Centrality and Power in Urban Networks of Music Production: Exploring Relational Geographies in the German Music Market

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Abstract

Popular music arises from production networks, in which various institutions and highly specialized actors such as musicians, producers, and sound engineers interact. As places where these actors come together, recording studios serve as centers of musical creativity. Each album that is produced can be viewed as a temporary merging of professional and personal networks across space and time that connects recording studios in different cities. In this way, virtual and physical movements between recording studios link cities around the world, forming urban networks of music production.

The aim of this paper is to identify key cities of music production in the German music market in terms of their centrality, power, and position in global production networks. We apply an approach of social network analysis to scrutinize interurban production networks. For this purpose, we collected information about the locations of studios involved in recording, mixing, and mastering a total of 155 albums of the German Top 20 album charts from October 2017 to February 2018.

Using this data, we identify and map comprehensive global networks of the German music market. Various measures of centrality and power reveal distinct patterns of intercity connections. Our analysis shows that the most central cities (interlinked to well-connected cities) are also the most powerful ones (interlinked to less-connected cities) and include Los Angeles, New York, and Berlin. However, there are cities that are more influential than their measured network centrality suggests. Cities like Stockholm act as gatekeepers, playing important mediating roles between the international and national scales of music production; other cities like Karlsruhe derive their high network power from a single renowned or specialized studio. In addition, analyses differentiated by origins of production and by genre indicate specific geographies of music production; networks of German production are less centralized and more locally orientated than those of non-German production. The paper also illustrates that urban networks of hip-hop music are typically intraurban and concentrated in single cities while urban networks of country music are highly interconnected on a national scale, linked to international networks only by a few key cities. The social network analysis presented in this paper reveals new relational geographies of music production beyond the dominant Anglophone markets and leaves room for comparative studies in other national contexts.

Keywords

URBAN NETWORKS, MUSIC INDUSTRY, GERMANY, RECORDING STUDIO, GLOBAL CITY, SOCIAL NETWORK ANALYSIS, CENTRALITY

Introduction

For decades, there has been continued scholarly interest in the organization and repercussions of popular music production. Demand structures, public policies, rights management, organizational restructuring, and—perhaps above all—technological developments constantly shift the conditions of sound production. Since the 1980s, a range of new mediums and file formats for sound storage have transformed the material infrastructure of music products, altering processes of production, dissemination, and consumption. The continuing influence of digital technologies such as cloud storage, streaming services, and platform-based systems of "prosuming" (producing and consuming) has disrupted the structure and business model of the music industry by changing cost structures, modes of reproduction, and market accessibility (Jones et al., 2017). These changes make it difficult to assess or predict impending effects on the structures and spatial organization of the music industry.

Nonetheless, cities continue to play a key role in the geographies of music production. The local development of specific sounds is well documented (Johansson & Bell, 2009), as are the urban origins of various musical genres and scenes (e.g. Emms & Crossley, 2018; Buchholz, 2019). Network perspectives on cities highlight relational aspects of music production, stressing its vertical and horizontal dimensions. The vertical dimension denotes the tradeoffs between e.g. musicians, institutions, and the music industry in an urban context, which are both preconditions and results of a specific ecology of circulation and negotiation (Cohendet et al., 2009). The horizontal dimension refers to interactions between individual actors of specific groups, such as musical subcultures or amateur scenes on a more local scale (e.g. Bennett & Peterson, 2004; Makkonen, 2014). Furthermore, taking into account project organization under conditions of globalization, the horizontal dimension of networks stresses the largely trans-local nature of today's professional music production, in which many specialized actors and institutions temporarily interact in global urban networks of recording, mixing, and mastering music. The nodes of this collaboration and transmission are anchored in recording and mastering studios.

By analyzing the spatial and social distribution of these crucial functions within the global city network, the geographies of power relations in the music industry can be approximated. The number and types of network linkages situated in a specific city allow for conclusions to be drawn about the city's role in filtering, managing, and controlling flows of global music production. Building on the seminal work by Watson (2012) on urban networks of production for major Anglophone digital music markets, we perform a social network analysis of studio locations to explore centrality and power in these relational geographies in the German national market. As Watson (2012, p. 464) observes, there is a relatively scarce number of studies on music production networks outside the Anglophone international music triangle—the UK, the US, and Australia. Analyses of other "regional blocs" (Laing, 1997) or of larger national markets are expected to present a divergent picture of urban connectivity in music production.

In this chapter, we aim to address this research gap by focusing on the German music market. Ranked behind the US and Japan with revenues of 466 million USD (7.7 percent of the global total value) in 2017, Germany represented the third largest music market in the

world (Bundesverband Musikindustrie [BVMI], 2018). Diverging from Watson's (2012) approach, our analysis of the national album charts considers not only digital and streaming revenue but also physical media revenue (i.e. CDs and vinyl shares), which accounts for a significantly higher share in Germany (55%) compared to the Anglophone markets (20%) (BVMI, 2018; Recording Industry Association of America, 2018). Furthermore, we extend the analysis of the overall network by three additional dimensions. Firstly, we analyze the networks of domestic and non-domestic production separately. Secondly, we distinguish between major and independent music companies in the data. Thirdly, we take musical genre as a central decisive factor in our analysis. This slightly de-centered and nuanced approach to the geographies of global production networks accommodates the trajectories and peculiarities of a specific national context. In doing so, we expect to uncover alternative perspectives on "the evolving economic geography of music" (Hracs et al., 2016) that explore beyond the globally dominant Anglophone markets.

In this paper, we begin with a brief overview of recent organizational and technological changes in music production, highlighting the ability of the music industry to keep power and profit highly concentrated in the hands of a few companies. We illustrate how the economic concentration of power is mirrored in the urban agglomeration of music-related businesses that rely on ecologies of talented musicians, material and institutional infrastructures of music production and consumption, and access to far-reaching networks of skilled workers. Following this, we introduce social network analysis as a tool to measure different aspects of social power and centrality in relational networks. After a brief discussion of our methods of data collection and processing, we present the results of our differentiated social network analysis. We conclude by briefly reflecting on the added value of future regional analyses of the urban networks of music production.

From production lines to project ecologies: the changing organization of the music industry

In early works on organizational sociology, music production was understood as a multi-stage process that existed within the closed system of a single music firm (Hirsch, 2000). These sequential models of transmission were soon questioned by studies that conceptualized musical production as a more collaborative and interactive process (Leyshon, 2001). Different actors in the music industry are actively intervening and changing music, not only by obeying market rationales but by integrating personal experiences and everyday mediations. Influenced by work in cultural studies that emphasized creativity and consumption, music-making was interpreted as a cultural practice connecting people from within and beyond the recording industry in co-producing cultural content (Negus, 1992).

Cultural studies also acknowledged new contexts by considering subcultures and scenes to be social spaces where production and consumption happen. This shifted the discursive emphasis from the corporate dimension of music production to the diversity of amateur musicking and the complexities of production/consumption. At the same time, the focus on these spaces spurred a greater sensitivity towards the material conditions of local music production by considering rehearsal rooms, venues, studios, or homes (Watson et al., 2009). As a result, several urban scenes with local and interlocal coalitions and alliances between

artists, intermediaries, and audiences were identified as birthplaces of new musical genres (Bennett & Peterson, 2004). In these contexts, the concept of the network gained importance in understanding various overlapping and genre-specific webs of music production involving interactions between different actors and institutions (Power & Hallencreutz, 2007; Crossley et al., 2015).

Lorenzen and Frederiksen (2005) conjectured that every music recording is a project that temporarily brings together social actors with different talents and skills in music production. Academic interest soon shifted to this understanding of music production and gradually replaced the focus on inter-firm teamwork (Grabher, 2002). Researchers have also begun to situate projects in their social and organizational context. Project organization not only yields benefits such as cost savings, flexibility, and specificity but also provides opportunities for building reputations and promoting reflexive learning. New software formats and digital platforms have increasingly lowered the entry barriers to music markets; this has expanded the possibilities of collaborative participation in musical production to actors outside the formal music industry, gradually undermining music firms' historic monopoly on music production and distribution. In sum, the traditional organization of production lines and global production networks of the music industry have been reconfigured into "a complex heterarchic ecology of firms, freelance musicians, online production, and distribution platforms as well as local scenes and online communities engaging in creative content production" (Schiemer et al., 2019, p. 295).

Expanded access to the means of production suggests a democratization of music production. However, recent data on the global music market show that record companies still dominate the global music market economically, with the three largest labels (Sony, Universal, and Warner) retaining about 70% of the global market share (Worldwide Independent Network, 2017). Historically, the music industry has been able to repeatedly adapt to changing conditions (Leyshon, 2014). The ownership of rights that protect the interests in the exploitation of creative work plays a key role in maintaining major labels' market dominance. Licensing across a multitude of platforms and outlets presents a range of revenue opportunities, ranging from performance royalties and mechanical rights for the reproduction of sound carriers to dubbing royalties for the reuse of works. Capital and power are concentrated across the networks of creativity, reproduction, distribution, and consumption and bolster present forms of power (Wikström & DeFillippi, 2016). These steady processes of reconfiguration are especially prevalent on the urban and interurban scales, producing and re-producing asymmetrical geographies of power (Jones et al., 2017).

Across physical space, the activities and loci of the music industry tend to be disproportionately concentrated in urban centers (Scott, 1999; Florida & Jackson, 2010). The three major record companies (Sony, Universal, and Warner) are anchored in global cities (New York City and Santa Monica/Los Angeles) surrounded by a dense institutional network of smaller record companies, studios, and freelancers in the music business. Agglomeration and urbanization economies are due to lower transaction and infrastructure costs, access to specialized services, proximity to competitors and markets, possibilities of a pool of highly qualified or talented creative workers, and ease of access to global urban networks of music (Power & Jansson, 2004; Hracs, 2012). Urban places where musicians work and live, as well

as where social, creative, and cultural infrastructures are well established, act as magnets for other talented musicians (Kloosterman, 2005).

Music production involves a complex system of interactions between many specialized actors and institutions. Those interactions and relationships subsequently form socially and spatially embedded networks of music production (Leyshon, 2001; Crossley et al., 2015). Urban places may, for example, host a unique ecology in which musical knowledge and innovation circulate between different social and spatial scales, from the "underground" of creative individuals to the "middleground" of intermediary groups and communities to the "upperground" of formal institutions and firms (Cohendet et al., 2009). The ability for musicians to create music depends, among other things, on actors like artist and repertoire personnel, producers, and sound engineers, who play important roles as cultural intermediaries or gatekeepers of recording facilities (Hennion, 1989; Horning, 2004). Novel digital technologies may suggest studios' diminishing role in music production (Leyshon, 2014). Nonetheless, these sites still act as centers of creativity and innovation at the highest technological levels, as documented in the detailed listings of studios and other places involved in successful productions (Toynbee, 2016). Accordingly, while music production is concentrated in certain places, it is becoming increasingly dispersed due to digital developments, which is only increasing global connectivity (Florida & Jackson, 2010; Rogers, 2011).

Measuring power and centrality in urban networks

From a structural point of view, a city's power can be understood as its ability to dominate other cities in terms of resource availability (Friedmann, 1973). However, power emerging from the relationality of urban networks is much more diffuse—every city holds its own respective position of power in global urban networks (Taylor et al., 2002). An analysis of power in these networks identifies cities that hold favorable positions over others due to their connectivity and, subsequently, their opportunities to participate and influence highly interconnected and interlocking networks (Taylor & Derudder, 2018). Common methods for measuring the roles of different actors in social networks are Bonacich Centrality and Bonacich Power (Bonacich, 1987). Applied to urban networks, the more central a city, the more links it has to other well-connected cities. Furthermore, the more powerful a city, the more links it has to less-connected cities; these less-connected cities are all the more dependent (Hanneman & Riddle, 2011). Additionally, Freeman's Flow Betweenness Centrality can be applied to assess a city's ability to control information flows—this calculates the centrality of an actor by its participation in flows between all other pairs of actors (Freeman et al., 1991). Cities with a high Flow Betweenness Centrality are often vital in linking poorly connected or unconnected regions in a network (Tabassum et al., 2018). Such cities often act as so-called gatekeepers for their importance in linking different countries or industries.

Data collection and processing

All obtained data was based on the locations of recording studios involved in the production of an album, that is, a project. The movement of sounds and information between recording studios engaged with each project linked different cities. Each project creates its own urban network, linking pairs of cities as joint production locations for the album. Analysis that includes multiple projects produces a more comprehensive urban network of music production. The data collection was conducted on a weekly basis from October 2017 to February 2018 based on the top 20 albums on the official German website for music charts (GfK Entertainment GmbH, 2018). In addition to data on studios and cities involved in recording, mixing, and mastering, information on the artists' origins, genre, and publishing company was collected. The main source for this data was the online database *www.discogs.com*. Any missing information on individual cases was supplementary researched on the internet.

The final dataset included data on 155 albums produced in a total of 308 different recording studios in 123 different cities. Roughly half of the albums (n=75) were German productions, in the sense that either the artist was of German nationality or the band was listed as German on *discogs*. The coding of connections between cities was non-directional, so no distinction between "sender" and "receiver" was made. The coded connection data was compiled into a comprehensive, symmetrical 123×123 matrix characterizing the urban networks of music production for the most successful albums of the German music market; additional matrices were made for further analyses by genre, record company, and German versus non-German production. These tables formed the basis for this study's social network analysis and for mapping the networks of music production. This analysis was done primarily with the software tool UCINET (Borgatti et al., 2002). For geographic visualization, we used the open-source tool Gephi and for analytical purposes, the visualization tool NetDraw (Borgatti, 2002).

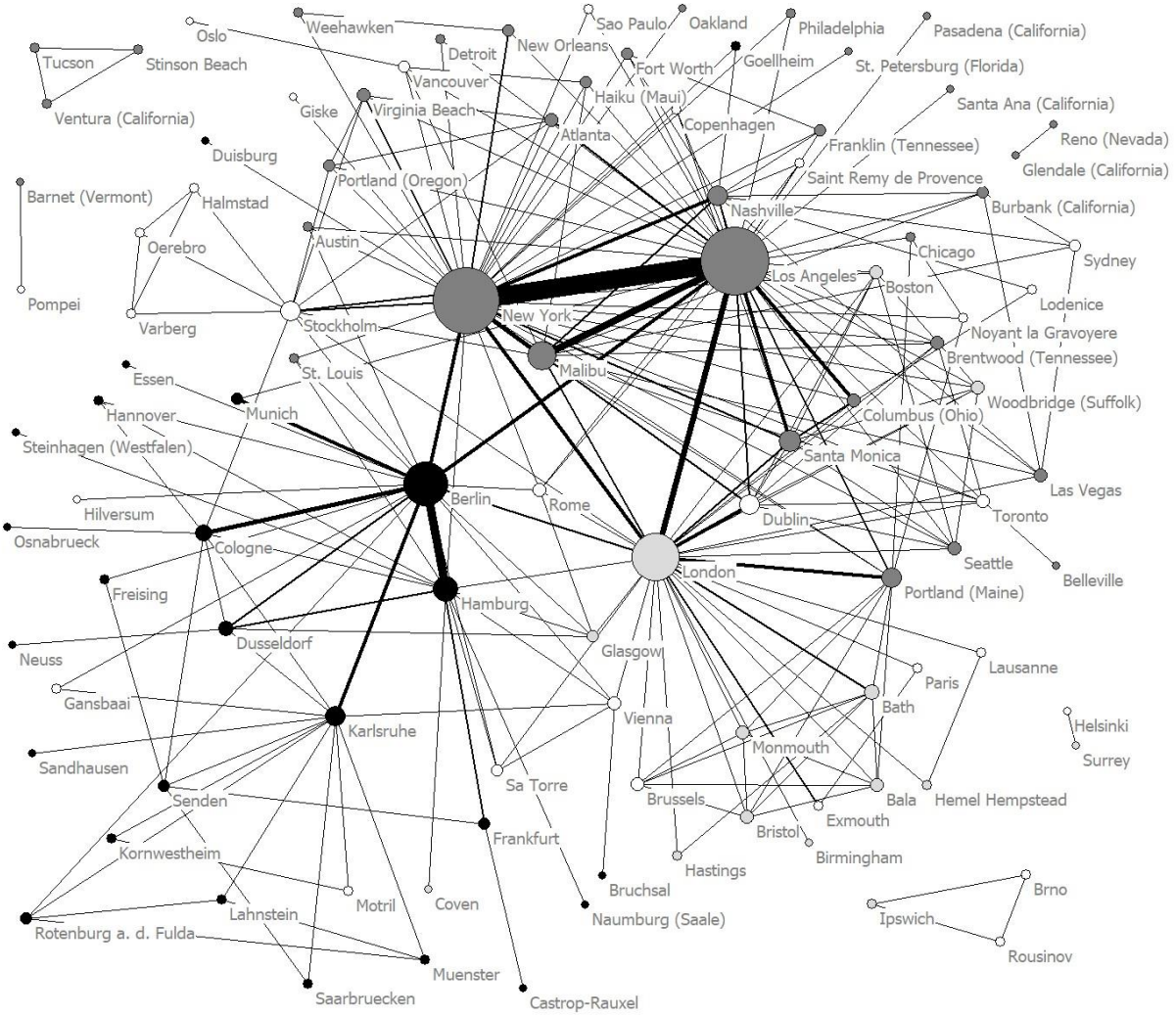
Global urban networks of music production according to the German music market

Figure 1 shows a non-geographic representation of the urban networks of music production according to the German music charts, demonstrating the embeddedness of individual cities. Los Angeles and New York each had the highest number of connections in the network (n=73 and n=70, respectively) and also had the most connections between them of any linked pair (n=17). Berlin and Hamburg were the most connected cities in Germany (n=43 and n=21, respectively) but had significantly fewer connections. As joint production sites for eight albums, they form the second most strongly interconnected dyad in the network. The figure also shows a relatively high density of intranational urban links and a lower density of international connections.

Berlin and Hamburg were also the most productive German cities to generate successful albums in Germany, as demonstrated by their album outputs. An album is considered to be an output of a city as soon as a recording studio located in the specific city becomes involved in the production process. Recording studios in Berlin were involved in more than a fifth of all albums (n=34), closely followed by Los Angeles (n=32), New York (n=27), London (n=22), and Hamburg (n=19).

Figure 1

The connectivity of cities in urban networks of music production, German music market

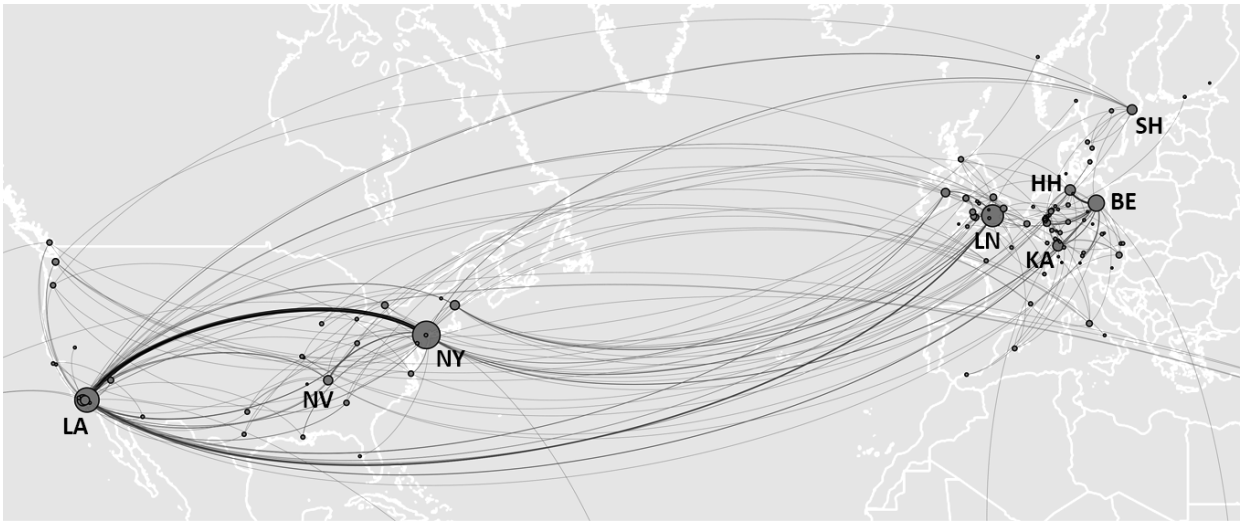


Note. The size of each node is determined by the total number of a city's connections. The thickness of the line linking two cities is based on how often the pair was joint production sites for an album. The country of each city is represented by node color (black for Germany, dark grey for the US, light grey for the UK, and white for other countries). Isolated cities (n=20) are not represented in this figure.

In Figure 2, the same global urban network of music production is mapped geographically. The figure demonstrates that Germany's top albums were produced almost exclusively in countries of the Global West, particularly in Germany, the US, and the UK. Especially surprising are the results for three German cities: Munich, Cologne, and Karlsruhe. Munich and Cologne, although recognized as top centers of media production within Europe (Krätke & Taylor, 2004), do not play a central role in the networks of music production. Karlsruhe presents a special case that will be discussed later.

Figure 2

Global urban networks of music production, German music market



Note. The size of each node is relative to the total number of a city's connections. The thickness of the line linking two cities is based on how often the pair was joint production sites for an album. City codes: BE – Berlin, HH – Hamburg, KA – Karlsruhe, LA – Los Angeles, LN – London, NY – New York, NV – Nashville, SH – Stockholm.

Role play in urban networks of music production: the centrality and power of cities

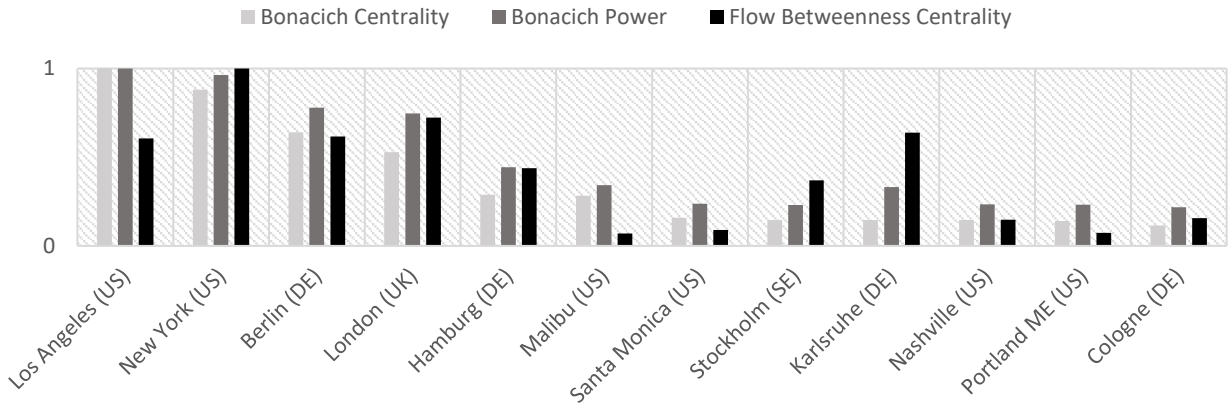
Figure 3 shows, in descending order, the top 12 cities measured by Bonacich Centrality. Los Angeles and New York have the highest values for both centrality and power, as they also accounted for the highest numbers of connections in the network. Berlin ranks third in terms of Bonacich Centrality measure, meaning it is the most central and powerful German city in the global network of music production. Hamburg is the second most central city in Germany. The data indicates a strong correlation between Bonacich Centrality and Bonacich Power—the most central cities also seem to be the most powerful.

However, Freeman's Flow Betweenness Centrality conveys a somewhat different picture of the power structures. Particularly striking are the high deviations of Flow Betweenness Centrality from Bonacich Centrality for Stockholm and the German city of Karlsruhe. While Stockholm has many international connections, other Swedish cities are only connected nationally. This demonstrates the important position Stockholm assumes as an international gatekeeper for the Swedish music industry. Karlsruhe's high Flow Betweenness Centrality value suggests that it has a high potential for taking on a similar mediating role for Germany. However, it is actually Berlin that serves as the German music industry's gatekeeper—the capital city clearly has more connections to international cities than any other German city. In contrast, over 80 percent of Karlsruhe's direct connections were to other German cities. All 11 albums that were co-produced in the city were mastered there, 10 of which were done at one particular studio: 24-96 Mastering. This number makes 24-96 Mastering the studio most involved in the production of successful music in Germany by far. Since mastering is a process that can be understood as a directed movement, recordings are often

sent to a small number of studios for mastering, which are thus involved in an unbalanced share of projects (Watson, 2015). Karlsruhe can be viewed as a "receiver city," into which urban networks of music production begin to converge. A similar pattern was found for the case of Portland (Maine) in the Anglophone market (Watson, 2012, pp. 461-463).

Figure 3

Centrality and power of cities in the global urban network of music production, German music market



Note. This figure shows three centrality measures for the 12 cities with the highest Bonacich Centrality values, in descending order. All values are relative to the highest value of a specific centrality measure.

Local roots and shifting structures in global networks of music production: an international comparison of domestic production patterns

In comparison to the Anglophone markets, urban networks of the German music market are much less concentrated in single cities and less likely to be dominated by a small number of recording studios. Global cities like Los Angeles, New York, or London dominated Anglophone music production as joint production sites for more than 40 percent of all successful albums. Select recording studios like Sterling Sound in New York were involved in more than 20 percent of all successful productions (Watson, 2012). In comparison, the German music market was dominated by Berlin, which served as a joint production site for just 22 percent of all albums. The recording studios with the greatest numbers of outputs, Sterling Sound and 24-96 Mastering, each accounted for only about 6 percent of all albums.

An analysis of the networks of German and non-German productions reveals significant differences. German networks are largely domestically oriented, centering on the Berlin–Hamburg dyad (see Figure 4). While the UK/US production network rarely involves German cities, the German production network includes several cities from the US and the UK. Most international cities such as Los Angeles and London are by far not as central and powerful for German music production as they were for UK/US production. The exception is New York,

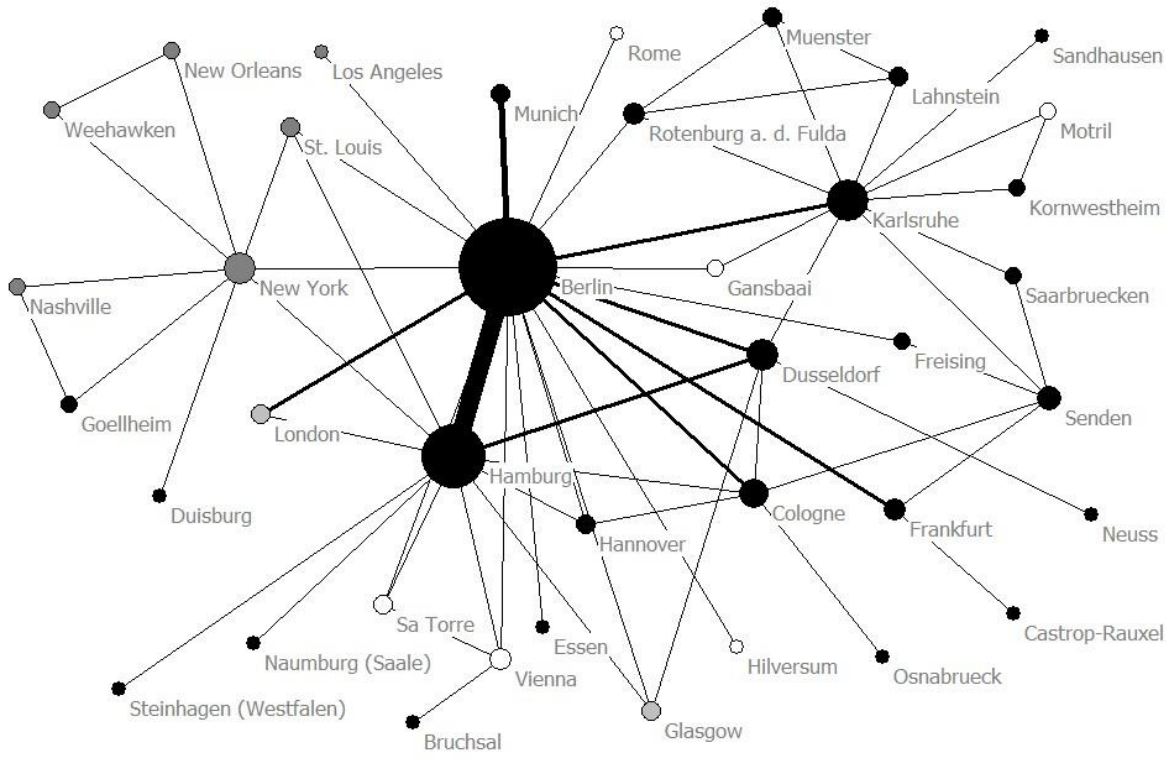
which has a high Flow Betweenness Centrality value that indicates the city's role as a mediator between the German and the US industries.

German music production is more internationally oriented than US music production and less internationally oriented than the UK market. The share of foreign cities in the German networks is about 30 percent, while for the US and the UK it is roughly 15 and 65 percent, respectively. This illustrates the international dominance of the US industry. Furthermore, German productions are much more locally orientated than UK/US productions. This is shown by the network's lower overall density, the number of albums exclusively produced in one city (single-city productions) and the large number of isolated cities in the network (see Table 1).

In sum, Berlin and Hamburg dominate the networks of German music production—they host the largest numbers of the record companies involved in producing Germany's top 20 albums. At the same time, these cities are home to the largest numbers of musicians in Germany (Stiller et al., 2014). Thus, even if the urban networks are rather decentralized compared to those in the UK or US markets, agglomeration and urbanization economies strongly affect the German music industry.

Figure 4

Urban networks of German music production



Note. The size of each node is determined by the total number of a city's connections. The thickness of the line linking two cities is based on how often the pair were joint production sites for an album. The country of each city is represented by node color (black for Germany, dark grey for the US, light grey for the UK, and white for other countries). Isolated cities (n=15) are not represented in this figure.

Table 1

Network properties—German production and UK/US production

	Overall network	German production	UK / US production
Albums	*155*	75	62
independent / major label	*70 / 85*	47 / 26	19 / 43
Cities	*123*	54	67
from DE / UK / US	*38 / 36 / 16*	38 / 6 / 2	3 / 32 / 15
Single-city productions	*54*	33	14
Isolated cities	*20*	15	3

Labeled networks: local or global – it's a thing of resources and dominance

Table 2 offers some characteristics of the networks of music production differentiated by major labels and independent labels. The three major music companies considered are Warner Music, Sony Music, and Universal Music, each encompassing their respective subsidiary labels as well. Independent labels accounted for a significantly lower network density and a higher number of single-city productions compared to the major labels. Their geographic reach tended to be less extensive and more diverse. This may be due to limited financial resources and a tendency to preferentially cater to niches in the music market (Benner & Waldfogel, 2016). In contrast, urban networks of music production seem to benefit from the opportunities offered by major companies. These labels are geographically concentrated in the cities most active in music production on both a global scale—such as London, Los Angeles, and New York—as well as on a national scale—including Berlin and Hamburg—forming highly interconnected networks.

Table 2

Network characteristics—major labels and independent labels

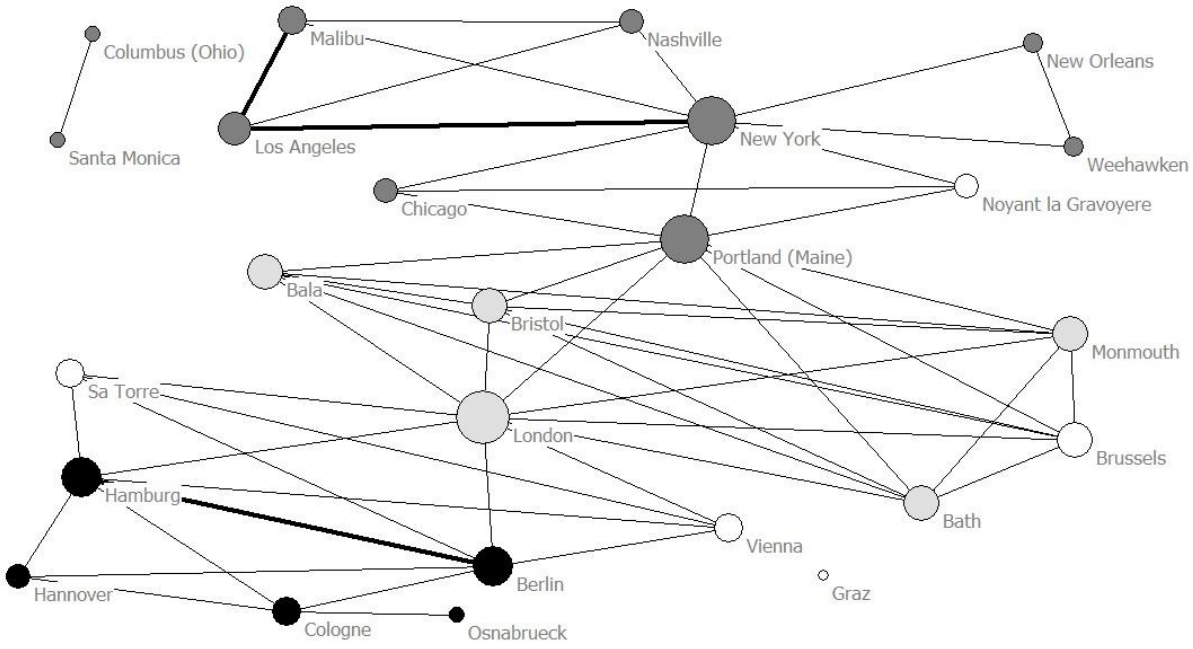
	Major labels	Independent labels
Albums	85	70
DE / UK / US productions	28 / 17 / 25	47 / 9 / 10
Cities	84	67
from DE / UK / US	18 / 12 / 29	29 / 6 / 14
Single-city productions	23	27
Isolated cities	10	15

Genre-specific cultures and networks of music production

According to Negus (2013), genres like rock, pop, country, or hip-hop are sets of musical features and events governed by specific rules concerning the social, commercial, and spatial organization of music production. The most common genres in music production are rock and pop. As they jointly accounted for a high proportion of all analyzed albums for this study, their network patterns mirror those of the overall network. However, these patterns diverge for the less-common genres of hip-hop and country. Our dataset includes 26 hip-hop and 11 country albums. Although the sample size for country was less than half that of hip-hop, there were 25 different cities in the broader network for country music production. Meanwhile, hip-hop's network consisted of only 20 cities. The structure of the urban networks of country music production shows strong patterns of domestic production that link together only a few cities, like London or Portland (Figure 5). These networks are largely decentralized, lacking an identifiable set of core cities. These findings are further substantiated by each city's values for Bonacich Centrality and Bonacich Power, as well as Flow Betweenness Centrality. London, Portland, and New York lead all three categories with values that are narrowly distinguished. Portland is a special case in point, as all albums produced there were country albums that involved a single mastering studio, Gateway Mastering. Although Portland has the highest value of Flow Betweenness Centrality, it might not be considered a gatekeeper for the UK and US industries considering its "receiver" role. This corroborates Watson's (2012) research, for Portland is significant in music production because of a single studio at which networks converge—just as is the case with Karlsruhe for the German music industry.

Figure 5

Urban networks of country music production

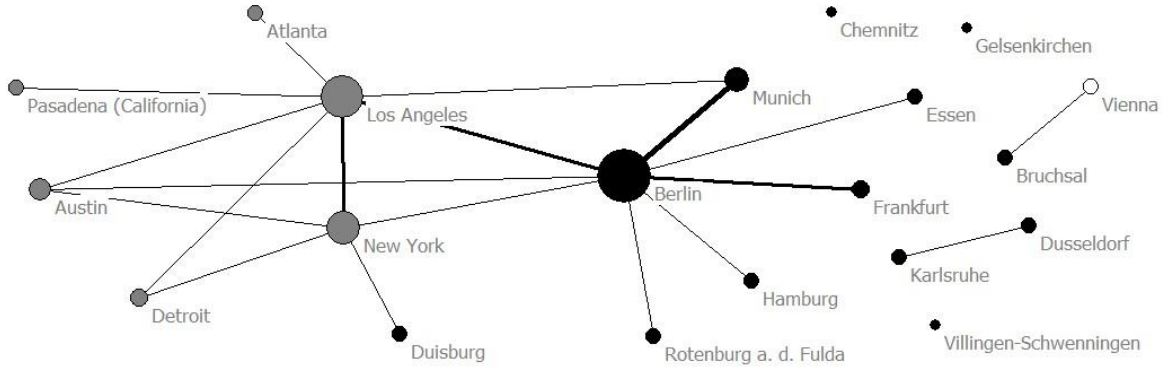


Note. The size of each node is determined by the total number of a city's connections. The thickness of the line linking two cities is based on how often the pair was joint production sites for an album. The country of each city is represented by node color (black for Germany, dark grey for the US, light grey for the UK, and white for other countries). Isolated cities are included here.

In contrast, our data demonstrate that urban networks of hip-hop music production are clearly dominated by Berlin. The city served as a production location for half of all albums and had direct connections to nearly 50% of all other cities in the genre-specific sub-network (see Figure 6). Munich and Berlin were the most strongly connected of all city pairs in German hip-hop production. However, the overall network density is significantly low, and more than a third of all hip-hop albums were single-city productions. Comparatively speaking, these projects are rather locally orientated; this reflects the culture of hip-hop music production, which is often organized around small and informal communities or artists' own independent labels (Mager, 2007; Harkness, 2014). The results confirm that music genres tend to form unique cultures that result in specific sociospatial networks of music production.

Figure 6

Urban networks of hip-hop music production



Note. The size of each node is determined by the total number of a city's connections. The thickness of the line linking two cities is based on how often the pair was joint production sites for an album. The country of each city is represented by node color (black for Germany, dark grey for the US, light grey for the UK, and white for other countries). Isolated cities are included here.

Conclusion: evolving economic geographies of music beyond the dominant Anglophone markets

Popular music is increasingly a product of temporary interactions between record company personnel, artists, and highly specialized actors such as producers and sound engineers. These mutual relationships form complex networks of creative co-production that are spatially anchored in places equipped with sound technologies for recording, mixing, and

mastering. These loci, mostly found in cities, benefit from agglomeration and urbanization economies due to wider access to network infrastructures and talent pools. Advances in digital technologies enable international teams to collaborate on music production on a global scale. While music can be produced across the globe, certain locations, studios, and specialists are more often involved in production projects than others. Previous analyses have revealed power geometries in the global networks of music production for the most dominant Anglophone markets. In our analysis, we focused instead on the German popular music market, which in 2017 represented the third largest global market in terms of revenue with a domestic share of about 55%. We also refined our analysis according to musical genre, record company size, and the origin of music production.

The urban networks of music production in the German market are influenced by global network structures but have some unique features. These include the powerful dyad of Berlin and Hamburg that mirrors that of Los Angeles and New York on a smaller scale. In particular, Berlin acts as a gatekeeper city by mediating between different international music industries. Karlsruhe, Stockholm, and Hamburg show new relational patterns on the periphery of the global urban network; these cities mediate between and within national industries. The case of Karlsruhe—as a city disproportionately involved in projects due to a specialization—demonstrates a concentration of production functions in a peripheral city. Conversely, Munich and Cologne, which are known to be large European media production centers, hold secondary positions in the network of music production.

Our analyses that differentiated between domestic/non-domestic productions, independent/major networks, and genre types revealed more nuanced geographies that reflect specific trajectories in the German context. The data that parsed the origins of production showed that German networks are decentralized and locally orientated relative to international production networks. Furthermore, the data for successful independent albums on the German market illustrated that they tend to have a narrower, yet more diverse, geographic reach than major production networks. Finally, our analysis differentiated by genre pointed to the significance of historic and geographic development trajectories of local and trans-local scenes in music production networks. This is particularly evident in the case of hip-hop music. There is room for research that examines in further detail the role of niche scenes and genre-specific cultures for music production networks in the urban setting. Our results also raise questions on how local and urban policies might have an impact on the role of a city in multi-scalar production networks. Future studies should integrate some qualitative research approaches, including interviews with local actors; these include not only artists and engineers, but cultural mediators such as “night majors,” commissioners for pop culture, and other cultural agents, investigating their ambitions for positioning their city in a global network of music production.

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