THE CREATIVE CAPITAL OF CITIES

Interactive Knowledge Creation and the Urbanization Economies of Innovation

Stefan Krätke
THE CREATIVE CAPITAL OF CITIES
Studies in Urban and Social Change

**Published**

- The Creative Capital of Cities: Interactive Knowledge Creation and the Urbanization Economies of Innovation
  Stefan Krätke
- Locating Neoliberalism in East Asia: Neoliberalizing Spaces in Developmental States
  Bae-Gyoon Park, Richard Child Hill and Asato Saito (eds)
- Worlding Cities: Asian Experiments and the Art of Being Global
  Ananya Roy and Aihwa Ong (eds)
- Place, Exclusion and Mortgage Markets
  Manuel B. Aalbers
- Working Bodies: Interactive Service Employment and Workplace Identities
  Linda McDowell
- Networked Disease: Emerging Infections in the Global City
  S. Harris Ali and Roger Keil (eds)
- Eurostars and Eurocities: Free Movement and Mobility in an Integrating Europe
  Adrian Favell
- Urban China in Transition
  John R. Logan (ed.)
- Getting Into Local Power: The Politics of Ethnic Minorities in British and French Cities
  Romain Garbaye
- Cities of Europe
  Yuri Kazepov (ed.)
- Cities, War, and Terrorism
  Stephen Graham (ed.)
- Cities and Visitors: Regulating Tourists, Markets, and City Space
  Lily M. Hoffman, Susan S. Fainstein, and Dennis R. Judd (eds)
- Understanding the City: Contemporary and Future Perspectives
  John Eade and Christopher Mele (eds)
- The New Chinese City: Globalization and Market Reform
  John R. Logan (ed.)
- Cinema and the City: Film and Urban Societies in a Global Context
  Mark Shiel and Tony Fitzmaurice (eds)
- The Social Control of Cities? A Comparative Perspective
  Sophie Body-Gendrot
- Globalizing Cities: A New Spatial Order?
  Peter Marcuse and Ronald van Kempen (eds)

**Forthcoming**

- Contemporary Urban Japan: A Sociology of Consumption
  John Clammer
- Capital Culture: Gender at Work in the City
  Linda McDowell
- Cities After Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies
  Gregory Andrusz, Michael Harloe and Ivan Szelenyi (eds)
- The People’s Home? Social Rented Housing in Europe and America
  Michael Harloe
- Post-Fordism
  Ash Amin (ed.)
- The Resources of Poverty: Women and Survival in a Mexican City*
  Mercedes Gonzalez de la Rocha
- Free Markets and Food Riots
  John Walton and David Seddon
- Fragmented Societies*
  Enzo Mingione
- Urban Poverty and the Underclass: A Reader*
  Enzo Mingione

*Out of print
THE CREATIVE CAPITAL OF CITIES

INTERACTIVE KNOWLEDGE CREATION AND THE URBANIZATION ECONOMIES OF INNOVATION

Stefan Krätke
Contents

List of Illustrations vii
Series Editors’ Preface x

Introduction 1

1 Creativity and Innovation under the Command of Capital 12
   The Capitalist Imperative of Creativity and Innovation 12
   Generalizing Models of Urban Economic Development 18
   The Role of Innovation and Interurban Competition in Harvey’s Theory of Capitalist Urbanization 24
   Conclusion 34

2 Creative Cities as a New Urban Growth Ideology: The Impact of Creative Occupations on Regional Economic Success 37
   Introduction 37
   Critique of Florida’s Conception of the Creative Class 39
   An Assessment of Regional Economic Success Factors and the Impact of Creative Workers on Regional Development 47
   The Impact of Creative Occupational Groups on Regional Economic Development in Germany 52
   Relationship between “Qualities of Place” and the Regional Concentration of Scientifically and Technologically Creative Workers 77
   Conclusion 88

3 Innovation and Knowledge Networks in a Metropolitan Region: The Impact of Localization Economies and Networking on Technological Creativity 92
   Introduction 92
   Innovation and Knowledge Networks: Theoretical Approaches 97
The Application of Network Analysis to Urban Regions’ Knowledge Networks 104
Geographic Scales and Structural Properties of Knowledge Networks in the Metropolitan Region of Hanover 109
Assessment of Network Impacts on Regional Firms’ Innovation Output 121
Conclusion 125

4 Creativity in the Culture and Media Industries: The Impact of Commercial Imperatives on Artistic Creativity 128
Introduction 128
The Institutional Order of the Cultural Economy: Creativity in a Capitalist Context 131
Global Centers of the Culture Industry and the Production of Lifestyle Images 146
Conclusion 155

5 Local Clustering of the Cultural Economy in the Metropolis of Berlin: The Urbanization Economies of Artistically Creative Occupations 158
Introduction 158
The Rise of the Cultural Economy in Berlin’s Inner-City Area 163
Creative Cities and the Role of the Culture Industries in Urban Economic and Spatial Development: Implications for Urban Regeneration 183
Conclusion 191

6 Synthesis: The Creative Capital of Cities 194

Appendix: Grouping of Occupations and Subsectors 208
References 219
Index 234
List of Illustrations

Figures

2.1 The regional distribution of the scientifically and technologically creative workforce in Germany, 2005 53
2.2 Comparison of the regional economic profiles of two large “high-technology” centers in Germany 54
2.3 Relationship between the proportional size of the research-intensive manufacturing and technology-related services sector and the scientifically and technologically creative workforce on a regional basis in Germany, 2005 58
2.4 Relationship between the proportional size of the research-intensive manufacturing and technology-related service sector and the share of the workforce in the fields of financial services, management, and consulting on a regional basis in Germany, 2005 59
2.5 Comparison of the regional economic profiles of two successful “high-technology” cities in Germany 60
2.6 Relationship between regional per capita GDP and the share of the workforce in scientifically and technologically creative occupations in Germany, 2005 62
2.7 Relationship between the total change in regional employment and employment growth in scientifically and technologically creative occupations in Germany, 1995–2005 66
2.8 The regional distribution of “innovation output” (patent applications) in Germany, 2000–2005 72
2.9 Relationship between regional “innovation output” (patent applications) and the share of employment in scientifically and technologically creative occupations in Germany, 2005 73
List of Illustrations

2.10 Regional distribution of the artistically creative workforce (self-employed artists and employees of the cultural economy) in Germany, 2004/2005 80
2.11 Share of foreign migrants in the population, 2006 82
3.1 The metropolitan region Hanover-Braunschweig-Göttingen and Germany’s formally established metropolitan regions 110
3.2 Spatial distribution of interorganizational ties for the Hanover-Braunschweig-Göttingen region, 2007 111
3.3 The structure of network relations of regional firms and research institutes in the automotive industry cluster of the metropolitan region of Hanover-Braunschweig-Göttingen, 2007 114
3.4 Network nodes with strong supra-regional connectivity in the automotive industry cluster of the metropolitan region of Hanover-Braunschweig-Göttingen, 2007 116
3.5 “Bridging function” of actors at the intersection of diverse subsectors in the metropolitan region of Hanover-Braunschweig-Göttingen, 2007 118
4.1 The local inter-firm network of business relations in the film industry cluster of Potsdam/Babelsberg 138
4.2 Value-added network of the film industry 140
4.3 A global media firm’s network of branch offices and subsidiaries in the national and international urban system 151
5.1 The relative concentration of employees in artistically creative occupations in Germany’s urban and regional system, 2005 164
5.2 Regional centers of the culture and media industries in Germany according to sectoral profile, 2000 165
5.3 Locational distribution of the culture and media industries in Berlin: multimedia firms, 2008 172
5.4 Locational distribution of the culture and media industries in Berlin: music industry firms, 2008 176
5.5 Locational distribution of artists in Berlin according to place of residence, 2007 180
6.1 The creative capital of cities – analytical layers of investigation 196

Tables

2.1 Relationship between GDP growth and employment growth in scientifically and technologically creative occupations 64
2.2 Relationship between GDP growth and employment growth in the “creative class” aggregate 64
List of Illustrations

2.3 Relationship between total change in regional employment and employment growth in scientifically and technologically creative occupations 68
2.4 Relationship between total change in regional employment and employment growth in the “creative class” aggregate 68
2.5 Relationship between employment growth in high-tech and medium high-tech manufacturing sectors and employment growth in scientifically and technologically creative occupations 70
2.6 Relationship between employment growth in high-tech and medium high-tech manufacturing sectors and employment growth in the “creative class” aggregate 70
2.7 Relationship between regional “innovation output” (patent applications) and the share of scientifically and technologically creative workers (negative binomial regression) 74
2.8 Results of empirical tests on the impact of the creative workforce on four dimensions of “regional economic success” 76
2.9 Relationship between “qualities of place” and the regional distribution of scientifically and technologically creative workers (negative binomial regression) 83
3.1 Knowledge network properties in selected subsectors of the regional economy (Hanover-Braunschweig-Göttingen, 2007) 119
3.2 Variable labels and definitions (regression analysis of network impacts) 122
3.3 Negative binomial regression of patent applications: Model 1 (including variable “supra-regional connectivity”) 124
3.4 Negative binomial regression of patent applications: Model 2 (including variable “international connectivity”) 124
Series Editors’ Preface

The Wiley-Blackwell *Studies in Urban and Social Change* series is published in association with the *International Journal of Urban and Regional Research*. It aims to advance theoretical debates and empirical analyses stimulated by changes in the fortunes of cities and regions across the world. Among topics taken up in past volumes and welcomed for future submissions are:

- Connections between economic restructuring and urban change
- Urban divisions, difference, and diversity
- Convergence and divergence among regions of east and west, north, and south
- Urban and environmental movements
- International migration and capital flows
- Trends in urban political economy
- Patterns of urban-based consumption

The series is explicitly interdisciplinary; the editors judge books by their contribution to intellectual solutions rather than according to disciplinary origin. Proposals may be submitted to members of the series Editorial Committee, and further information about the series can be found at www.suscbookseries.com:

Jenny Robinson  
Neil Brenner  
Matthew Gandy  
Patrick Le Galès  
Chris Pickvance  
Ananya Roy
Introduction

Over the last decade, urban theory has been strongly shaped by a heated debate concerning “creative industries” and the “creative class,” which are said to undergird the “creative city.” However, the notion that the cities and metropoles of the urban system function as major centres of creativity and innovation – playing, in turn, a decisive role in social and economic development – is not a new idea (cf. Hall 1966, 1998, 2000; Jacobs 1969; Heßler and Zimmermann 2008). Throughout history, large metropolitan cities have fostered “innovative milieus” (Camagni 1999), that is, creative systems composed of a diversity of actors and knowledge resources that multiply the capacity for networking and encourage the generation of knowledge and innovation. In a globalizing economy, large cities and metropolitan regions are attaining ever-greater significance due to the fact that “economies of urbanization can be consciously exploited in a worldwide-reaching spatial division of labour” (Thiel 2005: 19). The recent proliferation of publications on creativity and cities might be related to the current prominence of new urban growth theories in the public debate, a phenomenon that is crowding out the insights and contributions of critical urban theory. The “creative city” can be regarded as the newest place-marketing slogan to be exploited in interurban competition. Particularly at the urban level, the concept of creative industries today is being taken as a message of hope and inspiration for future successful development. This heated debate, however, has led to a highly questionable usage of the notion of creativity and an increase in uncritical urban and social theory. The widespread trumpeting of the “creative class” might be best understood as the marketing of misleading terms in order to create a new urban growth concept which is based on the self-idealization of particular elites within a
neoliberal model of society. Richard Florida’s claim that cities are “cauldrons of creativity” could be countered with the thesis that cities today are more accurately characterized as “cauldrons of neoliberals” acting in concert to undermine the world economy. The rise of the dealer class in contemporary capitalism has led to the invention of diverse “weapons of financial mass destruction,” which have been deployed very effectively at the expense of people all over the world, a fact that imbues the catchy thesis of a “creative age” (Florida and Tinagli 2004) with a highly ambiguous meaning. The “age of greed and fear” might be a more precise term for capturing the driving motives of the dealer class that dominates today’s capitalism (cf. Anderson 2008). While “creativity” has a generally positive connotation, it is quite a fuzzy concept (Markusen 2006a). It is worth noting that creative acts can also serve negative ends (Howkins 2001; Krätke 2004b). Creativity fuels the productive activities of the real economy, yet also played a key role in the creation of the risky financial products that triggered the economic crisis of 2008 onward.

The booming debate on “creative cities” can be traced back to the increasing interurban competition in contemporary capitalism (Harvey 1989). Creativity is at the heart of innovative capabilities, and successful innovation activities positively contribute to an urban region’s economic competitiveness. However, there are different pathways to urban competitiveness in capitalist societies. Besides an innovation-oriented path that focuses on the development of innovative capabilities, the space economy of capitalism offers – at least for a number of major urban regions – the option to rely on economic command and control relations for attaining superior competitiveness in the urban system. The economic strength and competitive power of urban regions thus may stem from quite different sources (including different functional and sectoral structures as well as different development paths). The “creative city” growth ideology ignores the fact that urban economic development is embedded in the basic societal framework of a capitalist economy. We have to keep in mind that the unfolding of creativity and innovation activity represents a particular strategic asset in the framework of increasing interurban competition. Thus, this book argues that the debate on the general role of creativity and innovation in urban development, interurban competition, and urban economic “regeneration” should be based on a deeper understanding of how creative work that yields technological as well as artistic innovation is organized and embedded in urban socioeconomic settings.

This book intends to furnish an alternative perspective to the uncritical and superficial notions that currently dominate the creative cities debate. This alternative perspective is theoretically and empirically grounded in research on urban and regional economic development, urban innovation networks, and the function of the cultural economy of cities. The term
“creative capital of cities” denotes the ability of urban economic actors to produce scientific, technological, and artistic innovations on the basis of relational assets that are socially produced within a city or urban region. A locally bound creative milieu of cultural producers might constitute one example of a city’s creative capital, the knowledge networks between an urban region’s research establishments and businesses yet another. By focusing on the socioeconomic context in which creative activities are embedded, this conception deviates from the standard notion of creativity as a uniquely individual quality. In our approach, creativity denotes the capability of individuals and of interacting groups of workers both at the intra-firm level and the level of interorganizational cooperation to create new knowledge that entails the variation of existing forms or the creation of novel forms which are applied to generate new technologies, products, and organizational forms. Hence creativity functions as an essential “input” in the process of innovation. The formation of interorganizational knowledge networks in a regional economy and the emergence of a locally bound creative milieu of cultural producers in the urban economic space are the hallmarks of an urban and regional socioeconomic environment that enables creativity to flourish. In short, beyond the specific capabilities possessed by individuals, creativity is embedded in relational networks of social and economic actors.

With respect to its ability to generate meaningful new ideas in collaborative contexts, creativity “is not necessarily an economic activity but may become so when it produces an idea with economic implications or a tradeable product” (Howkins 2001: x). Creativity is present at all levels of the economic process and can flourish in every kind of organization open to innovation. As the creative process is dependent on a specific socioeconomic context, there is a weak basis for developing a general theory of creativity which encompasses the activities of both the artist and engineer. Creative capabilities are relevant not only in the sphere of cultural industries, but also in a wide range of other industries, particularly the research-intensive branches of high-tech and medium high-tech industries. Since the unfolding of creativity depends on specific socioeconomic contexts, we will emphasize in particular the difference between scientific/technological creativity that draws on localization economies and knowledge networks, and artistic creativity that draws on urbanization economies and a continuous reconfiguration of project networks. Thus we do not intend to offer a “general theory of creativity.” The main emphasis is on the diversity of organizational and spatial contexts for the unfolding of different kinds of creative work. These will be the subject of analyses in Chapters 3, 4, and 5.

Yet clearly, only human actors—not things or territories—are creative. The “creative city” as such is a fiction. The creative capital of cities or regions has to be understood as an expression of the aggregated collective capability of its economic and social actors, which also comprise particular
occupational groups specializing in creative and innovative activity, to yield new forms, products, and problem solutions. Creativity depends on human actors and their interlinking (yielding knowledge networks of industrial innovation and project-based networks of artistic production), which creates a “collective” innovative capacity within particular regional and urban settings. Terms such as the “creativity of urban regions” or the “creative capital of cities” have to be understood as representing rough generalizing terms which do not imply that territories or cities as such can be creative. In the term “creative capital of cities,” “capital” should be understood as representing a “capacity or capability to” perform creative work that leads to successful innovation activity. This kind of usage of the term “capital” is quite common, for example in the literature on “social capital,” yet it differs from the classical notion of economic capital that prevails in the theory of political economy and in economics. The creative capital of cities thus denotes the capacity to create value from interactive knowledge generation in urban economic settings which are at the same time characterized by the geographic clustering of specific subsectors (i.e., the formation of local clusters) and by the presence of a diversity of industrial activities and knowledge resources. This creative capacity can be unevenly distributed (e.g., geographically concentrated) in the urban and regional system. The so-called “creative economy” (Howkins 2001) is predominantly an activity concentrated in urban economies, particularly in metropolitan regions.

The debate concerning “creative industries” and “creative cities” has for the most part focused on a selection of economic subsectors in which creativity plays a key role (see Hartley 2005; Kong 2009). However, the delimitation of these “creative subsectors” is still a subject of debate. Gibson and Kong (2005: 552) emphasize the dominance of selective interpretations of creativity, which is mostly discussed with reference to those forms which can be harnessed in productive ways for economic growth, while ignoring others that do not automatically contribute to economic development. Landry (2000) offers an unusually broad interpretation of the creative city that concentrates on innovative ideas for developing and running urban life. Landry addresses a wide range of topics, including the creative use of culture in urban revitalization, as well as imaginative solutions for the organization of urban transport systems, garbage collection, etc. The nearly forgotten realm of “social creativity” — understood in terms of the renewal of social institutions — is another topic addressed by Landry. On the whole, he aims to surmount the challenges to creative urban policies by offering a “toolkit for urban innovators.” In this way, his approach diverges considerably from typical assessments of creative subsectors in urban and regional economies. Landry’s approach has been extended by contributions that intentionally depart from the debate on market-led models of technological innovation in order to explore notions of community development based on social innovations.
as an alternative interpretation of the creative capabilities of the city (see Moulaert and Nussbaumer 2005). This book, however, deals more specifically with the creative and innovative capacity of urban regions from a multi-sectoral perspective. It encompasses a wider range of activities than the prevalent "creative industries" approach, but doesn’t attempt to develop all-encompassing policy prescriptions for urban development.

In order to delimit the “creative subsectors” of the urban and regional economy, we draw on the approach taken by Howkins (2001). Most participants in the current debate restrict the term “creative industries” to the arts, media, and cultural industries while deliberately excluding the sciences and R&D activities (which are relevant to all economic sectors, particularly the “knowledge-intensive” subsectors of the economy). Yet this view of creativity is rather one-sided. Indeed, Howkins (2001) notes that

the output of creative products has tended to happen most publicly and obviously in the arts, which has caused the arts to be seen as the core creative activity and for creativity and the arts to be treated as synonyms (or, at least, creativity and good art). But artists have no monopoly on creativity, nor are they the only workers in the creative economy. The difference between creativity in the arts and elsewhere is not that artists are more creative, or more successfully creative, but that because they deal in a specific range of ideas and aesthetics, they create specific kinds of works and work according to identifiable business models with their own patterns of supply, demand, values and pricing. Creativity flourishes equally in the sciences, especially in research and development (R&D). There is little difference between the creativity of the scientist and of the artist…. Put simply, the creativity is the same; the creative products are different. (2001: x–xi)

In contrast to a narrow categorization of creative industries that only includes sectors of “artistic” creativity (see Scott 2000), Howkins (2001) offers a broader definition that is based on the tangible products of intellectual property and a distinction between “copyright industries” and “patent industries.” The copyright industries consist of the prominent subsectors of the media and cultural economy (the advertising, film, TV, music, publishing, and performing arts industries, etc.). The patent industries, by contrast, consist of all industries that produce or deal in patents, which are the most important form of intellectual property for creative products (i.e., inventions) generated by research and development. However, the term “patent industries” is applicable to all manufacturing subsectors. Patent-producing R&D is particularly widespread in "knowledge-intensive" manufacturing subsectors such as pharmaceuticals, information technology, mechanical engineering, aerospace, and vehicle manufacturing.

Limiting the discussion to a narrow range of cultural products and industries prevents the formulation of an accurate definition of the creative
capital of cities and regions. Yet the inclusion of all of the above-mentioned subsectors under the term “creative industries” would be misleading, as it would encompass an excessively broad range of economic activity. In an era of economic development increasingly driven by innovation-related competition, every industry makes efforts to generate new products and manufacturing techniques. There is only a gradual quantitative differentiation of industries according to their average shares of research and development expenditure or employment. While most scholarship on creative cities focuses on cultural production, our approach to creative capital embraces cultural production as well as industrial research and development. Both are constitutive components of the creative capital of cities and regions. In our analysis, a distinction is drawn according to occupational categories; creative activities in artistic and cultural domains are grouped together and contrasted to activities in scientific and technological domains. Thus, in contrast to Howkins’s approach, R&D activities are not viewed as a distinct industry within the traditional range of economic sectors. The generation of new products, processes, and patents is a function within the value chains of various industries (which are traditionally distinguished according to their final products), but does not constitute an industry of its own, even if there are firms and organizations which specialize in R&D functions. R&D activities are included in our analysis with a particular focus on the “collective” generation of industrial innovations in urban and regional settings. Here, the formation of regional knowledge networks plays a decisive role. Networking and creativity are symbiotic. The capacity for interorganizational learning and innovation in a regional innovation system is directly proportional to the number of actors and interrelationships encompassed by it, as innovation is based on the interlinking of diverse knowledge resources. In this way, our analysis underscores a dimension of urban creativity mostly neglected in the current debate on creative cities. It should be noted here, however, that this topic is not neglected in the literature on urban and regional economic development, where a prominent area of research concerns creativity in industrial innovation and its territorial embeddedness in regional networks and local innovative milieus.

The theoretical framing of the book includes, first, the embedding of creativity and innovation in the capitalist imperative of accumulation and the unfolding of interurban competition, and, second, the classical economic geography concept of “localization and urbanization economies” that are at the heart of urban regions’ particular creative and innovative capabilities. This economic geography concept will be applied to the technologically and artistically creative capacities of cities and combined with empirical analyses of the functioning of these agglomeration economies in terms of the embedding of creative work in relational networks of socioeconomic actors at the
level of cities and urban regions. By applying social network analysis to urban innovation networks (Chapter 3), a new and detailed empirical analysis of knowledge networks that might extend the understanding of urban and regional innovation networks will be presented. The literature on the regional and urban dimension of innovation has been most influential to the approach presented here.

This book is divided into five main chapters. Each deals with a separate aspect of creativity in urban economic analysis. The chapters cover different levels of abstraction and focus on different scales of spatial contextualization (with empirical analyses moving from the national to the regional and intra-metropolitan local scale). This way of bringing together complementary theoretical concepts and different levels of investigation seems appropriate for achieving a differentiated understanding of the creative capital of cities.

Chapter 1 offers a basic contextualization of the issues of creativity and innovation that draws on David Harvey’s theory of capitalist urbanization, wherein the capitalist imperative of accumulation subordinates creative work and innovation activity to the continued race for competitive advantage and the appropriation of surplus profits. Harvey’s theory emphasizes the role of different circuits of capital and places innovation activity and technological change in the framework of interurban competition. We will suggest modifications of Harvey’s account with regard to the rise of a finance-dominated model of capitalist development. While technological innovation remains a significant source of competitive advantage and surplus profits, the capitalist economy today can privilege different pathways and investment options that comply with the imperatives of capital accumulation. The unfolding of creativity and innovation activity represents a particular strategic option in the framework of a finance-dominated regime of accumulation.

Starting from the thesis that creativity can be exclusively assigned neither to a particular social class nor to a particular selection of economic subsectors (i.e., the so-called “creative industries”), Chapter 2 engages in a macro-level analysis of the impact of creative occupational groups on regional economic success within Germany’s urban and regional system. The chapter starts from a critique of Richard Florida’s notion of the “creative class,” which has been wholeheartedly embraced by many policy makers and social scientists. Florida’s theory is criticized for its ideological affirmation of widening social stratification and detrimental economic trends as well as for its disregard of relevant urban economic development factors. In the deconstruction of the “creative class” concept, empirical research is also presented concerning the relationship between regional economic success and the distribution of particular occupational groups in Germany. The chapter ultimately concludes that the “dealer class” (or, in Florida’s terms, the class of “creative professionals”) does not enhance the ability of urban regions to pursue
Introduction

sustainable economic growth. The findings at this macro level of analysis indicate that a specifically delimited creative workforce indeed has a positive impact on urban economic development. However, the findings simultaneously indicate that prominent factors of capitalist economic development such as entrepreneurial control capacities and capital concentration in large firms still have a “greater” influence on the cities’ economic performance. The macro level of comparative regional analysis does not address the important question of how creative work generates innovations in the institutional setting of an urban region’s economy. The following chapters will go beyond the level of macro-analysis and present an analysis of the functioning of creative work in different subsectors of the urban economy.

Chapter 3 presents a meso-level analysis of the interactive basis of creative activities within the context of a metropolitan region. The analysis draws on existing studies regarding the sources of regional innovative capacity and includes a detailed investigation of the knowledge network employed by regional actors in a selected “medium high-tech” manufacturing sector of a metropolitan region in Germany (Hanover-Braunschweig-Göttingen). The capacity of technologically creative occupational groups to develop new products and solutions manifests itself in a specific regional context. The case study deals with a type of metropolitan region that is shaped by technology-intensive manufacturing industries and related innovation activities, still representing the backbone of the German economy. Within the framework of a regional innovation system and its relational aspects – that is, the knowledge networks employed by economic actors in particular economic sectors – “creativity” or creative capacity appear to be a socially produced locational advantage and regional economic success factor. Looking at regional or urban innovation systems in relational terms is a basic premise of much economic geography research on innovation. Yet prominent scholars in this field of research frequently emphasize the lack of empirical analyses of the structure and functioning of urban innovation networks that provide the framework for the unfolding of creative capabilities particularly in the sphere of technological innovation. Against this background, this chapter aims at a presentation of the specific socioeconomic context of technological creativity in a selected metropolitan region. The conclusion can be drawn that in the realm of technological innovation the creative capital of cities depends on the properties or “strengths” of their knowledge networks in specific branches of economic activity. This implies that the creative capital of cities has a specific “sectoral profile” in terms of one or more specific sectors with “strong” knowledge network properties. Due to their size and internal economic diversity, large metropolitan regions are able to develop a “strong” creative capacity in a variety of subsectors. In sum, the chapter deals with creativity in terms of the dynamic agglomeration
advantages of knowledge creation and the interactive social framework of technological innovation.

Chapter 4 focuses on the institutional order of the cultural economy, underscoring the impact of commercial imperatives on artistic creativity. We present an analysis of the functioning of artistic creativity under the command of capital and the imperatives of entrepreneurial success. The conclusion is reached that there is little justification for speaking of “creative industries” exclusively in terms of the capitalist culture and media industries to the exclusion of creative innovative activities undertaken by other industrial branches. The chapter also deals with the globalization of the cultural economy and the emergence of global centers of the culture industry.

Chapter 5 concentrates on urban cultural economies and, in particular, on the “urbanization economies” of artistic innovation. The cultural economy of the Berlin metropolis will be taken as a case study area. The Berlin case is a good example of the local clustering and rise of new “city industries” that prefer to concentrate in the densely built inner-city area. However, a specific feature of Berlin is the mismatch between flourishing creative industries and regional economic growth. The Berlin economy is comparatively weak even while the creative industries are expanding. Hence the Berlin case undermines Florida’s causal claims regarding the relationship between creative industries and growth.

We present a micro-level analysis of the inner urban clustering of the cultural economy sector in the Berlin metropolis that illustrates the functioning of the “urbanization economies” of artistic innovation. The clustering of artistically creative workers at the local level (i.e., in particular inner-city districts of a large city or metropolis) and the related emergence of a locally bound creative milieu of cultural producers again highlights the fact that “creativity” is in part a socially produced asset. The setting within which the cultural economy’s creative actors interact is the local “creative milieu,” which represents a key asset of the creative capital of cities, as it provides networking opportunities between firms or in non-work settings. The analysis draws on the large body of “pre-Florida” studies on urban cultural economies.

The misleading term “creative industries” has encouraged the self-glorification of actors in the cultural industries (comparable in many ways to the near-forgotten hyping of the so-called “New Economy”), and – even more crucially – currently operates as a disarming catchphrase for dominant urban growth ideologies (“creative class cities”). Nevertheless, the cultural economy makes a positive contribution to regional economic development, particularly in large cities and metropoles. The cultural industries employ a comparatively high and growing share of the workforce in global cities such as New York, Los Angeles, London, Paris, and Berlin. Yet creativity and growth of culture industries cannot be regarded as a “fix for urban ills.”
Introduction

The discussion of the implications of “creative industries” for urban regeneration will firstly emphasize the creation of “low quality” employment and the sector’s limited potential to solve a city’s labor market problems. Second, the expansion and local concentration of creative industries and actors contributes to the unfolding of gentrification processes in inner-city districts that are leading to increased sociospatial inequality and polarization. These arguments contradict most of the salvation promises of the “creative industries” urban growth ideology.

Chapters 2 and 3 draw on rather “rigorous” statistical analyses requiring a mode of representation and outlining of hypotheses that differs from Chapters 1, 4, and 5, which entail a predominantly “qualitative” way of presenting theses and conclusions. The empirical analyses presented in the book are related to the urban and regional system of Germany. On the one hand, this is the context within which the author works; on the other, the German case studies are relevant in a European and global context, too. The polycentric urban and regional system of Germany contains a range of metropolitan regions that compare with the different types of metropolitan urban economies across the European territory (except outstanding “extremes” such as the global city regions of London and Paris). This includes metropolitan regions thriving on an expanding service economy (such as Frankfurt-Main) as well as metropolitan regions with a strong base in technology- and research-intensive manufacturing industries (such as Munich, Stuttgart, and Hanover; see Krätke 2007). These urban regions form an essential part of the “regional motors” of the European economy, and they are strongly connected to the worldwide network of global city regions. At the same time, comparable to other European countries the German urban system is home to cities experiencing quite different urban fortunes, comprising large cities with considerable problems of industrial restructuring and related labor market pressures (such as, for example, Cologne and Berlin). In the European and German context, such cities often put particular emphasis on unleashing the presumed new growth potential offered by “creative industries.” While the empirical focus is on Germany, the arguments and conclusions presented have broader implications that may enrich the debate on creativity and cities at the European and wider international scale. The analyses concentrate on the case study regions Hanover and Berlin, which have been chosen for their different spatial structures at the intra-metropolitan scale and their contrasting sectoral structures or “lead sectors” of creativity and innovation: in the metropolitan region Hanover-Braunschweig-Göttingen, the creative capacities are investigated at the scale of a polycentric metropolitan region which contains several core cities, whereas in the monocentric Berlin metropolis, the unfolding of creative capacities will be examined at the local level of inner-city districts. The case study region Hanover-Braunschweig-Göttingen is an example of an urban region whose creative and innovative capacities are concentrated in the
medium high-tech industries (particularly the automotive industry). By focusing on this example we can prove that creative capacities are unfolding in rather “traditional” industrial sectors which differ from the high-tech industries mostly privileged in urban and regional innovation research. In the case study metropolis of Berlin, on the other hand, the cultural economy represents the “lead sector” of creativity and innovation. The investigation of the creative capacities of cultural products industries also emphasizes the point that there is no reason to assume a “superior” creativity in the culture industries as compared to other industries (such as the automotive sector in the Hanover case study). In sum, we have chosen contrasting case studies in order to underline the diversity of urban “worlds of creativity.”

This book aims to make a contribution to critical urban theory in two ways: first, by positioning the issues of creativity and innovation in the framework of the dynamics of a capitalist economic order. This political economy perspective is relevant for understanding the general role of creative and innovative capacities in contemporary urban development. According to Brenner (2009), critical urban theory requires sustained engagement with contemporary patterns of capitalist urbanization which become increasingly generalized on a world scale. Second, critical urban theory will be advanced by a reasoned critique of the latest urban growth ideologies. Currently, the theoretical notions surrounding “creative industries” and “creative cities” exert a great deal of influence over urban economic planning and development. Yet a critique of these concepts should not be reduced to assessing their functional role in shaping urban growth strategies. It is also necessary to employ sound empirical research on urban economic development in order to convincingly refute them. Against this background, the more detailed analyses of the functioning of creativity in specific sectors presented in Chapters 3 and 4 draw on the classical distinction between the localization and urbanization economies of the city, confirming the significance of dynamic agglomeration advantages for urban economies that are pursuing an economic development path that is based on knowledge-intensive activities. The function of urbanization economies hinges on uniquely urban qualities of place and the opportunities offered for cross-fertilization amongst a diversity of branches and actors. The creative capital of cities and metropolitan regions is therefore founded on processes of interactive knowledge creation within specific industry clusters as well as on urbanization economies in technological and artistic fields of innovation. These types of agglomeration economies offer socially produced locational advantages, particularly for knowledge-intensive industries and the cultural economy sector. Ultimately, the book offers a transdisciplinary approach to the analysis of creativity and knowledge generation in an urban context by combining perspectives in economic geography, regional research, and sociocultural urban studies.
Creativity and Innovation under the Command of Capital

The Capitalist Imperative of Creativity and Innovation

Contemporary urban and regional research has been shaped by an extensive debate on creativity and innovation, which has been accompanied by the emergence of new urban growth ideologies (such as the “creative class city”) and affirmative accounts of today’s capitalist societies (such as the notion of a “knowledge-based society”). Particularly in the academic disciplines of economic geography and urban and regional studies, the analysis of urban and regional innovation systems and of the interorganizational networks that foster collaborative knowledge creation, as well as the role of creative milieus as a major ingredient in innovative capacity, has seen many advances in the last decades, resulting in diverse models of the socioeconomic organization and spatiality of innovation (see Fagerberg, Mowery, and Nelson 2005).

An initial working definition of creativity and innovation might start from the point that creativity and innovation are a result of human labor (which includes the labor of knowledge generation) and are embedded in a social division of labor. Everyone can be creative in one sense or another, but we restrict the term here to creative work that is economically valued and geared toward the creation of innovations in terms of new products, new production processes, and new organizational forms. In the contemporary era, this kind of creative work has become the task of a specialized and skilled workforce of scientists, engineers, designers, and artists, etc. Thus, creative work and innovation activities are embedded in the functioning of the economy of historically specific social formations. Moreover, as we will explore in some detail, they are differentiated according to specific sectoral and spatial contexts. Creativity and innovation are closely interrelated or
"symbiotic," since the creative capacity of workers functions as a prime source of innovative capacity that is at the heart of successful innovation activities. Hence creativity functions as an essential "input" to the process of innovation. It denotes the capability of individuals and of interacting groups of workers (both at the intra-firm level and the level of interorganizational cooperation) to create new knowledge that entails the variation of existing forms or the creation of novel forms which are applied to generate new technologies, products, and organizational forms.

The creation of new knowledge essentially requires a recombination or novel combination of complementary "pieces of knowledge" in terms of either specific competencies residing within a particular field of activity or different knowledge bases of particular economic sectors, scientific disciplines, etc. Hence interactive knowledge generation through the collaboration of creative workers is of key importance in the innovation process. Interactive knowledge creation, on the other hand, entails a shared learning process that strengthens or expands the individual actors' creative capabilities. Innovation is the result of non-linear processes of searching and experimentation, whose course and "success" cannot be known in advance. Hence the generation of new knowledge should not be conceived of as a deterministic process. The process of innovation as a whole comprises research, development, and design activities, the "output" of this creative work being new designs, patents, contents of cultural products etc., and its economic utilization in the form of new products and technologies. Due to the diversity of socioeconomic fields and sectors, where innovation activities are to be found, creative capabilities rely on a specific knowledge base. Yet in the process of creative work, different knowledge bases might be combined in order to generate novel forms. The workforce employed in research, development, and design activities must have specific knowledge and skills, but the unfolding of creative capabilities is based on both specifically skilled human resources and broader social resources in terms of the organized interaction amongst creative workers in the innovation process. Thus creativity and innovation are embedded in spatially differentiated socioeconomic and institutional environments; specific forms of collaborative organization and "milieus" of interaction are constitutive factors of creative capabilities at the local and regional level. With regard to interregional competition, creativity and innovative capacity function as a socially produced regional advantage that contributes to uneven development in the urban and regional system.

Existing scholarship in economic geography and regional research has for the most part concentrated on the spatial distribution, functioning, and determining factors of creativity and innovation in urban and regional settings, and on the impact of innovative capacities on urban and regional economic development. However, the current debate on the role of creativity and innovation is characterized by a major shortcoming: there is a common
tendency in mainstream writing on this topic to decontextualize the issues of creativity and innovation from their embeddedness in a capitalist society and the imperatives of capital accumulation (see Florida 2004; Fagerberg, Mowery, and Nelson 2005). This book has a different starting point. The geography of uneven development at the global, national, and regional scale is essentially based in the dynamics of a capitalist mode of production. More generally, the contemporary world is characterized by the dominance and global proliferation of the capitalist mode of production, which can be further differentiated according to the variation of regimes of accumulation and modes of regulation and governance into a variety of capitalist development models (see Whitley 1999). These are, however, still characterized by shared basic ingredients such as the primary class division between the owners and “managers” of capital and a workforce dependent on wage labor, and by the overarching imperative of capital accumulation. The decontextualization of creativity and innovation from these basic features of the historical social formation in which such capacities are developing has fostered the emergence and spread of new urban and regional growth ideologies that entail a glorification of capitalism as a socioeconomic formation essentially based on knowledge creation and superior innovative capacities. The most advanced decontextualization is presented in Florida’s theory of the “creative class” (see Chapter 2), which denotes “the rise of human creativity as the defining feature of economic life” and claims that “we can read economic history as a succession of new and better ways to harness creativity” (Florida 2004: 21, 56). In such conceptualizations, the primary motives and the partially destructive powers of innovation activities that develop under the command of capital (such as in the sphere of “financial innovations,” or in the guise of sectoral and regional “switching crises” resulting from basic technological innovations) are widely neglected. Decontextualization leads urban and regional research to deal “immanently” with the unfolding of creativity and innovation – that is, to neglect the broader socioeconomic framework of a capitalist society that shapes the basic economic motives and social organization of such activities. Despite the many relevant and detailed findings of contemporary urban and regional innovation research, decontextualized approaches give rise to overly affirmative positive general characterizations of the current phase of capitalist development.

In the context of a capitalist society and economy, the unfolding of creativity and innovation activity takes place “under the command of capital.” Technological and artistic innovation is dominated by private sector activities, even though national or regional innovation systems often involve cooperative links between private sector firms and public sector research establishments. Private sector dominance leads to the privileging of those fields and modes of innovation activity that promise entrepreneurial and commercial success. Likewise, the issue of creativity is mostly considered with reference to those
forms which can be harnessed for economic growth. Creativity and innovation are thus embedded in the basic imperatives of capitalist economies which subordinate creative work and innovation activity to the continued race for competitive advantage and the appropriation of surplus profits. This basic condition represents a determining force that is also relevant to research on the uneven geography of creative and innovative capacities and to research into the specific regional and local conditions that support the generation and successful utilization of creative and innovative capacities.

The work of David Harvey represents the most advanced and detailed Marxist approach to the urbanization of capital and the forces shaping the geography of uneven development under capitalism. In Harvey’s theory of capitalist urbanization (Harvey 1989), the embedding of urban and regional processes (including creative and innovative work) in the imperatives of a capitalist economy is the explicit starting point of analysis. At the most general level, capitalism has been characterized as a historically distinct mode of production based on continued “revolution” in production methods, technologies, organizational forms, and spatial arrangements of the economy. Competition is a major driving force of this dynamic. According to Harvey (1989: 136), “the entrepreneurial search for excess profits is fundamental within the social relations of capitalism. Excess profits can be had by virtue of superior technology and organization or by occupying superior locations … The coercive laws of competition force capitalists to search out superior technologies and locations.”

Within the framework of capitalist competition, the imperative of innovation activity (that draws on creative work) is the continued striving for surplus profits. These represent excess profits above the prevalent “average” rate of profits. For individual capitalist firms, the command of superior technologies and production methods, the invention of new products as well as incremental product innovations, and the introduction of new organizational forms (including spatial arrangements of production and distribution) offer various approaches to the realization of surplus profits. In this sense, Marx’s theory of capital (Marx 1981) contains a concept of “endogenous growth” that emphasizes the role of technological change (innovation) in the process of capital accumulation – and this long before the contemporary rediscovery of technological change and innovation as a major economic growth factor in Romer’s “new growth theory” (see Romer 1990). However, as Luxemburg (1951) has shown, the accumulation of capital does not solely rely on innovation and technological change – it can also be based on the geographic expansion of capital accumulation and the incorporation (subsumption) of new sectors of social activity into the domain of private capital accumulation. We will return to a more detailed account of the role of innovation and interregional competition in Harvey’s theory of capitalist urbanization in the chapter’s third subsection.