the complexity of the model and may lead to biased results. The analysis reveals that the effects of sociodemographic parameters are rather weak, showing that women are more satisfied with society than men, and foreign-born and religious people express a slightly higher level of societal functioning. In terms of predictors at the level of social cohesion, we can see that social inclusion is highly relevant for guaranteeing higher levels of satisfaction with society. At the structural level, higher education leads to societal well-being, while unemployed and disabled people demonstrate a higher degree of societal malaise. The two most important predictors refer to the subjective level. People who see themselves as being at the bottom of society and people who have difficulties managing their income are likely to express higher societal dissatisfaction. Together, these variables at the individual level can explain a considerable amount of variance (22%). The inclusion of these predictors also accounts for a significant reduction in variance at the level of each country because differences between countries might be due to unequal distributions of social groups (with regard to sociodemographic and structural predictors). In the next step, Model 3 includes both individual and select macro-predictors. Ultimately, it seemed most beneficial to use four predictors at the national level (namely GDP per capita, public debt, quality of democracy, and the proportion of people with an immigrant background), which are illustrated in Model 3.

Table 1: Results of the multilevel analysis to explain societal well-being in the European Union. Click here to download the PDF file.[1] [22]

The intercept (row 1 of the table) is often described as the constant and represents the expected mean value of Y when all X variables have the value 0. The predictors in multilevel modeling are centered around their mean (to avoid bias), so that this intercept can be interpreted in a useful way. This means that societal well-being (on an 11-point scale from 0 to 10) has a mean of 4.71,

1 Unstandardized coefficients are illustrated (standardized in brackets), significance levels are added (from p<0.1+ to p<0.001***).

showing that societal well-being already reached a critical level in 2012 (below the scale mean of 5). [23]

In the other rows, all predictors are reported with some information on the measurement. Only significant effects are listed in the table (see the note under the table for further details). In the last column (Model 4), the standardized coefficients are reported. This makes it possible to compare the strength of the effects within the model. Here it is important to note that country-level predictors often have a larger effect size because there is a high level of variance at the individual level (with an n of about 40,000 individuals) compared to the country level (n=21). [24]

The next lines report the variance components, which can be used to compute the intraclass coefficients and the explained variance at both levels. These statistics are depicted further below. The last rows show the deviance, which can be used to compare the quality of the models using a chi²-test. The value of 10.07 (comparing Model 4 with 3) proves to be significant (taking four additional parameters into account) (HOX, 2010). Lastly, the last rows report the sample sizes at the individual level and at the country level. This sample size is reduced from Model 1 to Model 2 due to missing values concerning certain predictors at the individual level. [25]

Altogether, the three first predictors appear to be highly relevant in explaining societal malaise. The standardized effects (shown in brackets) demonstrate that GDP per capita has a considerable impact on societal well-being. The influence of public debt is also highly significant, while the quality of democracy only slightly contributes to explanations of societal malaise. Interestingly, the proportion of immigrants also leads to a slight decrease in societal well-being. This is a good example of why it is necessary to check for methodological bias at every stage of the multilevel analysis. The effect of immigrant size turned out to be insignificant when Cyprus (as an outlier) was excluded from the model. In Cyprus, a high degree of societal malaise (due to the economic crisis) converges with an extraordinarily high number of immigrants in the country, which account for the effect. The explained variance of the individual predictors here remains the same because independent country-level effects show no variance at the individual level and thus cannot change the impact of the individual predictors. [26]

In Model 4, the theory-guided conception is used to control for supranational dynamics, which may be responsible for those country effects. Besides the four predictors at the national level, the conception of the six European areas based on welfare state research (Figure 2) was introduced as an additional variable (with Scandinavia as the reference group). We can see here that societal well-being is lower in conservative countries, still lower in liberal welfare states and in Eastern European countries, and dramatically low in the Mediterranean region. All country-level predictors turn out to be insignificant when the welfare state typology is taken into account. Nonetheless, it is possible to explain more than 90% of the variance at the country level, which confirms that Model 4 has the highest explanatory power. [27]

In the end, we can state that after controlling for all individual predictors, societal malaise is currently highest in the Mediterranean region, followed closely by Central Eastern Europe. Compared to Scandinavia, the liberal welfare states (the UK and Ireland) and certain conservative states (for example, Belgium, Germany, and France) experience a higher degree of societal malaise. The macro predictors clearly indicate that we are now confronted with considerable cleavages between the different European regions (BECK, 2012). The multilevel analysis confirms that perceptions of a functioning society in Nordic countries are due to high levels of economic prosperity, a higher quality of democracy, and lower levels of public debt. By comparison, notable increases in public debt and precarity (STANDING, 2011) might influence societal pessimism in several regions of Western Europe (especially in the liberal welfare states). Financial restrictions (together with high unemployment rates) take societal dissatisfaction to extreme levels in the Mediterranean region. In Eastern Europe, it might be useful to attribute societal malaise to lower levels of economic prosperity and a lower quality of democracy. Especially in the Eastern periphery, we can observe citizens' ongoing disenchantment with democratic parties. This is largely due to perceptions of corruption (LINDE, 2012). [28]

Standardized effects (in brackets) are also depicted in that model to compare the relevance of different impact factors. When we look at the individual level, there are only three predictors (namely, subjective estimation of status, household income, and education) that exert a considerable impact on societal malaise across all countries (because the values are higher than 0.1, which is still considered a weak effect). Using large samples at the individual level (here about 40,000 respondents took part in the survey) almost automatically results in highly significant effects although the Europe-wide effects are rather week. Therefore, a more sophisticated analysis, addressing the dynamics of different European regions more precisely, is often needed (ASCHAUER & MAYERL, 2019). With a multilevel analysis, however, we quickly reach our limits because the sample sizes at the country level are too small to adopt more advanced modelling techniques. [29]

The possibility of simultaneously measuring the impact of country-specific indicators, individual predictors, and supranational characteristics and combining them in hierarchical regression models has made comparative survey research much more relevant over the last decade (MEULEMANN, 2008). However, the example also identified several weaknesses in multilevel designs. Most of the approaches only use two-level models with survey participants at the micro level embedded in their countries (at the macro level). Thus, most researchers follow the conviction that any other collective identity besides the nation state is more or less meaningless. TIEMANN (2009) recommended that a multilevel analysis should include regional dynamics to better validate the results and to enrich simple models with various interaction effects, although they have to be handled carefully from a methodological perspective. Of course, there is notable research that takes into account the complexity of European dynamics while attempting to work with additional layers and more complex multilevel modeling (e.g., accounting for regional dynamics of inequalities, HEIDENREICH, 2010). Large-

scale surveys (e.g., the European Survey on Income and Living Conditions, EU SILC) now also provide reliable data for different NUTS levels. Using this Nomenclature of Territorial Units for Statistics (NUTS) is common in European databases. There are three subdivisions, ranging from broader units (NUTS 1) and NUTS 2 (which roughly reflect the administrative divisions within the country) to NUTS 3 (referring to more fine-tuned regions). However, using NUTS 3 regions presents us with considerable data limitations within the European context. [30]

Even if we have the possibility to enrich the abstract category of the nation state with contextual factors, we are still confronted with fixed spatial entities. We can capture these entities with random samples at local, regional, national, or transnational levels, but we still *choose* our population according to spatial units and we draw our generalizations based on those units. These studies lose a great deal of informative value when large percentages of people are on the move (due to migration) or when boundaries and dynamics of spatial territories are in constant flux. We have to search for new explanations of translocal processes and for relational dynamics of given spatial units. This brings the quantitative method of network analysis to the fore, as it is best suited for a relational understanding of space. However, this method has its own specific strengths and weaknesses. [31]

4. Network Analysis in Transnational Migration Research: Towards a Relational Understanding of Space

In the network analysis paradigm, researchers view relations (rather than individuals or collectives and categories) as the central unit of empirical analysis. With this approach, the theoretical and empirical mission is to grasp cultural processes of identity formation and boundary construction in dynamic terms, in contrast to classical approaches where the unit of analysis equals the spatial unit. TILLY (2004), one pioneer of network analysis, called this perspective "relational realism" as the "doctrine that transactions, interactions, social ties and conversation constitute the central stuff of social life" (p.72). [32]

Concerning the methodological approach, network analysis relies on mathematical graph theory. Applying this to the social world means that individuals or social entities (such as organizations) are represented by points and social relations are depicted as lines. Before being depicted graphically, network data are organized in the form of a socio-matrix where the rows and columns represent social actors and the social relationship between the actors is reported in the cells. We can identify various features of relations such as friendships, cooperation, trade ties, information flows, or even weblinks and citations to reflect on the relationship between different nodes. These different relations can be grouped into higher level categories such as similarities, social relations, interactions, or flows (BORGATTI, MEHRA, BRASS & LABIANCA, 2009) When analyzing large-scale data, the socio-matrix becomes more important than the corresponding sociogram in terms of analyzing the "hidden" network structures. Finally, it is possible to derive important coefficients that stand

for the properties of the network. Initially, we can measure the density of the network as well as the centrality of certain points within the network. Further on, we can derive information about certain clusters within the network as well as social structures, which are reflected in density measures, well-connected subgroups, or marginalized areas within the network (CARRINGTON & SCOTT, 2011). [33]

Despite the great progress with regard to the method, network analysts are often seen as being too distant from theory. Networks are predominantly described empirically and are only partially integrated into causal models, although there are numerous theoretical approaches that would have the potential to enrich empirical results. A logical link between network analysis and sociological theory is, for example, the field theory of BOURDIEU (2001 [2000]). In his view, social spaces are similar to battle fields that result from the different placements of individuals. People strive to use their existing capital effectively in order to improve their positions. The empirical order that becomes visible in a network is therefore also an order of power that goes hand in hand with an unequal distribution of resources (SCHEIBELHOFER, 2011). In this respect, every network analysis provides insights about the balance of power, marking relations of superiority, belonging, or subordination in the relevant field structures (BERNHARD, 2010). Good examples are exclusive circles, which, in addition to economic and cultural capital, also require symbolic capital. These resources are effective at excluding undesirables from privileged zones or branding them as not belonging to them (BOURDIEU, 1982 [1979]). Conversely, life in peripheral zones leads to a decline in available capital and subsequently to deprivation and stigmatization. Those groups that are characterized by precarious living conditions are then increasingly cut off from the "cycles of productive exchange" (CASTEL, 2000, p.359). These kinds of social relations often interact with physical space, which is prominently addressed in network research on segregation (RODRIGUEZ-MORAL & VORSATZ, 2016). There is convincing evidence in geographical neighborhood studies that people choose to live in areas where people similar to themselves tend to dominate (JOHNSTON & PATTIE, 2001). Locality is also seen as a better predictor than social characteristics for how people vote because "people who talk together vote together" (MILLER, 1977, p.65). [34]

However, the main advantage of the network analysis is its flexibility with regard to spatial re-figurations. We can estimate that intensive patterns of social contacts are still common in rural areas, whereas social interactions in urban areas have become much more unpredictable and diverse through the ongoing polycontexturalization of urban space (KNOBLAUCH & LÖW, 2020). Therefore, it is not surprising that—in parallel with the emergence of the relational understanding of space in sociology (e.g., FULLER & LÖW, 2017)—there is an upswing in social network analysis, because it is possible to make interpersonal and organizational entanglements visible *within* the changing nature of space. In contrast to traditional methods focusing on spatial entities, the network analysis follows the approach that causation is not grounded in the individual or in specific spatial contexts but rather in the social structure of relations. This means that

similar attributes among people or organizations result in similar networks. The outcomes are then mainly the result of barriers and opportunities, which are structured along certain network positions (MARIN & WELLMANN, 2011). Focusing on relations thus requires a change in sociological perspective, because we draw our attention to the social connections within or beyond spatial borders. Especially when we analyze *translocalization,* these methodological approaches have a high relevance. One interesting field in this respect is transnational migration research (FAIST, FAUSER & REISENAUER, 2014; PRIES, 2010). [35]

This reorientation of traditional migration research is based on the idea of a new type of migrant—the transmigrant—who commutes between the country of origin and the current country of residence and in doing so creates new social networks that connect both regions. Transmigrants thus lead a fluid life between both worlds, coexisting with the formation of multiple relationships (family ties, economic connections, social, religious, political, or organizational networks) beyond national borders (SCHEURINGER, 2006). Current societal developments are likely to favor the establishment of transnational social fields. Globalization strengthens the transfer of capital, goods, and technologies regardless of national borders. Transport connections all over the world increase people's mobility and enable the maintenance of different social worlds in a cost-effective way. If regular commuting between the places of residence and origin is not possible or affordable, ICTs and social media are mainly responsible for constant and in-depth communication with family members and relatives. Even disadvantages in the host societies and experiences of discrimination may contribute to the emergence of transnational attitudes and lifestyles (HAN, 2010). In the course of failed efforts of acceptance in society, a kind of "reactive transnationalism" may occur. Here, losses of recognition by the ethnic community are compensated by a higher engagement in transnational associations up to politically active groups (FAIST et al., 2014). [36]

A lot of studies from the field of transnational migration research have shown how informal networks—favored by new communication technologies—can manifest themselves over spatial and social distances, and may become stable over time. Here, there is a clear necessity to overcome methodological nationalism (for example BECK & SZNAIDER, 2006). We are indeed confronted with new spaces, which belong neither to countries of origin nor to current places of residence, but rather reflect a third translocal space (BHABHA, 2000 [1994]). The global networks of information, goods, and people cause a delimitation of space and give rise to such emerging social fields, which are permanently in flux and therefore difficult to grasp in social research. URRY (2003), a proponent of the mobility paradigm, spoke of cosmopolitan fluids, while CASTELLS (2004) adopted the approach of a network society, speaking of streams. It is of utmost importance to capture these new social relations with innovative methodological approaches. [37]

Again, surveys are mostly used to acquire data on relationships among people or other actors. MARSDEN (2011) distinguished between whole network studies,

where several facets of relationships between actors are collected to gain insight on the network structure, while the closeness of certain actors in a given social environment comes to the fore in egocentric network studies. Network sampling frequently faces a boundary specification problem (LAUMANN, MARSDEN & PRENSKY, 1989) affecting the generalizability of the results. Especially egocentric networks are often obtained with snowball sampling to define a set of focal actors. Social relationships with other actors will then indicate inclusion in the group, while absence may signal group boundaries. To derive comprehensive samples, the link-tracing method is often recommended, starting with a probability sample of actors, surveying their contacts, and subsequently sampling those contacts (LIEBOW et al., 1995). [38]

In a highly relevant study on transnational migration networks, which was recently published in a special issue on Social Network Analysis in Migration and Transnationalism and should serve as an example here, VERDERY, MOUW, EDELBLUTE and CHAVEZ (2018) roughly follow this procedure. The study is based on the Network Survey of Immigration and Transnationalism (NSIT), which includes 607 respondents from transnationally active Mexican immigrant communities in the Raleigh-Durham-Chapel Hill area (North Carolina), Houston (Texas), and Guanajuato (Mexico). Fieldwork began in North Carolina with immigrants from Guanajuato who were selected from contacts based on ethnographic research. Guanajuato is one of the regions of origin where many Mexican immigrants start on their way to the United States (DURAND, MASSEY & ZENTENO, 2001). North Carolina can be seen as a new destination for Mexican immigrants with its migrant population quickly growing and a high number of undocumented immigrants. The respondents were asked to fill in various types of ties on location (adult household members, non-household family members, friends residing at their place of residence) and cross-border connections (e.g., family members and friends living in Guanajuato as well as return migrants). The second stage of the survey was carried out in Guanajuato based on the mentioned cross-border relations to North Carolina. People were asked to name family members or friends currently living in North Carolina or Houston. In contrast to the first area, Texas has long received immigrants from Mexico, with Houston being a popular destination. It is assumed that a large Latino community is already established there. Finally, based on those contacts, a third phase of data collection was conducted in Houston based on further snowball sampling. [39]

The survey is ideally suited for social network analysis because it provides data on the network affiliates, communication frequency, and relationship type of all nominated and sampled individuals. In total, the network consists of 8769 social ties among 5236 individuals. In the following figures, we can observe black nodes for people living in North Carolina and light gray nodes for those in Guanajuato, while dark gray nodes represent the immigrants in Houston. The following figures illustrate a structural cohesion analysis (MOODY & WHITE, 2003) depicting the embeddedness of the cross-border network at different levels of communication frequency. Most human networks tend to show one giant component that is clearly larger than the others (STROGATZ, 2001). This is seen as the primary

measure of cohesion because it represents the maximum number of people who can be reached by a certain piece of information. In Figure 3, this largest component is depicted with regard to different communication thresholds. For instance, compared to Figure A, Figure B only shows the nodes that remain after deleting the network members who communicate with each other less than once per year. The main message of the five network models is that even when we restrict the number of contacts to a weekly frequency or daily frequency, we can still see that many respondents across borders are linked through many ties (VERDERY et al., 2018, pp.62-65 for further explanations).

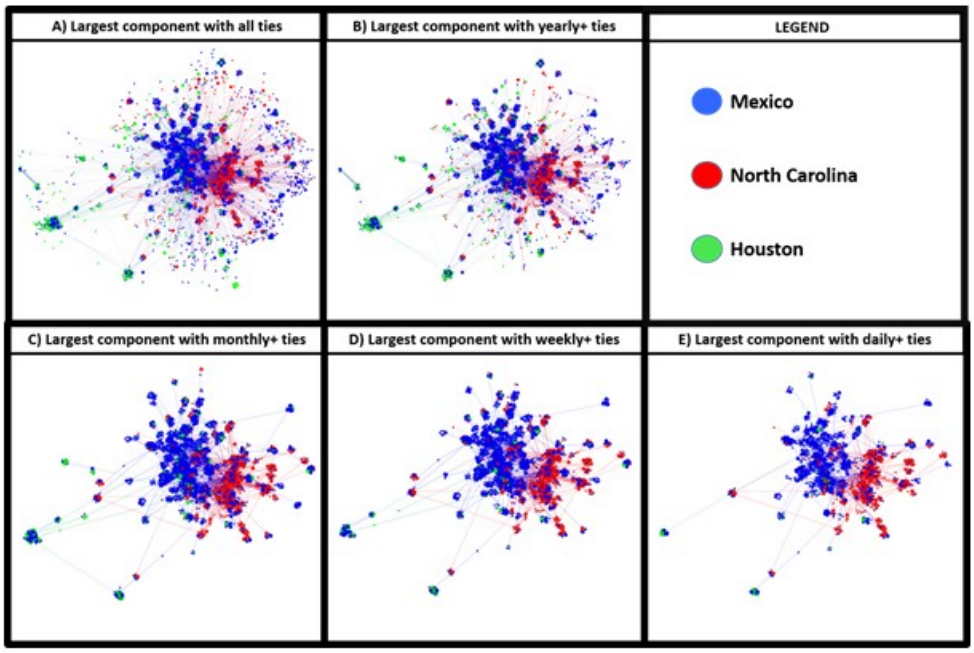

Figure 3: Network ties between immigrants in Mexico and the United States (VERDERY et al., 2018, p.63, reprinted with permission from the authors) [40]

Those results clearly highlight the importance of social networks because transnational social fields remain active through a rapid transmission of information via communication flows. The authors further expand on the results using a causal analysis based on additional data from the survey. Consistent with assimilation theory (ALBA & NEE, 2009), the authors could confirm that ties to the origin are successively replaced by ties to the destination the longer the immigrants live abroad. Otherwise, being active around peers who maintain their cross-border relations leads to a significant increase in cross-border contacts. Return visits seem to have an impact in renewing connections between friends and relatives, although many undocumented migrants are not able to return home. Thus, it can be assumed that legal restrictions have a negative effect on the ability to maintain connections and may lead to marginalization (PORTES & ZHOU, 1993). [41]

Due to the complexity of the approaches, transnational migration research is generally more ethnographically and qualitatively oriented, whereby the use of

quantitative data is increasingly demanded. A quantitative approach is essential to provide realistic classifications of the *extent of* translocalization. However, due to great challenges in terms of achieving representative samples (see FRANK, 2011 for an overview of sampling strategies), conclusions with regard to the extent of transnational practices vary widely. In the well-known Comparative Immigrant Entrepreneurship Project (CIEP), PORTES, HALLER and GUARNIZO (2002) estimated that 5% of immigrants are transnationally active, although this study mainly focused on business activities. However, other researchers do not rely on network data and instead analyze the extent of migrants' transnational activities in a given national context. In their study, FAUSER et al. (2015) proposed a share of 80% of migrants who have already cultivated a transnational lifestyle. Their analysis is based on the German Socio-Economic Panel (SOEP), which is an impressive longitudinal study that has been conducted since 1984. However, this well-known study is solely restricted to the "national container" of Germany, drawing a representative longitudinal sample of German households every year (WAGNER, GOEBEL, KRAUSE, PISCHNER & SIEBER, 2008). When focusing on immigrants residing in Germany in this large sample, the question arises as to whether family relationships, remittances, visits to the country of origin, or the consumption of foreign media are sufficient to assume a transnational lifestyle. There is also the danger of exaggerating the extent of transnationalization, because traditional ways of being widely assimilated (ESSER, 2004) still coexist or are even represented by the majority of immigrants. It is of utmost importance to search for new directions for quantitative research to address these new translocal lifestyles in an increasingly globalized and interconnected world. In addition, VERDERY et al. (2018) concluded: "Without data on the complete network linking migrants to origin, to each other, and to others at destination, researchers may underestimate the role of social networks in the migration process" (p.69). [42]

Social network analysis seems to be an effective means of gaining an enhanced understanding of the transnational field of migrant communities. But we have also seen that research on translocalities is still far too complex to comprehend using a single method. Polycontexturalization, which has already been mentioned as a consequence of having a translocal lifestyle, is visible in different places. Here, a wider range of methods is needed to capture diverse elements of the social production and the cultural identity of space. [43]

5. Crossing Methodological Boundaries to Address Polycontexturalization

Despite the ongoing rivalries between quantitative and qualitative methodology, which is now especially visible in the renewal of the German positivism dispute (ESSER, 2018; HIRSCHAUER, 2018), I argue that an integration of quantitative and qualitative research methods is by all means necessary in order to capture the complex concept of the polycontexturalization of space. This requires comprehensive mixed-method designs to be developed to integrate different research perspectives on local conceptions of space (for an overview of mixed-method approaches, KELLE, 2014). As a first step, we have to investigate the nature of our research subject, after which we need to choose our methods based on our main research question to adequately explain, describe, or understand the phenomenon. Throughout the entire research process, however, we should be guided primarily by our theoretical approaches and the methodological tools have to be selected according to our theoretical assumptions. This idea of a flexible methodological triangulation stems back to the famous book "The Research Act" by DENZIN (1978), where he described methodological triangulation as a "complex process of playing each method off against the other so as to maximize the validity of field efforts" (p.304). [44]

All in all, a complex mixed-method design (KUCKARTZ, 2014) is needed, especially since the various methods cannot stand alone, but rather should always be related to each other. They can be used in parallel or consecutively to achieve valuable results. Finally, various results can be cross-validated and further enhanced by theory, which makes it possible to answer complex research questions in a well-founded and differentiated manner. Researchers who are culturally involved, who speak the language of the group, and who understand the local cultural symbols should conduct the preliminary fieldwork. When we strive for comparability, we have to be aware that most of the spatial characteristics at one location are not equally relevant in different spatial contexts. In a comparative approach we should therefore focus on *functional equivalence* (BACHLEITNER, WEICHBOLD, ASCHAUER & PAUSCH, 2014). This means, concepts need not be defined in the same manner between different cultural contexts, but they have to serve the same function; in other words, we can (and sometimes need to) use different methods to obtain comparable results. [45]

Quite often, quantitative analysis provides an overview of the extent of the phenomenon at more aggregate levels and tries to explain (causal) relations between concepts, while qualitative research sheds light on micro phenomena and makes it possible to explore contextual and cultural specificities on location. However, these superficial distinctions between macro and micro approaches and an epistemology of explaining versus understanding social realities is also misleading. A great deal of progress has been made in qualitative methodology to *explain* social reality through differentiated case studies, grounded-theory, and comparative approaches (BAUR, 2018). One successful example is the rising popularity of QCA (qualitative comparative analysis), which was chiefly developed to account for the complexity of societal influences (LEGEWIE, 2013; RAGIN,

2008). The primary purpose of QCA is therefore to seek to explain the outcome variable in a differentiated way. The focus on complex causality (SCHNEIDER & WAGEMANN, 2010) means that the interplay of causal relations is mainly responsible for certain outcomes and various combinations of explanatory variables can be responsible for certain effects. The QCA method normally focuses on small theoretical samples (e.g., of countries or regions) and represents an iterative dialogue between case analyses, formalized comparisons, and theory development. Cases are further grouped into types, which are characterized by certain configurations of conditions. In the popular method of fuzzy set QCA, an attempt is made to capture vague empirical dynamics using continuous "variables" to find patterns of relations in a systematic comparison of cases (see LEGEWIE, 2017 for a critical discussion). The analysis is carried out using certain software packages that adopt formal and even statistical procedures to obtain results that reflect complex causality (see LEGEWIE, 2019 for an overview). [46]

Returning to the issue of transnational fields in migration research (Section 4), we are able to capture the transnational ties with a network analysis. However, if we aim to address complex life realities on location (polycontexturalization), we have to expand on those results using ethnographic or even multi-sited research. This reflects the relational understanding of space (KNOBLAUCH & LÖW, 2020) that sites are connected to one another. As a research field, multi-sited ethnography is therefore constructed along the conjunction of locations in which researchers should establish forms of presence. Exactly those critical points of intersection with scales and units of research deserve attention directly exploring the interconnected actors across space (see NAESS, 2016 for further consideration). RYAN (2015), reflecting specifically on her role in migration research, suggested striking a balance between multiple positionalities. Migration researchers cannot always be "insiders" (with shared ethnicity) and it is often useful to go beyond the ethnic lens. Besides the ethnic background, there may exist multiple boundaries involving ethnography or in certain interview situations that may appear across many forms of diversity (e.g., linguistic, socio-cultural, or religious-based issues, in addition to race, class, and gender). Only by constantly considering the reflexive role of the researcher is it possible to reveal the complex dynamics of location (RYAN, 2015). [47]

When we address polycontexturalization, we have to challenge the conventional view of "the field" as a single territorial unit. A certain location (for instance, a multicultural city district) should be seen as composed of several sites, processes, and relations, which can refer to that specific space or which can exceed spatial borders. It is an empirical question to what extent the boundaries of different kinds of social relations coincide. It is better to adopt the idea of multiple social relationships, some quite localized and some worldwide in scale (also TILLY, 1990). Mixed-method approaches and striving for openness, collaboration, and understanding different epistemologies in empirical research will help to increase knowledge and may produce a far more comprehensive picture of the studied phenomenon (KELLE, 2001). According to FLICK (1998), it seems useful to deal with triangulation less as a strategy for validating the results

and more as a means of increasing the scope of the research and delving deeper into certain phenomena. In this regard, various methods should *complement* each other in order to determine any other potential layers of polycontexturalization. [48]

6. Georeferenced Survey Data: Developing a Spatially Integrated Methodology

Aside from the example of using social network analysis to determine the relationship between people and the mixed-method studies to identify the different layers of a socially constructed space (polycontexturalization), geographic information systems (GIS) can also be considered a useful tool for a spatially integrated methodology at the micro level. Quantitative research is undoubtedly undergoing radical change due to the progress of new data processing technologies. Researchers now have new ways to operationalize data and to measure them with greater accuracy. The new low-cost options for data acquisition ensure that empirically relevant information can be obtained at precise "resolutions" with very small-scale spatial units. Concerning the mediatization of the social world, the message for quantitative research with regard to the re-figuration of space is quite simple: We should take advantage of the processes of digitalization and we should try to incorporate technological advancements to conduct more fine-tuned spatial research. When we conduct studies in urban sociology only referring to administrative units, we may face the challenge of ecological validity. It is often unclear whether our units (such as zip codes) are really relevant for the social processes we are studying (CHAN-TAK, 2014). [49]

The most promising direction in this regard is to link GIS data with survey respondents. The first step is to add spatial identifiers to the survey data. This means georeferencing the survey, allowing us to locate (ideally) every survey respondent by means of their geo-coordinates. The next step is called spatial linking. We can start linking various pieces of GIS data with the location of the survey respondent's household. Finally, we can use combined information from GIS layers and our respondents. Figure 4 shows how we are able to connect various spatial layers and context indicators to our survey data.

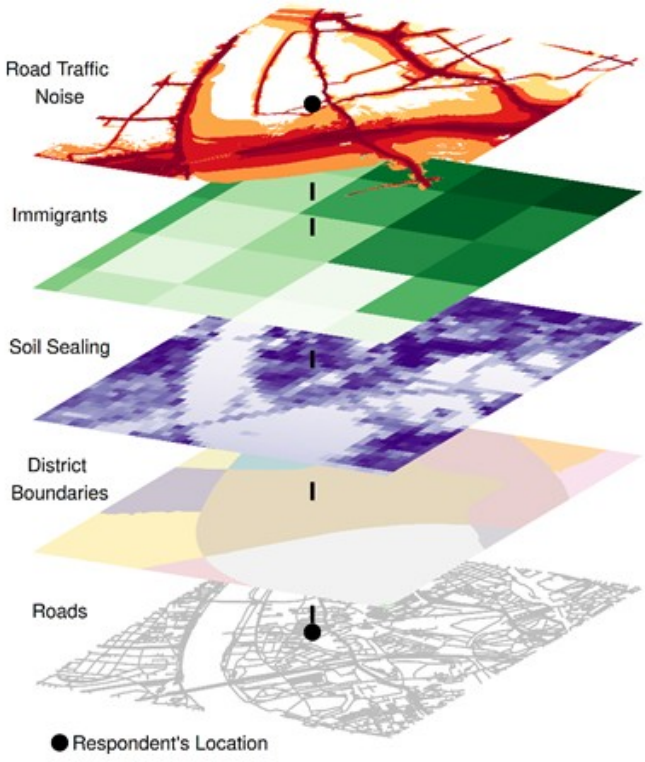

Figure 4: Spatial linking: adding GIS data to the information about the respondent's location (JÜNGER, 2019, p.42, reprinted with permission from the author) [50]

The strength of GIS data (providing different layers of maps) lies in the processing capabilities and presentation options for spatial data. We can link GIS data on the living environment of the respondents from the municipal level even down to the street level. Integrating GIS data and survey data also represents effective interdisciplinary cooperation. While geographers are specialists in geospatial methods, sociologists are familiar with survey methods and respondent data. If we succeed in linking both types of data in an appropriate way, we can use our classic statistical techniques (while carefully addressing certain levels of bias) to draw sophisticated conclusions (JÜNGER, 2019). [51]

Gathering point-location data and combining it with survey data helps to deepen our sociological findings, which have traditionally been based on administrative units (BAUR et al., 2014). With this strategy, we have the opportunity to receive more fine-tuned information about the concrete living environment of the individuals. We can also compute mean values of social groups and can estimate their distance to relevant infrastructure options in their neighborhood areas. Although these methodological approaches are quite new, there are already a great many applications, such as assessing health indicators (SAIB et al., 2014), environmental issues (DIEKMANN & MEYER, 2010), social inequalities (DOWNEY, CROWDER & KEMP, 2016), and education (WESSLING, HARTUNG & HILLMERT, 2015). Thanks to years of technical progress, our traditional

methods (such as survey research) profit a great deal from cheap and easy-to-use research tools that only require basic knowledge of GIS procedures. [52]

Georeferenced survey data is mostly used in the context of neighborhood studies. Interest in residential segregation goes as far back as early studies by the Chicago school (PARK & BURGESS, 1926) and is now celebrating a revival because new technical possibilities allow us to use more precise units. In this context, a notable study of neighborhood effects on ethnic prejudice will serve as the third empirical example. In the study, KLINGER, MÜLLER and SCHAEFFER (2017) tested the halo effect thesis, which may provide a potential solution to the contradictions between ethnic threat and contact theory. While the ethnic threat approach (QUILLIAN, 1995) proposes a rise in ethnic prejudice in culturally diverse neighborhoods, contact theory (PETTIGREW, 1998) argues for a reduction in prejudice due to increased opportunities for intergroup contact. The halo effect thesis assumes that people living in homogenous neighborhoods bordering ethnically diverse ones are particularly susceptible to xenophobia. They have limited opportunities for intergroup contact (due to their own neighborhood) but fear the impact of immigration because highly diverse neighborhoods are quite close to their surroundings. This study is a perfect example of how the new data possibilities allow for a more sophisticated empirical test of certain hypotheses. KLINGER et al. (2017) used the georeferenced data collected as part of ALLBUS (German General Social Survey 2014) and complemented those data with census 2011 data on the proportion of foreigners. By geocoding the survey data, the respondents could be located in the grid cells of the 2011 census. The share of foreigners could be depicted in all adjacent grid cells (of 1 km²) based on geocoded census data (Figure 5). [53]

This procedure makes it possible to analyze all possible halo constellations across Germany and combines that neighborhood information with the xenophobia values of ALLBUS respondents. The radius of one square kilometer effectively illustrates the precise neighborhood where most interactions take place. It is very rare that data are available with such spatial precision and are available for a comprehensive test of the hypothesis. Nevertheless, the authors found *no effect* at all, although they tested for various coefficients, which were derived in a methodologically sound way. They even took into account various levels of bias. One important bias in research is the modifiable area unit problem (MAUP). Depending on how methodologists extend their spatial units of analysis, the results of the analysis may change. Consequently, all results from statistical models embedded into certain spatial contexts may be affected by the level of aggregation (CHAN-TACK, 2014). Nevertheless, the authors computed different models from narrow to large-scale spatial units without finding any significant effect.

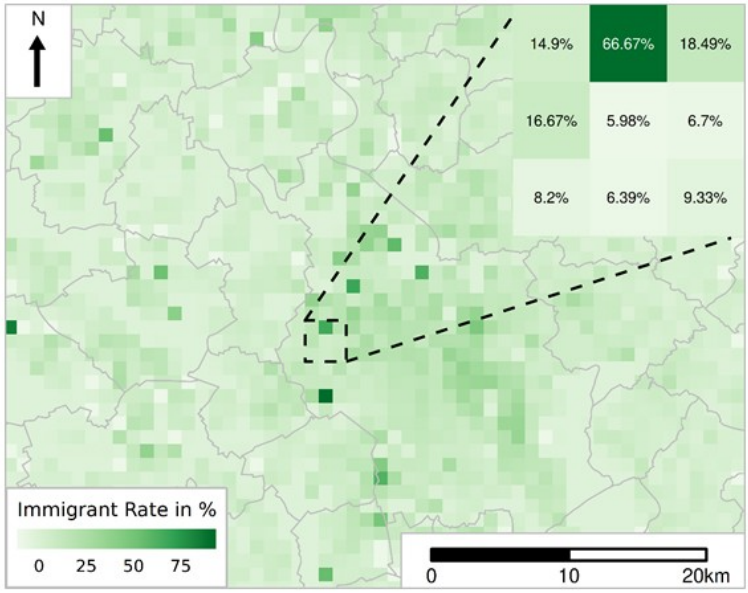

Figure 5: The immigrant rate and potential halo constellations (example of Cologne) (JÜNGER, 2019, p.129, reprinted with permission from the author) [54]

The study by KLINGER et al. (2017) is a good example that highly advanced methodological approaches may still have shortcomings. The authors themselves mentioned that people with an immigrant background are simply measured as foreigners. Here we still lack data on the proportion of different ethnic groups on location. The landscape of immigration all over Germany is highly diverse with groups (e.g., from Western Europe) being largely integrated (and even "invisible") and third-country nationals mainly being the "target" of current prejudice (with regard to Muslims, see PICKEL & YENDELL, 2016). Additionally, there are large fields of polarizations between rural and urban districts, where people in urban areas may be far more progressive (DIRKSMEIER, 2014). Moreover, there are different constellations of immigrants in East and West Germany (WAGNER et al., 2008) and potentially different dynamics of prejudice (ASCHAUER & MAYERL, 2019 for a Europe-wide comparison). Accordingly, without accounting for regional differences in the models, potential effects can easily be averaged over all spatial units. [55]

When we deal with a highly advanced methodology, we often still have to admit that our data faces limitations and that the sociological interpretation only begins after the methodological results have been computed. Thus, the call for theory-driven social research should be repeated constantly in order to avoid potential pitfalls despite the new potential posed by precise data. Finally, it is important to point out the fact that every survey adopting these technically advanced procedures is merely a snapshot in time. Especially with regard to migration and neighborhood effects, spatial characteristics often change rapidly. Certain events (such as the refugee crisis) and ongoing public discourses may shape people's realities. As a result, it seems that the best data possibilities we have are often not suitable enough to evaluate complex issues of social cohesion that vary

across regions, social groups, and over time. Data on xenophobia and the share of foreigners, which are available in high spatial resolution, are probably not sophisticated enough to account for ongoing dynamics (such as mediatization, translocalization and polycontexturalization), which as a whole continuously affect the social relations of individuals. [56]

7. Conclusion: Spatial Constellations and Demands for Future Quantitative Research

In this article, I tried to explore the potentials of quantitative research (predominantly referring to survey research) to react adequately to the current re-figurations of space, which were prominently addressed by KNOBLAUCH and LÖW (2020). Starting with comparative sociology at the macro level, the domain of survey research is quite strong. This is reflected by established cross-national surveys within Europe (such as the European Social Survey and the European Value Study) and by surveys covering countries from different regions of the world (such as the International Social Survey Program, the World Value Survey, etc.). In spite of the many achievements of transnational research (for instance, DAVIDOV, SCHMIDT, BILLIET & MEULEMAN, 2018), we still face major difficulties. When it comes to our theoretical concepts, which are measured in surveys, we have to be aware that all latent constructs need to be operationalized in a way that makes the data comparable (BACHLEITNER et al., 2014 for a more detailed overview of equivalence). Surveys still refer mainly to the national containers of space and there has not been any notable progress on how to select appropriate units or how exactly to make use of different cultures. One of the main weaknesses of cross-cultural survey research is evident in the fact that culture always equals nation. Multilevel analyses based on transnational surveys currently embody the mainstream of cross-cultural research and are best suited to evaluate the economic and cultural cleavages that manifest themselves around conflicts of distribution and identity. However, most studies hardly refer to spatial re-figurations. I therefore presented one example based on my own research (ASCHAUER, 2017b), adopting a theory-guided conception of different welfare state regimes in the EU. [57]

The focus on supranational dynamics across Europe was just one example of how to deal with alternative units in order to obtain more sophisticated results, while the main results of the multilevel model are still based on national dynamics of societal well-being (Table 1). In order to overcome the deficiencies of methodological nationalism, we have to search for new units of analysis that transcend our national borders (focusing more on supranational dynamics) or that deepen our knowledge within nations (focusing more closely on regional or local dynamics, or specifically addressing certain subgroups within or between societies) (for methodological approaches in well-being research, also ASCHAUER, 2019). Furthermore, we need to find ways to assess transnational relations, because surveys are always restricted to the data of individuals who normally do not know each other. Therefore, from a transnational perspective, surveys only make it possible to assess how citizens are influenced by their local,

regional, or national contexts, while the selected aggregation levels are still treated as unrelated aggregated units. [58]

Hence, it is not surprising that quantitative techniques such as the social network analysis (McCULLOH, ARMSTRONG & JOHNSON, 2013) have gained ground in order to focus more on the interconnectedness of spaces or movements beyond conventional spatial categories. Transnational migration research (Example 2) is one of the most dynamic research areas that explores the network of mobile populations, which circulate between various places and build strong ties beyond administrative borders. They are an ideal example of living and belonging in a translocal way, without relying on the current place of residence. The social network analysis is certainly one way to explore the relations between individuals in the future. It is even regarded as the missing link—in an era of globalization and mobility—to investigate how the interconnectedness of people, objects, and signs is structured and how they evolve over time (BILECEN, GAMPER & LUBBERS, 2018). However, the network approach refers mainly to a methodological paradigm founded in the mathematics of graph theory and social interaction. It has a well-developed set of descriptive statistics, but it often lacks theoretical elaboration. Especially when we explore elements of polycontexturalization at specific locations, we need to integrate findings from the network analysis within a broader array of methods. Mixed-method designs have to be put more prominently into place to address the multiple layers of spatial dynamics. The combination of qualitative and quantitative methods has been practiced in social research for many years, although both camps of methodology are still living side by side. The re-figuration of spaces in particular, which can be considered an obvious and challenging research agenda, would be an opportunity for both camps to bite the bullet and take the best from both methodological worlds. In addition to this plea to cross methodological boundaries, we also have to overcome spatial boundaries with multi-sited research (COLEMAN & VON HELLERMANN, 2012). Researchers are always mired in their value systems and are inclined to misinterpret data. In order to enhance blind spots when researchers deal with cultures outside of their own, experts from within are required to receive a minimum of culture-specific knowledge (BAUR et al., 2014). This means a necessary adoption of perspectives and a triangulation of researchers—especially when comparing multiple layers of space in culturally distant regions. [59]

Combing geographic information systems with survey data is another special methodological strategy to follow the path of a spatially integrated science. Here, it is possible to uncover different spatial layers and to measure their impact on the living conditions or attitudinal and behavioral characteristics of individuals. This method—using the advances of the mediatization of the social world and the new benefits of digitalization—is perfectly tailored to enhance our knowledge of spatial dynamics at the micro level. Although a georeferenced data analysis fails to adopt a relational concept of space (because the analysis is still focused on the individual and not on social interactions), we are able to obtain precise measures of local characteristics, which can be interpreted as clear signs of the social production of space. Additionally, the preciseness of GIS data reflects even

higher standards compared to surveys. Using the quality criteria of quantitative research, we can state that physical/material data is also normalized and constructed, yet still more objective than survey data. The indicators can be seen as reliable and valid measurements representing infrastructure at the local level (MEYER & BRUDERER-ENZLER, 2013). [60]

The new potentials of information technology and using mass data inspire a great deal of fascination among quantitative methodologists, but there is the danger that it is only the tools that drive the development of research and profound theoretical thinking is left behind. That is the reason why we always have to complement data-driven research with theory-guided knowledge to prevent overly hasty results. Our role as methodologists in the social sciences should be to reflect precisely on potential strengths and weaknesses in our research methods. Data analysis itself is just the first step to scientific knowledge and pure findings only allow for superficial conclusions. In methodology, one must not be consumed by a single topic and be carried away by the fascination of data science, but instead it is necessary to carefully select the advancements in methodology that are suitable for sociological research. In the competition between traditional and new approaches in quantitative research to addressing space, the emphasis of empirical social research should still be placed on data interpretation. It is always necessary to incorporate our results into recent theoretical advancements because otherwise our studies based on sophisticated methods would be useless for the further development of the sociology of space. This plea for theory-driven quantitative research may sound rather old-fashioned (especially in reference to the boom in data science), but it should be repeated constantly in order to avoid potential pitfalls in spatial research. [61]

References

Alba, Richard & Nee, Victor (2009). *Remaking the American mainstream: Assimilation and contemporary immigration.* Cambridge, MA: Harvard University Press.

Aschauer, Wolfgang (2016). Societal malaise and ethnocentrism in the European Union. Monitoring societal change by focusing on EU citizens' perceptions of crises. *Historical Social Research*, *41*(2), 307-359, https://doi.org/10.12759/hsr.41.2016.2.307-359 [Accessed: April 25, 2020].

Aschauer, Wolfgang (2017a). *Das gesellschaftliche Unbehagen in der EU. Ursachen, Dimensionen, Folgen.* Wiesbaden: Springer VS.

Aschauer, Wolfgang (2017b). Societal malaise in turbulent times. Introducing a new explanatory factor of populism in a cross-national Europe-wide perspective. In Reinhard C. Heinisch, Christina Holtz-Bacha & Oscar Mazzoleni (Eds.), *Handbook of political populism* (pp.307-328). Baden: Nomos.

Aschauer, Wolfgang (2019). New directions in cross-cultural wellbeing research. *Revue des politiques sociales et familiales*, *132-133*, 5-23.

Aschauer, Wolfgang & Mayerl, Jochen (2019). The dynamics of ethnocentrism in European regions. Comparing enduring and emerging determinants of solidarity towards immigrants. *European Societies*, *21*(5), 672-703.

Bachleitner, Reinhard; Weichbold, Martin; Aschauer, Wolfgang & Pausch, Markus (2014). *Methodik und Methodologie interkultureller Umfrageforschung. Zur Mehrdimensionalität der funktionalen Äquivalenz*. Wiesbaden: Springer VS.

Bauman, Zygmunt (1999 [1997]). *Das Unbehagen in der Postmoderne.* Hamburg: Hamburger Edition.

Bauman, Zygmunt (2003 [1999]). *Flüchtige Moderne.* Frankfurt/M.: Suhrkamp.

Bauman, Zygmunt (2007). *Liquid times: Living in an age of uncertainty*. Cambridge: Polity Press.

Baur, Nina (2011). Mixing process-generated data in market sociology. *Quality & Quantity*, *45*(6), 1233-1251.

Baur, Nina (2018). Kausalität und Interpretativität. Über den Versuch der quantitativen Sozialforschung, zu erklären ohne zu verstehen. In Leila Akremi, Nina Baur, Hubert Knoblauch & Boris Traue (Eds.), *Handbuch Interpretativ forschen* (pp.306-360). Weinheim: Beltz Juventa.

Baur, Nina; Hering, Linda; Raschke, Anna Lena & Thierbach, Cornelia (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, https://doi.org/10.12759/hsr.39.2014.2.7-50 [Accessed: May 3, 2021].

Beck, Ulrich (2012). *Das deutsche Europa. Neue Machtlandschaften im Zeichen der Krise*. Berlin: Suhrkamp.

Beck, Ulrich & Grande, Edgar (2010). Jenseits des methodologischen Nationalismus. Außereuropäische und europäische Variationen der Zweiten Moderne. *Soziale Welt*, *61*, 187-216.

Beck, Ulrich & Sznaider, Natan (2006). Unpacking cosmopolitanism for the social sciences: A research agenda. *The British Journal of Sociology*, *57*(1), 1-23.

Beckers, Tilo & Rosar, Ulrich (2010). Komparative empirische Sozialforschung. Eine Einführung zu Varianten quantitativen Vergleichens. In Tilo Beckers, Klaus Birkelbach, Jörg Hagenah & Ulrich Rosar (Eds.), *Komparative empirische Sozialforschung* (pp.11-39). Wiesbaden: VS Verlag für Sozialwissenschaften.

Bernhard, Stefan (2010). Netzwerkanalyse und Feldtheorie. Grundriss einer Integration im Rahmen von Bourdieus Sozialtheorie. In Christian Stegbauer (Ed.), *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften* (2nd ed., pp.121-130). Wiesbaden: VS Verlag für Sozialwissenschaften.

Bhabha, Homi K. (2000 [1994]). *Die Verortung der Kultur*. Tübingen: Stauffenberg.

Bilecen, Basak; Gamper, Markus & Lubbers, Miranda J. (2018). The missing link: Social network analysis in migration and transnationalism. *Social Networks, 53*, 1-3.

Boatcă, Manuela (2010). Multiple Europas und die interne Politik der Differenz. In Manuela Boatcă & Wilfried Spohn (Eds.), *Globale, multiple und postkoloniale Modernen* (pp.341-357). München: Hampp.

Boatcă, Manuela (2019). Forgotten Europes. Rethinking regional entanglements from the Caribbean. In Breno Bringel & Heriberto Cairo (Eds.), *Critical geopolitics and regional (re)configurations: Interregionalism and transnationalism between Latin America and Europe* (pp.96-116). London: Routledge.

Borgatti, Stephen P.; Mehra, Ajay; Brass, Daniel J. & Labianca, Giuseppe (2009). Network analysis in the social sciences. *Science*, *323*(5916), 892-895.

Bourdieu, Pierre (1982 [1979]). *Die feinen Unterschiede. Kritik der gesellschaftlichen Urteilskraft*. Frankfurt/M.: Suhrkamp.

Bourdieu, Pierre (2001 [2000]). *Das politische Feld. Zur Kritik der politischen Vernunft.* Konstanz: UVK.

Bude, Heinz (2014). *Gesellschaft der Angst*. Hamburg: Hamburger Edition.

Carrington, Peter J. & Scott, John (2011). Introduction. In John Scott & Peter J. Carrington (Eds.), *The Sage handbook of social network analysis* (pp.1-8). London: Sage.

Castel, Robert (2000). *Die Metamorphosen der sozialen Frage. Eine Chronik der Lohnarbeit.* Konstanz: UVK.

Castells, Manuel (2004). *The network society. A cross-cultural perspective*. Cheltenham: Edward Elgar.

Chan-Tack, Anjanette M. (2014). The case for spatially-sensitive data: How data structures affect spatial measurement and substantive theory. *Historical Social Research*, *39*(2), 315-346, https://doi.org/10.12759/hsr.39.2014.2.315-346 [Accessed: May 3, 2021].

Coleman, James (1991). *Grundlagen der Sozialtheorie, Bd. 1: Handlungen und Handlungssysteme.* München: Oldenbourg.

Coleman, Simon & Von Hellermann, Pauline (Eds.) (2012). *Multi-sited ethnography: Problems and possibilities in the translocation of research methods, Vol. 3*. New York, NY: Routledge.

Davidov, Eldad; Schmidt, Peter; Billiet, Jaak & Meuleman, Bart (2018). *Cross-cultural analysis. Methods and applications (2nd ed.)*. New York, NY: Routledge.

Denzin, Norman K. (1978). *The research act. A theoretical introduction to sociological methods (2nd ed.)*. New York, NY: McGraw Hill.

Diekmann, Andreas & Meyer, Reto (2010). Demokratischer Smog? Eine empirische Untersuchung zum Zusammenhang zwischen Sozialschicht und Umweltbelastungen. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, *62*(3), 437-457.

Dirksmeier, Peter (2014). Are urbanites more permissive? Germany's urban geography of prejudice. *Urban Affairs Review*, *50*(6), 835-863.

Downey, Liam; Crowder, Kyle & Kemp, Robert J. (2016). Family structure, residential mobility, and environmental inequality. *Journal of Marriage and Family*, *79*(2), 535-555.

Durand, Jorge; Massey, Douglas S. & Zenteno, Rene M. (2001). Mexican immigration to the United States: Continuities and changes. *Latin American Research Review*, *36*(1), 107-127.

Durkheim, Emile (1982 [1895]). *Die Regeln der soziologischen Methode*. Darmstadt: Luchterhand.

Eisenstadt, Shmuel N. (2001). The civilizational dimension of modernity. Modernity as a distinct civilization. *International Sociology*, *16*(3), 320-340.

Elchardus, Mark & De Keere, Kobe (2012). Social control and institutional trust: Reconsidering the effect of modernity on social malaise. *The Social Science Journal*, *50,* 101-111.

Esping-Andersen, Gosta (1990). *The three worlds of welfare capitalism.* Cambridge: Polity Press.

Esser, Hartmut (1993). *Soziologie. Allgemeine Grundlagen*. Frankfurt/M.: Campus.

Esser, Hartmut (2004). Welche Alternativen zur Assimilation gibt es eigentlich?. *Imis-Beiträge*, *23*, 41-61.

Esser, Hartmut (2018). Zwei Seelen wohnen, ach! in meiner Brust? Nicht nur eine "Stellungnahme" aus "gegebenem Anlass". *Zeitschrift für Theoretische Soziologie*, *7(1)*, 132-152.

Faist, Thomas; Fauser, Margit & Reisenauer, Eveline (2014). *Das Transnationale in der Migration. Eine Einführung*. Weinheim: Beltz Juventa.

Fauser, Margit; Lieblau, Elisabeth; Voigtländer, Sven; Tuncer, Hidayet; Faist, Thomas & Razum, Oliver (2015). Measuring transnationality of immigrants in Germany: Prevalence and relationship with social inequalities. *Ethnic and Racial Studies*, *38*(9), 1497-1519.

Ferrera, Maurizio (1996). The "Southern model" of welfare in social Europe. *Journal of European social policy*, *6*, 17-37.

Flick, Uwe (1998). *An introduction to qualitative research.* London: Sage.

Frank, Ove (2011). Survey sampling in networks. In John Scott & Peter J. Carrington (Eds.), *The Sage handbook of social network analysis* (pp.389-403). London: Sage.

Fuller, Martin G. & Löw, Martina (2017). Introduction: An invitation to spatial sociology. *Current Sociology*, *65*(4), 469-491.

Giddens, Anthony (1991). *The consequences of modernity*. Cambridge: Polity Press.

Giddens, Anthony (1995 [1984]). *Die Konstitution der Gesellschaft.* Frankfurt/M.: Suhrkamp.

Glick Schiller, Nina; Basch, Linda & Blanc, Christina S. (1995). From immigrant to transmigrant: Theorizing transnational migration. *Anthropological Quarterly*, *68*(1), 48-63.

Hahn, Cornelia & Stempfhuber, Martin (Eds.) (2015). *Präsenzen 2.0. Körperinszenierung in Medienkulturen.* Wiesbaden: Springer VS.

Han, Petrus (2010). *Soziologie der Migration: Erklärungsmodelle, Fakten, politische Konsequenzen, Perspektiven (3rd ed.).* Stuttgart: Lucius & Lucius.

Harvey, David (1994). Die Postmodere und die Verdichtung von Raum und Zeit. In Andreas Kuhlmann & Marc Augè (Eds.), *Philosophische Ansichten der Kultur der Moderne* (pp.48-79). Frankfurt/M.: Fischer.

Heidenreich, Martin (2010). Einkommensungleichheiten in Europa. Multiple Raumbezüge sozialer Ungleichheiten in einem regional-national-europäischen Mehrebenensystem. *Zeitschrift für Soziologie*, *39*(6), 426-446.

Hirschauer, Stefan (2018). Der Quexit. Das Mannemer Milieu im Abseits der Soziologie. *Zeitschrift für Theoretische Soziologie*, *7*(1), 153-167.

Hox, Joop (2010). *Multilevel analysis: Techniques and applications (2nd ed.)*. New York, NY: Routledge.

Johnston, Ron & Pattie, Charles (2001). Dimensions of retrospective voting: Economic performance, public service standards and Conservative party support at the 1997 British General Election. *Party Politics*, *7*(4), 469-490.

Jünger, Stefan (2019). *Using georeferenced data in social science survey research:* The *method* of spatial linking and its application *with* the German General *Social Survey* and the GESIS Panel. *GESIS-Schriftenreihe*, *24*, https://doi.org/10.21241/ssoar.63688 [Accessed: April 24, 2020].

Kelle, Udo (2001). Sociological explanations between micro and macro and the integration of qualitative and quantitative methods. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 2*(1), Art. 5, https://doi.org/10.17169/fqs-2.1.966 [Accessed: April 24, 2020].

Kelle, Udo (2014). Mixed methods. In Nina Baur & Jörg Blasius (Eds.), *Handbuch Methoden der empirischen Sozialforschung* (pp.153-166). Wiesbaden: Springer VS.

Klinger, Julia; Müller, Stefan & Schaeffer, Merlin (2017). Der Halo-Effekt in einheimisch-homogenen Nachbarschaften. *Zeitschrift für Soziologie*, *46*(6), 402-419.

Knoblauch, Hubert & Löw, Martina (2020). The re-figuration of spaces and refigured modernity—concept and diagnosis. *Historical Social Research*, *45*(2), 263-292, https://doi.org/10.12759/hsr.45.2020.2.263-292 [Accessed: May 3, 2021].

Kollmorgen, Raj (2009). Postsozialistische Wohlfahrtsregime in Europa. Teil der "drei Welten" oder eigener Typus?. In Birgit Pfau-Effinger, Sladana S. Magdalenic & Christof Wolf (Eds.), *International vergleichende Sozialforschung. Ansätze und Messkonzepte unter den Bedingungen der Globalisierung* (pp.65-92). Wiesbaden: VS Verlag für Sozialwissenschaften.

Kuckartz, Udo (2014). *Mixed methods: Methodologie, Forschungsdesigns und Analyseverfahren*. Wiesbaden: Springer VS.

Laumann, Edward O.; Marsden, Peter V. & Prensky, David (1989). The boundary specification problem in network analysis. In Linton C. Freeman, Douglas White & A. Kimball Romney (Eds.), *Research methods in social network analysis* (pp.61-87). Fairfax, VA: George Mason University Press.

Lefebvre, Henri & Nicholson-Smith, Donald (1991 [1974]). *The production of space*. Oxford: Blackwell.

Legewie, Nicolas (2013). An introduction to applied data analysis with qualitative comparative analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 14*(3), Art. 15, https://doi.org/10.17169/fqs-14.3.1961 [Accessed: May 2, 2021].

Legewie, Nicolas (2017). Anchored calibration: From qualitative data to fuzzy sets. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *18*(3), Art. 14, https://doi.org/10.17169/fqs-18.3.2790 [Accessed: May 2, 2021].

Legewie, Nicolas (2019). Qualitative comparative analysis. In Nina Baur & Jörg Blasius (Eds.), *Handbuch Methoden der empirischen Sozialforschung* (pp.649-665). Wiesbaden: Springer VS.

Leibfried, Stephan (1992). Towards a European welfare state? On integrating poverty regimes into the EC. In Zsuzsa Ferge & Jon E. Kolberg (Eds.), *Social policy in a changing Europe* (pp.245-279). New York, NY: Campus.

Lengfeld, Holger & Hirschle, Jochen (2010). Die Angst der Mittelschicht vor dem sozialen Abstieg. In Nicole Burzan & Peter A. Berger (Eds.), *Dynamiken (in) der gesellschaftlichen Mitte* (pp.181-200). Wiesbaden: VS Verlag für Sozialwissenschaften.

Lessenich, Stephan (1995). *Wohlfahrtsstaat, Arbeitsmarkt und Sozialpolitik in Spanien: eine exemplarische Analyse postautoritären Wandels*. Opladen: Leske + Budrich.

Liebow, Edward; McGrady, Gene; Branch, Kristi; Vera, Mildred; Klovdahl, Alden; Lovely, Richard; Müller, Charles & Mann, Eberhard (1995). Eliciting social network data and ecological model-building: Focus on choice of name generators and administration of random-walk study procedures. *Social Networks*, *17*(3-4), 257-272.

Linde, Jonas (2012). Why feed the hand that bites you. Perceptions of procedural fairness and system support in post-communist democracies. *European Journal of Political Research*, *51*, 410-34.

Löw, Martina (2001). *Raumsoziologie.* Frankfurt/M.: Suhrkamp.

Luhmann, Niklas (1997). *Die Gesellschaft der Gesellschaft*. Frankfurt/M.: Suhrkamp.

Lynn, Peter; Hader, Sabine; Gabler, Siegfried & Laaksonen, Seppo (2007). Methods for achieving equivalence of samples in cross-national surveys: The European social survey experience. *Journal of Official Statistics*, *23*(1), 107-124.

Marin, Alexandra & Wellmann, Barry (2011). Social network analysis. An introduction. In John Scott & Peter J. Carrington (Eds.), *The Sage handbook of social network analysis* (pp.11-25). London: Sage.

Marsden, Peter V. (2011). Survey methods for network data. In John Scott & Peter J. Carrington (Eds.), *The Sage handbook of social network analysis* (pp.370-388). London: Sage.

Mau, Steffen (2007). *Transnationale Vergesellschaftung. Die Entgrenzung sozialer Lebenswelten*. Frankfurt/M.: Campus.

McCulloh, Ian; Armstrong, Helen & Johnson, Anthony (2013). *Social network analysis with applications*. Hoboken, NJ: Wiley.

Meuleman, Heiner (Ed.) (2008). *Social capital in Europe. Similarity of countries and diversity of people? Multilevel analysis of the European social survey 2002*. Leiden: Brill.

Meyer, Reto & Bruderer-Enzler, Heidi (2013). Geographische Informationssysteme (GIS) und ihre Anwendung in den Sozialwissenschaften am Beispiel des Schweizer Umweltsurveys. *Methoden, Daten, Analysen*, *7*(3), 317-346.

Miller, William L. (1977). *Electoral dynamics in Britain since 1918*. London: Macmillan.

Moody, James & White, Douglas R. (2003). Structural cohesion and embeddedness: A hierarchical concept of social groups. *American Sociological Review*, *68*(1), 103-127.

Nachtwey, Oliver (2016). *Die Abstiegsgesellschaft: über das Aufbegehren in der regressiven Moderne*. Frankfurt/M.: Suhrkamp.

Naess, Hans Erik (2016). Creating "The field": Glocality, relationality and transformativity. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *17*(3), Art. 15, https://doi.org/10.17169/fqs-17.3.2600 [Accessed: April 24, 2020].

Park, Robert E. & Burgess, Ernest W. (1926). *The urban community.* Chicago, IL: University of Chicago Press.

Pettigrew, Thomas F. (1998). Intergroup contact theory. *Annual Review of Psychology*, *49*(1), 65-85.

Pickel, Gert & Yendell, Alexander (2016). Islam als Bedrohung?. *Zeitschrift für vergleichende Politikwissenschaft*, *10*(3-4), 273-309.

Portes, Alejandro & Zhou, Min (1993). The new second generation: Segmented assimilation and its variants. *The Annals of the American Academy of Political and Social Science*, *530*(1), 74-96.

Portes, Alejandro; Haller, William J. & Guarnizo, Luiz E. (2002). Transnational entrepreneurs: An alternative form of immigrant economic adaptation. *American Sociological Review*, *67*(2), 278-298.

Pries, Ludger (2010). *Transnationalisierung. Theorie und Empirie ländervergleichender Vergesellschaftung*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Quillian, Lincoln (1995). Prejudice as a response to perceived group threat: Population composition and anti-immigrant and racial prejudice in Europe. *American Sociological Review*, *60*, 586-611.

Ragin, Charles C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond.* Chicago, IL: University of Chicago Press.

Robertson, Roland (1994). Globalisation or glocalisation?. *Journal of International Communication*, *1*(1), 33-52.

Rodriguez-Moral, Antonio & Vorsatz, Marc (2016). An overview of the measurement of segregation: Classical approaches and social network analysis. In Pasquale Commendatore, Mariano Matilla-Garcia, Louis M. Varela & Jose S. Canovas (Eds.), *Complex networks and dynamics: Social and economic interactions* (pp.93-119). Cham: Springer.

Rokkan, Stein (2000). *Staat, Nation und Demokratie in Europa. Die Theorie Stein Rokkans aus seinen gesammelten Werken rekonstruiert und eingeleitet von Peter Flora*. Frankfurt/M.: Suhrkamp.

Ryan, Louise (2015). "Inside" and "outside" of what or where? Researching migration through multi-positionalities. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 16*(2), Art. 17, https://doi.org/10.17169/fqs-16.2.2333 [Accessed: April 24, 2020].

Saib, Mahdi S.; Caudeville, Julien; Carre, Florence; Ganry, Olivier; Trugeon, Alain & Cicolella, Andre (2014). Spatial relationship quantification between environmental, socioeconomic and health

data at different geographic levels. *International Journal of Environmental Research and Public Health*, *11*(4), 3765-3786.

Scheibelhofer, Elisabeth (2011). *Raumsensible Migrationsforschung*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Scheuch, Erwin K. (1973). Das Interview in der Sozialforschung. In Rene König (Ed.), *Handbuch der empirischen Sozialforschung, Bd. 2: Grundlegende Methoden und Techniken der empirischen Sozialforschung, Teil 1* (pp.66-190). Stuttgart: Enke.

Scheuringer, Brunhilde (2006). Transnationale Migration als Entgrenzungsphänomen. In Manfred Oberlechner (Ed.), *Die missglückte Integration? Wege und Irrwege in Europa* (pp.239-256). Wien: Braumüller.

Schneider, Carsten Q. & Wagemann, Claudius (2010). Qualitative comparative analysis (QCA) and fuzzy-sets: Agenda for a research approach and a data analysis technique. *Comparative Sociology*, *9*(3), 376-396.

Schröder, Martin (2013). *Integrating varieties of capitalism and welfare state research. A unified typology of capitalism*. New York, NY: Palgrave.

Schroer, Martin (2006). *Räume, Orte, Grenzen. Auf dem Weg zu einer Soziologie des Raums.* Frankfurt/M.: Suhrkamp.

Sheller, Mimi & Urry, John (2006). The new mobilities paradigm. *Environment and planning A: Economy and Space*, *38*(2), 207-226.

Simmel, Georg (1995 [1908]). Der Raum und die räumliche Ordnung in der Gesellschaft. In Otthein Rammstedt (Ed.), *Georg Simmel – Soziologie: Untersuchungen über die Formen der Vergesellschaftung. Gesamtausgabe, Bd. 11* (pp.687-790). Frankfurt/M.: Suhrkamp.

Spier, Tim (2010). *Modernisierungsverlierer? Die Wählerschaft rechtspopulistischer Parteien in Europa*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Standing, Guy (2011). *The precariat. The new dangerous class.* London: Bloomsbury.

Strogatz, Steven H. (2001). Exploring complex networks. *Nature*, *410*(6825), 268-276, https://doi.org/10.1038/35065725 [Accessed: May 3, 2021].

Tiemann, Guido (2009). Zwei Verfahren zur Analyse heterogener Kausalität: Time-Series-Cross-Section- und Mehrebenenmodelle. In Susanne Pickel, Gert Pickel, Hans J. Lauth & Detlef Jahn (Eds.), *Methoden der vergleichenden Politik- und Sozialwissenschaft. Neue Entwicklungen und Anwendungen* (pp.213-232). Wiesbaden: VS Verlag für Sozialwissenschaften.

Tilly, Charles (1990). *Coercion, capital, and European states, AD 990-1992.* Oxford: Blackwell.

Tilly, Charles (2004). *Stories, identities, and political change*. Lanham, MD: Rowman & Littlefield.

Todorova, Maria (1997). *Imagining the Balkans.* Oxford: Oxford University Press.

Urry, John (2003). *Global complexity*. Cambridge: Polity Press.

Verdery, Ashton M.; Mouw, Ted; Edelblute, Heather & Chavez, Sergio (2018). Communication flows and the durability of a transnational social field. *Social Networks*, *53*, 57-71.

Wagner, Gert G.; Goebel, Jan; Krause, Peter; Pischner, Rainer & Sieber, Ingo (2008). Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland—Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender). *AStA Wirtschafts-und Sozialstatistisches Archiv*, *2*(4), 301-328, https://doi.org/10.1007/s11943-008-0050-y [Accessed: May 3, 2021].

Weßling, Katarina; Hartung, Andreas & Hillmert, Steffen (2015). Spatial structure counts: the relevance of regional labour-market conditions for educational transitions to vocational training. *Empirical Research in Vocational Education and Training*, *7*(1), 12.

Author

Wolfgang ASCHAUER is a sociologist, psychologist, and communication scientist and works as an associate professor at the Department of Political Science and Sociology at the University of Salzburg (Division of Sociology and Cultural Science). In 2015, he received his habilitation in sociology after completing an extensive monograph on "The Societal Malaise of EU Citizens," which was published by Springer in 2017 (in German). His main fields of research include challenges of social integration in Western societies. He has conducted numerous studies on ethnocentrism, social inclusion, well-being, and integration dynamics among immigrants. He was the coordinator of the research network 21 ("Quantitative Methods") of the European Sociological Association and has long been working on substantial improvements concerning quantitative methodology in cross-cultural comparisons. His understanding of practicing sociology means addressing the most pressing issues of contemporary societal developments, learning from interdisciplinary approaches, and promoting theory-guided research with an open view towards the wide range of methods in the social sciences.

Contact:

Wolfgang Aschauer

University of Salzburg
Department of Political Science and Sociology
Division of Sociology and Cultural Science
Rudolfskai 42
5020 Salzburg, Austria

Tel.: +43 / (0) 662 /8044-4105
Fax.: +43 / (0) 662 / 8044-413

E-mail: wolfgang.aschauer@sbg.ac.at
URL: http://www.uni-salzburg.at/soziologie/aschauer

Citation

Aschauer, Wolfgang (2021). The Re-Figuration of Spaces and Comparative Sociology: Potential New Directions for Quantitative Research [61 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *22*(2), Art. 21, http://dx.doi.org/10.17169/fqs-22.2.3739.