Comparing the Social Structure in Beijing and London:

Towards a more equal, cosmopolitan landscape of urban theories

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Comparing the social structure in Beijing and London: Towards a more equal, cosmopolitan landscape of urban theories

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Abstract

The purpose of this thesis is to help reconfigure the landscape of urban theories to become more equal, cosmopolitan, and closer to that of the real urban world. Conceptually, this thesis criticises the Western-centred production of urban knowledge, suggests a new step to decentre this production, and highlights the comparative gesture that can be used to support this step. Empirically, this thesis puts this new step into practice. It compared Beijing and London, via the quantitative analysis of secondary data, in terms of the demographic compositions of the labour force, earnings inequality, and socio-spatial inequality, with each comparison confronting a conventional idea in urban research.

The step proposed in this thesis to interrupt the Western-centred knowledge production is that: imagined geographic divisions should be unlearned, places kept apart by these divides should be drawn into conversation, and the resulted conversation should be used to help urban theories achieve a more pluralistic universalism. The underpinning idea is that: urban research should preserve a sense of worldly curiosity, urban theories should be subject to constant remaking, and a world of cities should no longer be as crudely analytically divided as before. To take this step, comparative methods are suggested to be reformatted: comparisons should be rethought of as a way of thinking, be made across cities kept apart by the imagined geographic divides, and be used to reconstruct existing concepts.

Beijing and London, two cities kept apart so often today by these divides, were compared. Results show that urban life in the two cities is subject to the dialectics of global-local dynamics, and that the demography of the labour force of the two cities both resonates to, and differs from, each other. I confront the idea that cities across the geographic divides are too different to be compared. In addition, contrary to what is conventionally believed, the two cities did not follow a similar path to deal with inequalities, and their levels of inequalities changed differently. These results confirm how limited much of our existing urban knowledge is, and how great the potential of a wider set of urban comparisons could be in renewing them.

It is hoped that this thesis can encourage more research in this area, and provide future researchers with some additional conceptual and analytical tools to engage with the project of decolonising urban knowledge.

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This thesis becomes a reality with the support of many people. First and foremost, I would like to thank my supervisors, Danny Dorling and Janey Messina. I am extremely grateful to Danny for offering great support and encouragement throughout my DPhil journey, spending many hours reading and commenting on whatever I sent to him, and opening up my mind to new ideas in our regular meetings. His kindness, not only to me but also to everyone else, has made me want to become an approachable and empathetic person like him. Janey has offered valuable advice in framing the research, handling the up and downs of the DPhil work, and navigating career options. Having both of them as my supervisors are the most fortunate thing that I have in my time in Oxford.

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justice, but I am very grateful to them both.

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Finally, I would like to thank Jake Yang for making my time in Oxford extremely happy and enjoyable. His optimism has helped me to survive the nearly-one-year lockdown. I am also grateful to Zhe Yang for always being there whenever I need someone to talk to and always understanding me. Last, but not the least, many thanks to my parents for their love and support. Talking to them over the over the telephone is the most relaxing time of my day. I could never have managed this without their help.

A summary of the impacts of COVID-19 on this thesis

According to the timetable written in my confirmation of status report (February 2020), the work that I was then planning to complete included: 1) data collection, analysis and writing-up of the paper on earnings inequality (Chapter 6); 2) revision of the introduction, literature, methodology, and contextual background chapters (Chapters 1-4); and 3) the writing-up of the conclusion chapter (Chapter 8). It is the first work that has been severely affected by COVID-19.

The access to the data required for the paper on earnings inequality was applied in February, before the UK went into lockdown. Since then I began to conceptualise this paper on the basis that the data will be available within two months (which is the normal application time). However, not only did the process take longer than I had expected due to the COVID delays; I was also notified on May 22nd, more than two months afterwards, that the data can only be accessed within department which was then fully closed. This completely jeopardised the work that I had made since February; and I had to redirect the research focus of that paper on the basis of what alternative data I could get. Consequently, the modelling of inequality that was previously planned was dropped. This reduction of empirical work then made me shift the attention a little towards how inequality changes in the two cities could be interpreted and understood, the result of which is the work now presented in Chapter 6 of this thesis.

From September 2020, the department has been partially reopened to office workers. However, I had completed the paper on earrings inequality by then; and it would be no help to return back to the original plan and to rewrite the paper. The previously planned work, despite being jeopardised by COVID-19, can now be carried out in my future research.

For all, 2020 was an unusual year full of disruptions. I have not only discovered that I cannot access some vital data outside the department, which threw me back in time a long way; I have also had to cope with the increasing amount of hostile media concerning China during this period, as well as having to remain in a country a long way from my home. Moreover, as with many DPhil students, trying to work on the thesis without a proper office setting is daunting; and living and working in the same space, with so much less contact than normal with my peers has made this all the worse. I am very grateful for all the support that I have received, which has enabled me to keep on doing some work, albeit at a much lower level of productivity than has been usual for me since I arrived at Oxford. This thesis would not have been possible without this support.

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Abbreviations

Abbreviation	Term
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
AWE	Average Weekly Earnings
CBD	Central Business District
CGSS	Chinese General Social Survey
CHIP	China Household Income Project
COVID-19	Coronavirus disease 2019
DIT	Department for International Trade
EU	European Union
FDI	Foreign Direct Investment
FIRE	Finance, Insurance, and Real Estate
GaWC	Globalization and World Cities
GDP	Gross Domestic Product
GFCI	Global Financial Centres Index
GLA	Greater London Authority
HEI	Higher Education Institution
LFS	Labour Force Survey
LFPR	Labour Force Participation Rate
MDSD	Most Different Systems Design
MLD	Mean Logarithmic Deviation
MNC	Multinational Corporation
MSSD	Most Similar Systems Design
NBS	National Bureau of Statistics (China)
ONS	Office for National Statistics (UK)
SIC	Standard Industrial Classification
SOE	State-owned Enterprise
WCN	World City Network
WTO	World Trade Organisation

Data sources

2001 and 2011 Census data in the UK are collected by the Office for National Statistics. The aggregate data were accessed via the Nomis website; and the microdata were acquired via the UK Data Service under the standard End User Licence agreement.

2000 and 2010 Census data in China are collected by the National Bureau of Statistics. The aggregated data were accessed via the China National Knowledge Infrastructure website; and the microdata were acquired through negotiations with Beijing Municipal Bureau of Statistics.

The Annual Population Survey datasets are Crown copyright. The safeguarded microdata were acquired via the UK Data Service under the standard End User Licence agreement.

The China Household Income Project is an initiative housed at Beijing Normal University, Beijing, with scientific leadership by the Institute of Economics, Chinese Academy of Social Science. The research data are distributed by China Institute for Income Distribution

Chapter 1 Introduction

An overarching issue

In August 2008, Beijing handed over the Olympics to London. The then London mayor, now Prime Minister Boris Johnson, was present at the ceremony. He had no idea that eight years later there would be Brexit which might affect London's position as the world's top financial centre. Nor did the Beijing mayor know that a global recession was approaching, to which both cities not outsiders were, but during which Beijing's importance in the global economy was boosted, (as the less impacted place).

The place of key cities in the world is changing significantly. Not only have we entered the 'Urban Age' or the era of 'Planetary Urbanisation'; but also this entering is no longer led principally by cities that had taken the lead in recent centuries (Brenner & Schmid, 2014; Burdett & Sudjic, 2007). Today, for the first time in human history, more than half the world's population is living in cities; and almost no one is being left out of urbanisation processes (Ash et al., 2008; Brenner, 2018). Moreover, places being labelled in the recent past as 'developing' are now often the heartland of urban growth; and many cities once recently considered inferior have come to share the responsibility for coordinating the world economy (Smith, 2019; Taylor & Derudder, 2016). The urban terrain is expanding enormously and being reshaped fundamentally. It is becoming both larger and more complex.

The landscape of urban theories has failed to keep pace with this changing world. This is not to deny the continuous scholarly efforts devoted to theorising. Rather, it is to suggest that neither the processes nor the places through which we theorise urban issues have changed to the extent required to adequately understand today's urban world (Leitner et al., 2019). Most urban theories are still produced by abstracting what happens to a locally sourced template, and are then elevated to a universal framework to study other places (Figure 1.1, part a). Most chosen templates are situated in Euro-America (King, 1990a; Roy, 2009). Wirth's urbanism was derived from Chicago, Soja's postmodern geographies from Los Angeles, Castells's dual city from New York, and Hall's polycentric metropolis from Western Europe (Hall & Pain, 2006; Mollenkopf & Castells, 1991; Soja, 1989; Wirth, 1938). Despite the production of many new concepts, where they are produced are still largely in yesterday's heartland of urban development.

To adapt our existing theories to ones that match the world most people live in and the world that is of probably the greatest future economic importance, the entrenched Euro-American hegemony must be addressed. Not only do 'neglected' places need to be paid more attention to in empirical research; they should also be recovered as a site of urban theorisations. Scholarly efforts have been made to deal with both needs. For the past three or four decades, the geographic scope of urban research has expanded; and the experiences of many cities to which existing theories were found inapplicable have been used to construct alternative concepts (Leitner et al., 2019; Dick & Rimmer, 1998;

Ginsburg et al., 1991). Scholarly efforts to decolonising urban knowledge are now in the air, which can include re-focusing work on cities, especially cities in the so-called peripheries.

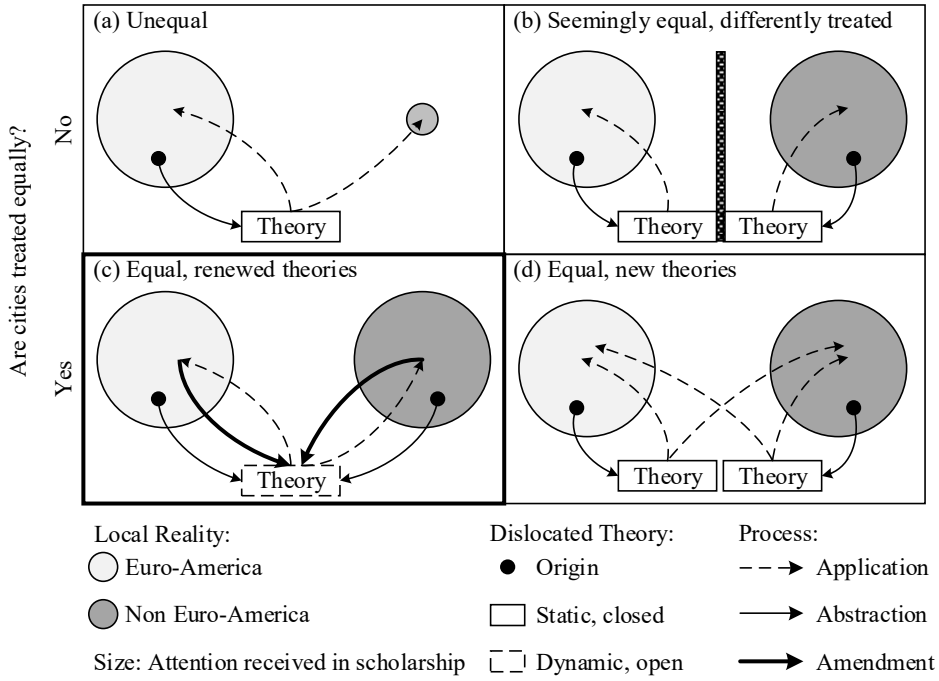


Figure 1.1. Different landscapes of urban theorisations

Existing efforts to decolonising urban knowledge are not without their problems. Admittedly, some cities have been recovered as a site of urban theorisations, but this recovery is still largely underpinned by a persistent tendency to interpret these cities as deviations from the norm, as belonging to a different category (Chibber, 2013; Robinson, 2002, 2003; Said, 1978). Consequently, as I expand on later in Chapter 2, most theory construction results in more, rather than less, separation between Euro-America and the rest of the world, and makes the exchange of ideas more, rather than less, difficult. What is even worse is that this separation could be deployed to ascribe value to theories produced in the two sides; and this practice may increase, rather than

reduce, the Euro-American hegemony (Figure 1.1b). Thus, recent efforts to block the 'traffic of ideas that routes concepts from Euro-America to the global South' are at best ineffective and, at worst, harmful (Roy, 2009; Roy & Ong, 2011). Unlearning the imaginative separation is required instead (Figure 1.1d). This unlearning brings out a more equal landscape of urban theories, where certain (Euro-American) cities are no longer elevated but laid besides their peers; where differences among cities are no longer obstacles but facilitators to their conversations. It is this conceptual change that this thesis advocates to be more widely made and tries to practice.

Having advocated a more equal landscape of urban theories, the subsequent question is what role cities should play in theory-making? Perhaps the easiest answer is to follow the tradition. That is, the abstraction-elevation process through which urban theories are produced remains the same; but now the local templates are no longer confined within a certain region, but can be located anywhere (Figure 1.1d). In doing so, the theoretical box can be enlarged, into which ever more new concepts originating from an ever larger repertoire of cities can be added (Roy, 2009; Scott & Storper, 2015).

The practice of enlarging the theoretical box has limitations: it fails to recognise that concepts should be in a constant state of remaking (Chibber, 2013; Mignolo, 2013). Being both located and dislocated, any urban theory is inexorably inscribed with both in-here particularities and out-there regularities. Thus, as Peck (2015) suggested, it 'cannot be rigid and deterministic', nor 'exceptional and site-specific', but 'must be

amendable to empirical reconstruction' (Figure 1.1c). Such amendments are perhaps more valuable than adding alternative concepts. They not only address the paradox embedded in any theory, either old or new; they also tidy up the landscape which otherwise would be overloaded with chaotic, new concepts. Thus, in this thesis, I argue that, for existing theories, new empirical evidence should be used to revise, renew, and reconstruct them. Doing so means that urban theories should be conceptualised not as inert, but as alive; they should be continually reinvented to become more cosmopolitan. This conceptual argument underlies this thesis.[1]

In studying cities, we are always, albeit not always consciously, making comparisons; and the form of these comparisons frames, and is reframed by, our thinking about cities (McFarlane, 2010; Wood, 2019). This thinking needs to be adapted to the demands of the times we are living in, and so does the comparative gesture. Two specific changes are required. First, comparisons should cross the imagined divides that have made some cities be assumed as incomparable with others. These divides, such as North/South, have a symbiotic relationship with the unequal landscape of urban theories, and have to be unlearned if this landscape is to be reconfigured (Robinson, 2011). Second, comparative results would be better theorised through a reflection on existing concepts, than through a creation of new ideal types. What underpins this decision is the above mentioned belief, that reinventing existing concepts is perhaps more valuable than

[1] The conceptual argument is put forward in Chapter 2; and its empirical practices can be found from Chapter 5 to Chapter 7.

producing ‘a thousand new ones’ (Brenner, 2019; Peck, 2015). Operating this reinvention would require a clear theoretical sense prior to comparison, an equal attention to both commonalities and differences during comparison, and a reflection on that particular theoretical sense after comparison (Scott & Storper, 2015; Storper & Scott, 2016). These two methodological changes are practiced in this thesis, a practice that rests upon, and serves to, the new thinking of the production of urban theories.

To briefly summarise, the key argument of this thesis is that: the landscape of urban theories should become more equal, and the theories *per se* should achieve pluralistic universalism; otherwise the Geographical field of urban studies may lose its contemporary relevance. Being equal means not only an equal appreciation of each city’s potential in theory-making, but also a dynamic conversation among a world of cities (Robinson, 2016a). Achieving pluralistic universalism means that existing so-called universal theories should be reconstructed and renewed to reflect a much wider range (a more plural range) of urban experiences. Practicing this argument would require two methodological changes in the comparative gesture: 1) existing divides (such as North/South) that define what cities can be compared should be overcome; and 2) comparative results would be better theorised through a significant adaption of existing urban theories.

This thesis not only sets out a call for change in urban theorising; it also puts this call into action. In each paper that makes up a part of this thesis (Chapters 5-7), a

comparison of an urban event is made between cities kept apart by existing geographical divisions, with an aim of renewing and reconstructing existing urban knowledge. Thus, this thesis is an attempt to conceptually, methodologically, and empirically reconfigure the landscape of urban theories. It contributes to the conceptual debate on how we should view the importance of different cities in the field of urban studies, and how they can contribute to a more cosmopolitan urban theory. It speaks to the question of how we can reformat the comparative methodology for a more equal, and global, landscape of urban studies. It adds empirical evidence to the field of postcolonial urban research, a field in which matters of research practice have not received the attention that they deserve.

Our changed world in a nutshell: Beijing and London

Beijing and London are the chosen case study cities. Their relative importance in the world well exemplifies how significant the urban landscape has changed. The centre of this landscape was initially not in the West: Beijing had been the world's largest city since the 16th century. However, this centre shifted westwards during the colonial era; and in 1831, London, the capital of the British Empire, overtook Beijing as the most populous city in the world (Chandler, 1987). This top position had stayed in London for a century until the rise of New York; and the study of cities was developed into an academic field exactly in this Western-centred urban landscape.

History repeats itself. After nearly two centuries, the centre of the urban landscape

began to shift backwards to the East. In the 1982 classic film '*Blade Runner*', an urban future of 2019 is predicted in which the dominant imagery is Japan; and in its 2017 sequel '*Blade Runner 2049*', this imagery is expanded to include Korea and China. Indeed, in these 35 years, China's urbanisation has proceeded at an extraordinary speed; and Beijing, the capital city of this fast urbanising country, has seen urban population increased by 14 million, a figure nearly twice the total population in London. Similarly fast-growing is Beijing's global influence: in 2018 it was only three spots lower than London in terms of the connectivity in the world city network (GaWC, 2018). Beijing's resurgence in the world is extraordinary, but is also just part of a greater eastward shift of urbanisation, as was the case of London two centuries ago. The centuries-long Western hegemony has obscured the fact that the urban landscape is in a state of constant change. This fact can be reminded of by thinking across the urban stories of Beijing and London.

Despite the fact that Beijing has been approaching London rapidly in terms of urban development and global influence, comparing them has been rarely thought of in urban research. This predicament comes largely from the unchanged (colonial) ways in which the two cities are categorised. Beijing is tagged with South, Third World, and socialist; and London stands for North, First World, and capitalist. These analytical divides, as suggested earlier, are one important factor that restricts our comparative imaginations and upholds the unequal landscape of urban theorisations. They need to be overcome and unlearned. Thus, thinking across the urban stories of Beijing and London represents

a methodological attempt to cross the imagined geographical divides, an attempt that is called for in this thesis.

The theoretical position of London in urban research is pivotal. It is where Charles Dickens set his '*A Tale of Two Cities*' (1859) and Karl Marx wrote his '*Das Kapital*' (1867). It also appears in Saskia Sassen's '*The Global City'* (1991) and David Harvey's '*A Brief History of Neoliberalism*' (2007). Concepts such as inequality, capitalism, global city, and neoliberalism, are thus infused with the experience of London, the capital of the British Empire, and are universalised (perhaps but very probably) through its (neo-) colonial power. These seemingly universal, but actually parochial, concepts, as suggested earlier, need to be reconstructed, to which thinking of London, a city that has inspired many 'universal' concepts, and 'elsewhere' has much to contribute.

Thinking of London with Beijing can contribute significantly to theory reconstruction. On the one hand, the geo-historical contexts of London are more different from Beijing than from Euro-American cities, not to mention that London has already been much compared with the latter over the past decades (Musterd & Ostendorf, 2013; Tammaru et al., 2015). Comparing these two cities can thus provide new theoretical insights and uncover the relevance of specific contexts to urban theorisations that are hard to be discerned otherwise. On the other hand, most cities outside Euro-America cannot compete with Beijing in presenting so many urban issues that are also of concern in London. Beijing is now similarly expected to compete for being a premier global city,

and to be prepared for the (possibly) rising inequality to come (Liu & Shi, 2019; Shi et al., 2017). Thus, comparisons between Beijing and London can generate very new and innovative reflections on existing theories; the number of theories on which they can reflect is also much larger than one would have expected (Wu, 2019).

Bringing the experiences of Beijing and London into the same conversation is of great practical significance. Both China and the UK are significant countries with global influence, and have been changing in significant ways (Cassis & Wójcik, 2018). Comparisons of their capital cities would have relevance to countries that fall behind or beneath them in any imagined hierarchy. Moreover, for the two capital cities, their comparisons may suggest some alternative ways of envisaging their future development, and may also provide some fresh ideas about the ways in which the two cities can learn from each other. Thus, thinking across Beijing and London is a response to the fact that the urban landscape is in a state of constant change, an attempt to cross the imagined geographical divides, an effort to adapt existing theories, and an endeavour to encourage cross-cultural understanding and learning. This is the thinking which is at the heart of this thesis.

Empirical focus: Social structure of the labour force

In this thesis, I use three interrelated aspects of the social structure of the labour force to develop the comparative analyses between Beijing and London. Various ideas of the nature of cities are developed with reference to the labour force, which can be seen from

Wirth's (1938) 'size, density and heterogeneity', Harvey's (1973) 'theatre of class struggle', and the more recent Scott and Storper's (2015) argument for cities being the node of agglomeration. The compositions, behaviours, relations, and patterns of the labour force are also the basis on which many classic urban theories are built (Hackworth, 2019; Massey, 1984; Park et al., 1925; Smith, 2005; Wilson, 1987). Moreover, the labour force could be argued as representing the whole city in a nutshell: its structure and spatial distribution are influenced by almost all aspects of a city, be it economic, institutional, political, cultural or physical (Fogli & Veldkamp, 2011; Massey, 1984; Shi et al., 2017). Thus, an analytical focus on the structure of the labour force not only enables this thesis to engage with many key urban concepts; it also offers an opportunity to think and compare the two cities more holistically.

The three aspects being compared between Beijing and London are: the demographic composition of the labour force, the earnings inequality, and the socio-spatial inequality. Each aspect is built on the previous ones. The first aspect concerns the most basic information of the labour force, i.e. its age, gender, and educational structures. However simple they may seem to be, these structures are actually shaped by a complex set of factors. These factors include not only global economic status, national institutions, and local cultures, but also their interactions and the results of these interactions (such as migration). Knowing this basic information is more than a first, and indispensable, step to understand the labour force. It can also reveal how life in cities is shaped by factors at multiple scales, and how it both resonates with, and differs from, urban experiences

elsewhere, a fact that enables us to think across different city contexts.

The other two aspects, namely the earning and spatial distributions of the labour force, point to the issue of inequality. This issue is an enduring topic in the discussion of cities, and is particularly contested in recent decades (Dorling, 2018; Beauregard, 2018). Today, 'inequality' is a watchword among policymakers and activists; and reducing inequality is an important Sustainable Development Goal (Griggs et al., 2013). It is also an issue that has recently been highly discussed in urban research in general, and in global city research in particular (Rokem & Vaughan, 2019; Fainstein, 2001; Gourzis et al., 2019; McDermott, 2019; McDonald, 2007). Not only is social and spatial polarisation featured in both Friedmann's (1986) world city hypothesis and in Sassen's (1991) original thesis of the global city, the scholarly debate on polarisation has also continued up to now (Hill & Kim, 2000; Hamnett, 2020). Thus, this thesis's focus on earnings and socio-spatial inequalities represents a response to the rising call for redressing our increasingly unequal world. It also represents an engagement with the global city debate to which the experiences of Beijing and London, two global cities, should have much to contribute.

The global city debate, as it is currently known, centres on the sources of inequalities. One side thinks of inequalities as a result of the specific economic base of these cities which is in turn a result of the intensified economic globalisation (Friedmann, 1986; Sassen, 1991). The other side, which stands less with functionalism than with conflict

theory, relates the rising inequalities in specific Western cities to their recent adoption of neoliberal policies which is in turn seen as related to class struggles (Swyngedouw & Wilson, 2014; Hamnett, 1996a; Harvey, 2007). This thesis engages with this debate in three ways. Inspired directly by this debate, this thesis first interrogates whether or not ideas of these two sides are both evident in cities. Secondly, if the answer is yes, then do the policies taken to deal with inequalities converge across global cities as these cities face 'common' economic pressures from globalisation, or do they still diverge as policy-making is embedded in idiosyncratic, relatively enduring, sociocultural environments (Hall & Soskice, 2009; Peck & Theodore, 2007)? Finally, do the effects of economic restructuring and neoliberal policies hold across urban contexts, or are they contingent on specific urban environments? In answering these questions, this thesis seeks to adapt the dominant (Western-based) ideas of inequalities.

An overview of the thesis

The overarching objective of this thesis is to reconfiguring the landscape of urban theories closer to that of the real urban world, and this objective is achieved in two ways. Conceptually, this thesis criticises the Western-centred landscape of urban theories, suggests a new step that can be taken to decentre this landscape, and highlights the comparative gesture that can be used to support this new step (Chapters 2 and 3). Empirically, this thesis practices this new step and the comparative gesture: it compares Beijing and London in terms of three interrelated aspects of the social structure of the

labour force (Chapters 4-7). These investigations provide the empirical evidence of how biased is the presumption that cities of different kinds are incomparable and how limited the existing ideas of urban inequalities are. They in turn lend support to the conceptual argument of this thesis. Accordingly, this thesis makes three major contributions. Empirically, it contributes to our understanding of the labour force and inequalities of the two cities in particular and of the two issues in general. Methodologically, it deconstructs the myth that cross-divide urban comparison is unviable and unsounded, and reveals the potential of the comparative methodology for theory reconstruction. Conceptually, it reimagines a more equal, cosmopolitan landscape of urban theories and sets out a new step towards this re-imagination.

This thesis is article-based. Its core comprises three academic papers (Chapters 5-7) which are part of the empirical investigations of this thesis, and a framing document (Chapters 1-4 and Chapter 8) in which the conceptual issues are detailed. This thesis is arranged as follows.

Chapter 2 develops the conceptual argument of this thesis and reviews the key research fields that are pertinent to the empirical investigations. The conceptual argument is developed with reference to postcolonial studies; and the research fields being reviewed include comparative urbanism, global city, and urban inequalities. Specifically, this chapter discusses the existing landscape of urban theorisations and its underpinning ideologies. It then reviews how these ideologies have been deconstructed, and what

specific practical steps have been suggested to decolonise this landscape. These steps are then critically evaluated, after which a new step is proposed which serves as the theoretical framework of this thesis. This chapter also provides the route map to the specific research topics and questions of the empirical investigations. It shows how the topic has been narrowed down from postcolonial urban studies, to comparative urbanism, to comparing global cities, and to comparing inequalities across global cities.

Chapter 3 focuses on the methodological issues of this thesis. It shows the worldview underpinning this thesis and how this worldview has been acquired; and it explains why I have decided to do research comparatively, and quantitatively. Apart from these broad issues, this chapter also discusses the processes in which a specific comparative method was chosen, the specific definitions on the urban issues being studied were given, and the specific quantitative methods were reached. It also shows what data sources have been used in the thesis and why they were preferred over the alternatives.

Chapter 4 tells the story of Beijing and London in being, and becoming, a global city. This chapter shows how Beijing and London, on the one hand, are similarly embedded in the global urban system, and, on the other hand, emerged as a global city in very different geo-historical contexts. In doing so, this chapter provides the contextual information of the two cities which is needed to interpret the empirical results, and it demonstrates how the choice of comparing the two cities aligns with the comparative method discussed in Chapter 3.

Chapter 5 (the first of the three articles) compares the age, gender, and educational structures of the labour force between Beijing and London. The key research question is: whether Beijing and London are so different from each other that they should be viewed as incommensurable? The answer to this question is no. Using census data, the paper finds that the labour force of the two cities shares a very similar description and differs only in the extent of the attributes in the description. What shapes these compositions is a global-local nexus, in which the global force pushes cities together and the local one intervenes in the process. Thus, Beijing and London, which have long been kept apart by the imagined geographical divides, are interrelated and tied into a globalising network; they are comparable given these interconnections. This paper has been published in *Habitat International* (Shi, 2019).

Chapter 6 compares the earnings inequality in Beijing and London. The key research question is: whether global and local forces are both present in influencing earnings inequality, and whether cities facing similar economic pressures from globalisation have chosen a similar path to deal with inequalities? The answer is yes to the first question and no to the second. Using survey data, the paper finds that the level of earnings inequality is similar between the two cities, but the direction of change is opposite. What underlies the similarity is a shared susceptibility of the two cities to transnational capital; and what underlies the opposite changes is their different local actions on distributing earnings, a difference that persists despite the convergence of the two cities in the global city position. This paper has been submitted to *Geoforum*.

Chapter 7 (the final journal article) compares the socio-spatial inequality between Beijing and London. The key research question is: whether the effects of economic restructuring and neoliberal policies on socio-spatial inequalities are contingent on certain urban conditions? The answer to this question is yes. Using census data and novel computer graphic visualisations, the paper finds that the socio-spatial inequality increased in London but decreased in Beijing. This opposite trend is found to be related to Beijing's fast speed in population growth and urban expansion. A long neglected local condition – the speed of develop – is thus highlighted that should be taken into the framework of explaining socio-spatial inequality. This paper has been published in *Applied Geography* (Shi & Dorling, 2020).

Chapter 8 draws together the findings and discusses the implications for forwarding a more equal and cosmopolitan landscape of urban theories. It also provides an evaluation on the body of research in this thesis and suggests new avenues of future research.

Chapter 2 Literature

Introduction

This thesis, first and foremost, is situated in the field of postcolonial (quantitative) urban studies. It seeks to challenge the geographical inequality in knowledge production with quantitative empirical studies; and these empirical studies are situated in the literature of comparative urbanism, global city, and urban inequalities. This chapter thus comprises two parts. The first part reviews the field of postcolonial studies and deals with the theoretical framework of this thesis. The second part reviews the research fields that have guided the empirical work of this thesis.

In the first part of this chapter, the unequal landscape of knowledge production is reviewed; and several related, but different, postcolonial critiques of this inequality are provided. In addition, existing practical steps to decolonising urban knowledge are introduced; how these steps are related to, and different from, each other are explicated; and in what ways they resonate with postcolonial theories is highlighted. Having reviewed the existing literature, in this part I propose a new step through which the goal of decolonising urban research could be genuinely reached. This newly proposed step is what has been put into practice in this thesis, the results of which, I hope, could encourage more urban researchers to take the step proposed here. In this sense, the thesis makes both a conceptual and empirical contribution to the agenda of decolonising urban research; it is an intervention in the production of urban knowledge.

In the second part of this chapter, the route map to the specific research topics and questions of this thesis is provided. Specifically, this part shows how the topic of this thesis has been narrowed down from postcolonial urban studies, to comparative urbanism, to comparing global cities, and to comparing inequalities across global cities. It also shows the major arguments of these research fields and how these arguments have informed the empirical work of this thesis.

Theoretical framework: Postcolonial theory

Geographical inequality in knowledge production

The Western dominance of knowledge production is evident in the field of urban studies to which this thesis belongs. This dominance can be seen in the geography of the sites of urban theorising, most, if not all, of which are located in Euro-America. The rest of the world, by contrast, often acts not as a 'producer', but as a 'consumer', of urban theories (Davies, 2001; Robinson, 2002; Roy, 2009; Sheppard et al., 2013). This dominance can also be seen in practices of urban research, most of which follow, or are required to follow, the research codes in the West (Mignolo, 2009; Yeung, 2001). A piece of work that fails to do so would likely be subject to what Spivak (1990: 126) called 'epistemic violence': it risks being dismissed as of no 'scholarly' value. The field of urban studies is occupied by a 'Euro-centred epistemology' (Mingolo, 2009: 160): the urban experience in the West is seen as superior in terms of becoming universal theory; and having the Western form of philosophical reasoning is seen as an essential

quality of a knowing subject.

The Euro-centred epistemology is underpinned by a colonial way of thinking of the dynamics of historical development. At the root of this thinking is the theory of 'the autonomous rise of Europe', an idea that 'Europe was more advanced and more progressive than all other regions' prior to its intense interaction with non-Europe (Blaut, 1993: 2). This idea has spawned two additional beliefs. The first belief is that the rest of the world is historically backward, and its development has to follow the European path (Massey, 1999; Power, 2003; Sheppard, 2005). Thus, the European norm should be the benchmark against which all other societies are judged; and its geographical diffusion should be natural, ethical, and for the recipients' good (Barnett, 2014; Chakrabarty, 2000; Mosley et al., 1995). This argument, when projected onto the field of urban studies, implies that the urban experience in the West should be the source of urban theories by which urban experiences elsewhere are interpreted and explained, the universal application of which is natural and desirable.

The second belief is that the rise of Europe, as it had been achieved prior to the interaction with the 'Outside', must be a result of the positive qualities exclusive to Europeans (Blaut, 1993, 2000). This argument effectively connects the level of 'development' to the level of 'being human': as Europe is more 'developed' than elsewhere, so are Europeans more developed in humanity than everyone else in the world (Fanon, 1961; Quinn, 2017). This belief has far-reaching consequences. It has

made Europeans believe that they are superior to others not just in the intellectual thoughts *per se*, but also in the ability of producing these thoughts (Doty, 1996; Young, 2016, 2020). It has also made them denigrate others' ability of knowledge production, a negation that has been practiced so widely, for so long, that many people being dehumanised have also come to accept this imposed intellectual inferiority (Fanon, 1961; Gibson, 2017). Given this imagined ranking, it comes as no surprise that practices of urban theorisations have largely been believed to be confined to researchers who study urban experiences in the West, and in the Western way.

The entrenched Euro-centred epistemology in urban research has remained largely unnoticed until very recently (Robinson, 2013; Slater, 1992). The fact that Eurocentrism has occupied our mind for two centuries that it has become subconscious is one reason. The tendency in the field of urban studies to deploy a universal concept, such as city and urbanisation, 'outside a consideration of the discursive constructions which give these concepts different meanings in different societies' has also helped to disguise this Euro-centred epistemology (Slater, 1992: 318). In other words, the focus on abstract ideas and the emphasis on the claims to universalism have drawn the attention away from the places in which these ideas are created, and have thus left unnoticed the fact that these places are mostly located in Euro-America (Robinson, 2002). The production of urban knowledge is not simply centred on the West; this centre is also kept invisible and elusive.

Postcolonial critiques of the Eurocentric production of knowledge

Criticising the superiority of the West in knowledge production is a defining ambition of postcolonial scholarship, within which several approaches are available (Young, 2016, 2020). Perhaps the most straightforward approach is to counter the theory of the autonomous rise of Europe, a theory that, as shown above, acts as a foundation of the Euro-centred epistemology. Scholars taking this approach have used empirical evidence to reveal that many so-called European inventions, such as modernity, were in fact not originated exclusively in Europe (Abu-Lughod, 1989; Mitchell, 2000). Even forms of capitalism had already existed in Asia and Africa prior to 1492, a fact that undermines the claim that Europe was then more advanced than all other regions (Barnett, 2014; Blaut, 1993). Moreover, the rise of Europe has been argued as not 'autonomous', as the theory claims. It was instead built on Europe's access to, and exploitation of, the New World which acted not only as a source of gold and silver, but also as a sink for its surplus populations (Amin, 1988; Sheppard, 2005; Stephanson & Jameson, 1989). For these empiricist researchers, neither the theory of the autonomous rise of Europe nor the Western superiority informed by it is grounded in facts. This Eurocentric history, as the title of Blaut's book suggests, is '*The Colonizer's Model of the World*'.

Dipesh Chakrabarty, another scholar that has countered the theory of the autonomous rise of Europe, took a different approach from the above researchers. Instead of using empirical evidence to reject the theory's arguments *per se*, Chakrabarty directed his

critique at the analytical tools with which the theory was developed (Skaria, 2009). For Chakrabarty, the problem of the argument that Europe is more modern than non-Europe is not so much with the content of the argument, as it is with the idea of 'modernity'. On the one hand, this idea has been conceptualised as an analytical tool with universal applicability. On the other hand, it was invented in 'very particular (European) intellectual and historical traditions that could not claim any universal validity' (Chakrabarty, 2008: xiii). Applying this European invention to all societies thus entails a Euro-centric historical narrative: Europe is the site of the first occurrence of modernity, with all other societies in 'a waiting room of history' (*ibid.*:8). This narrative is by no means stable. It can be interrupted, disturbed, and resisted with an alternative thinking of modernity, one that is produced without ignorance of non-Western histories, and with an appreciation of the diversity of human life-worlds (Chakrabarty, 2000, 2008).

Chakrabarty's critique of making European modernity as the master idea to which all histories are referred resonates with Spivak's (1988) seminal essay '*Can the Subaltern Speak*?'. In both of their work, the application of Western thinking to the production of knowledge of the non-West was criticised as marginalising the non-Western forms of knowledge (Guha & Spivak, 1988; Morris, 2010; Spivak, 2003). But Spivak's critique does not stop here. Instead, she further criticised this application as excluding the non-Western ways of knowing: the uncritical adoption of Western thinking in non-Western contexts effectively replaces the space from which the natives speak for themselves with one from which Western intellectuals speak for them (Spivak, 1988). As hooks

(1990) wrote poignantly:

> 'Tell me about your pain. I want to know your story. And then I will tell it back to you in a new way. Tell it back to you in such a way that it has become mine, my own. Re-writing you, I write myself anew. I am still author, authority. I am still [the] colonizer, the speaking subject, and you are now at the center of my talk.' (hooks, 1990: 343)

In this passage, it is clear that, contrary to the theory of the autonomous rise of Europe, non-Europeans are neither lack of voice (subjectivity) nor lack of the action of speaking (producing knowledge). Their absence in knowledge production is a result of 'epistemic violence': instead of being treated as a subject that can speak for themselves, non-Europeans have been treated as an object being investigated by those with the Western ways of knowing (Spivak, 1988: 308).

In stressing 'epistemic violence', Spivak has associated her work with Edward Said's *Orientalism*, which is a, if not the, founding text of postcolonial research (Spivak, 1990; Young, 2016). In this text, Said, employing Michel Foucault's notion of discourse, introduced the idea that colonial domination was achieved not just through military operations, but also through cultural representations (in literary and scholar work) (Barnett, 2014; Said, 1978). Specifically, the Orient was made 'visible, clear, "there" in discourse about it' via 'various Western techniques of representations'; and in doing so, the West assumed the authority to speak for the Orient, whereas the Orient was made an object to be spoken of (Said, 1978: 24). Thus, to develop cultural representations of the Orient is to have authority over it, to impose a muteness on it, and to dominate it

(Barnett, 2014; Said, 1978). A practice of representing the Orient via 'Western languages' is a practice of making it an object, one that cannot represent itself and has to be represented.

Apart from practices of representing, Said further suggested that the content of representations is also functional to colonial domination. The study of various Oriental cultures and traditions has always concluded that the Orient was 'barbarian', 'defeated', and 'dangerous', that its spaces were 'an empty desert' (Said, 1978: 226). However, these representations were seen by Said as 'a kind of Western projection onto and will to govern over the Orient', than as the reality of what is there (*ibid.*: 80). For one thing, they were constructed to build the identity of the West, as identity is always socially constructed with reference to the characteristics ascribed to what is presumed to be different from 'us' (Barnett, 2014). For another thing, they were constructed to legitimise and facilitate colonial conquest: barbarians need to be civilised; empty land needs to be occupied (Gregory, 1994, 1995; Young, 2020). Thus, as Said argued, 'the line separating Occident from Orient is less a fact of nature than it is a fact of human production, which I have called imaginative geography' (Said, 1985: 2). It is this imagined line that has enabled the West to identify itself not only as different from, but also as superior to, the Orient.

In criticising the Eurocentric production of knowledge, the above approaches are interrelated to, but distinct from, each other. As shown above, scholars like Blaut used

historical evidence to counter the theory of autonomous rise of Europe; and in doing so they undermined the foundation on which Eurocentrism is built. Chakrabarty also disavowed this theory. However, his critique was located less at the theory *per se* than at the concept deployed to formulate the theory, which he argued as parochial in nature but, contradictorily, being applied universally. This contradiction was similarly noticed by Spivak. But her attention was not paid to how this contradiction has supported a historical thinking underpinning the Eurocentric bias. Instead, she saw this contradiction as directly entailing the bias: in universalising the Western ways of thinking, the voice of non-West has been either silenced or unheard. This idea can also be found in Said's book *Orientalism*, in which practices of speaking for the Orient were suggested as making the Orient an object without voice. However, Said went even one step further, suggesting that the knowledge of the Orient *per se* was an imagination developed by the West to build up its own 'superior' identity and to legitimise its colonial expansion. Despite different focuses, all these approaches point to one central idea: the Eurocentric production of knowledge is unjustifiable; it needs to be challenged.

Existing steps to decolonising urban studies

The postcolonial critiques of the Eurocentric production of knowledge, as shown above, have been developed largely in the disciplines of historiography and literary studies. However, from the 1990s onwards, they have been critically translated into the field of urban studies in particular, and of geography in general, the origin of which is intimately

connected with colonialism (Driver, 1992; King, 1990; Noxolo et al., 2008; Sidaway, 2000). This 'translation' occurred not simply due to a rising call for 'decolonising the mind' (Thiong'o, 1986); it occurred also due to an increasing sense that the world order has shifted dramatically from the one in which much of urban knowledge was produced (Roy, 2005; Watson, 2009). Consequently, a new research agenda has emerged in the field of urban studies: it seeks to interrogate whether, and how, the non-West has been marginalised in existing urban knowledge and by the production of it; and it seeks to challenge this marginalisation (De Leeuw & Hunt, 2018; Jazeel & McFarlane, 2010; Robinson, 2002, 2011). It is this newly emerged research agenda that has guided the work in this thesis.

The insights from postcolonial theory illuminate several practical steps that can be taken to change the Eurocentrism of urban research. One starting point is to translate postcolonial criticism into this field, to disclose that urban knowledge is not 'universal and independent of context' as it seems to be, and to reveal that theoretical accounts are not produced in nowhere as they appear to (Madden, 2015; Noxolo, 2017; Sidaway, 2000). This is a step that has been taken by some critical geographers. For example, Slater (1992) argued that the 'projected universality [of much of urban knowledge] tends to conceal a particularity based, to a large extent, on the specific experiences of the USA and the United Kingdom'. Likewise, Robinson (2003), drawing on the work of Chakrabarty, suggested that:

> ‘The assumed universalism of many theoretical claims within the discipline, usually developed, as Chakrabarty would have it, in ignorance of the range of different social contexts to which they are assumed to apply, is characteristic of much western geographical writing.’ (Robinson, 2003: 275)

For these critics, existing urban knowledge is problematic not simply because it has been produced largely in the West, but more importantly because this parochial nature of urban theorising has been hidden under the clothes of universalism (Robinson & Roy, 2016). Tearing off these clothes and exposing this parochial nature are thus a significant, and fundamental, step towards decolonising urban studies (Figure 2.1, part a).

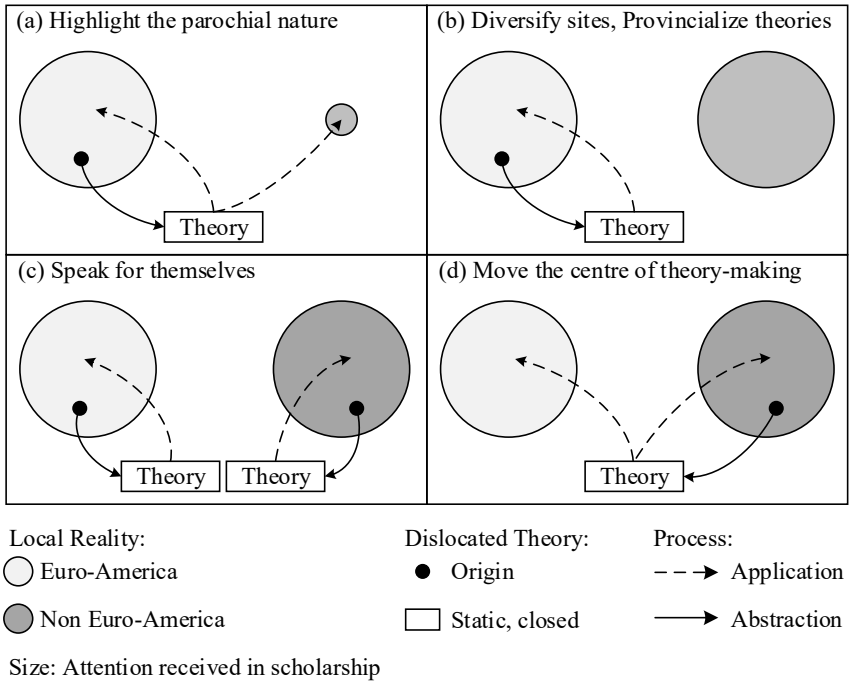


Figure 2.1. Existing steps to decolonising urban knowledge in schematic diagram

To highlight the parochialism in urban research is one thing; and to address it is another. One way in which this parochialism could be possibility addressed is to conduct robust empirical investigations on the urban experiences of ‘neglected’ places under the

premise that they are investigated *not* for 'the theory mills of the North' (Appadurai, 1999; Davies, 2001). This type of investigations represents a postcolonial effort to diversify the sites of urban research (Bunnell & Maringanti, 2010; Robinson, 2003; Yeung, 2001). It also offers the answer to a question that resonates deeply with Said's critique of Orientalism: is our knowledge of some places reflects the reality there; or is it just a selected view based on the Western urban theories (Gregory, 1995; Harvey, 1995; Swyngedouw, 1995). Answering this question can reveal to what extent research on cities is imbued with power asymmetries, such that knowledge of some places was produced even without attending to what is truly happening there. The answer can also serve to provincialize existing (Western) urban theories (Lawhon et al., 2018; Leitner et al., 2019; Sheppard, Leitner, & Maringanti, 2013). This type of investigations thus constitutes a vital postcolonial practice: it brings 'neglected' places into the discussion of contemporary urban issues; it frees these places from the dominant Western discourse; and it disturbs the entrenched idea of Western geography as sovereign-universal-global truth (Figure 2.1b).

Interrogating the right of the Western discourse to speak for 'neglected' places is no doubt a vital step towards decolonising urban research. However, it alone is not enough to reach the destination. If postcolonial theorists are right in seeing colonialism as involving a negation of the agency of the oppressed, then another step that needs to be taken is to restore this agency, to let the oppressed speak for themselves (Gregory, 1995; Slater, 1992). To put it more explicitly, as shown in Figure 2.1c, 'neglected' places

should be restored as a production site of urban theories, with which their urban experiences can be represented and spoken for (Esson et al., 2017; Rao, 2006; Roy, 2011). This movement, albeit challenging, has recently been initiated, leading to the development of what has been called 'Southern urbanism' (Schindler, 2017), or 'Southern Theory' (Connell, 2007; Palat Narayanan, 2020). It has also motivated some critical urban theorists to go even one step further, arguing that:

> 'The centre of theory-making must move to the global South….As the parochial experience of Euro-American cities has been found to be a useful theoretical model for *all* cities, so perhaps the distinctive experiences of the cities of the global South can generate productive and provocative theoretical frameworks for *all* cities.' (Roy, 2009: 820, emphasis as in original)

In this reading, decolonising urban knowledge is no longer confined to provincializing existing (Western) theories, nor confined to constructing new theories for 'neglected' places. It also involves moving the centre of theory-making, or what Roy (2009) argued 'a recalibration of the geographies of authoritative knowledge' (Figure 2.1d).

Pitfalls in the existing steps and the possibility of a new one

The idea of moving the centre of theory-making means well; but I would suggest that it might result in more harm than good. Essentially, it accepts the existence of a 'centre' in theory-making; and this acceptance could entail a practice that replaces the West with the non-West as the primary referent in theory. This practice, I suggest, simply reverses, rather than reduces, power asymmetries. It involves, to use Hall's words, 'a simple set

of reversals, putting in place of the bad old essential white subject, the new essentially good black subject' (Hall, 1996: 445). Consequently, the result is not promoting 'equality and well-being for all human beings who dwell on our planet' (Young, 2020: 34). Rather, it is inciting the oppressed to follow the colonial practice and to be a new 'coloniser' in urban research. The disruption of the Eurocentrism of urban knowledge should thus not be interpreted as a call for moving the centre of theory-making; it should be seen as a move to level the field.

The recovery of 'neglected' places as a production site for urban theories would not achieve its purpose of decolonising urban knowledge unless one caveat is addressed. That is, this recovery should not simply be seen as empowering these places to 'speak for themselves', but also be seen as animating a 'form of communication through which a genuine pluralistic universalism might develop' (Barnett, 2014: 257). Dismissing the second perspective would entail two dangers.

The first danger is that, if the 'recovered voice' is only used for monologue rather than for dialogue, the imaginative line 'separating Occident from Orient' is likely to remain fixed (Said, 1985: 2). It could be argued that a strong emphasis on 'Southern Theory' has, in effect, re-inscribed a binary opposition between 'us' and 'them', and has, to a large extent, generated 'neo-orientalist' tendencies (Barnett, 2014; Roy, 2009; Storper & Scott, 2016). This new form of dualism, in which imagined geographical categories are prefixed to urban theories, is then likely to be mobilised by the more powerful side

to legitimise a practice of ignoring the 'voice' from, if not undermining the theoretical value of, the other side (Mamdani, 1996; Mbembe, 2001). In this case, the inequality in the production of urban knowledge is unlikely to be reduced, but to be reproduced (McFarlane & Robinson, 2012).

The second danger is more specific to the field of urban research. While this field has long been devoted to producing generalised theories, this tradition might risk being completely jettisoned if the recovery of 'neglected' places as a production site for urban theories fails to go beyond 'speaking for themselves'. This complete destruction, I suggest, does more harm than good to urban research. Firstly, the landscape of urban theories would become chaotic: it would be overload with concepts; and as Peck (2015: 161) poignantly noted, 'maybe a thousand new urbanisms will bloom'. Secondly, the absence of dialogue across 'voices' and the resulted loss of generalised urban theories would engender a sense of cultural relativism that makes cross-cultural understanding more, rather than less, difficult (Barnett, 2014; Scott & Storper, 2015). In this case, even if the field of urban studies may become more global in geographical terms, it would, at the same time, shift away from a more global, pluralist urban theory (Peck, 2015). Thirdly, discarding existing theories in favour of producing new ones, in essence, represents a denial of the fact that urban theories are not set in stone, but are subject to renewal and reconstruction. This virtue of being constantly remaking would be lost if urban evidence is used only to construct new theories rather than to revise existing ones. Thus, it is necessary to 'recover the voice' of 'neglected' places; it is equally necessary

to use the 'voice' to speak to ongoing debates, to existing theories, to urban experiences in other parts of the world (Wu, 2020; Wu & Keil, 2020). As a field characterised by a sense of worldly curiosity, what urban research needs is neither parochial universalism, nor parochialism, but pluralistic universalism.

It should be clear by now that the ultimate goal of decolonising urban research is to achieve, to borrow an idea from ethical theory, 'pluralistic universalism' (Audi, 2007). On the one hand, it should still insist on producing universalised urban theories; and on the other hand, this production should be 'plural' in a sense that it attends to different urban experiences in different places, and to different ways of knowing. In achieving this goal requires a new step, one that is related to, but different from, the existing ones. Central to this new step are two principles. First, the 'voice' of neglected places should be recovered, but it should not replace that of historically powerful places. Second, this 'voice' should be used not just to 'speak for themselves', but more importantly to communicate with others. These two principles echo an enduring call of postcolonial theory for unlearning the imagined us-and-them binary.

In practice, the newly proposed step can be implemented in two ways, depending on the existence of the theory of an urban phenomenon. It is not uncommon that some theories and concepts have already been developed by scholars studying in and on cities in the West to interpret the existing urban phenomena; and many of these phenomena, such as urban inequality, are evident not just in the West, but also globally. In this case,

it is not worthwhile to completely discard the Western-based theories, and to build up new ones from a wider range of locations. Instead, to achieve 'pluralist universalism', it is more efficient to initiate a process of renewal and reconstruction, in which different contexts are used to revise existing theoretical accounts (Figure 2.2, part a). It should be highlighted here that the work of this thesis, which concerns existing urban theories, aligns with this specific approach.

For urban phenomena that either have yet to be conceptualised or are yet to appear, their theorisations have no choice but to be developed from scratch. In this case, theory-building should attend to the experiences of the diverse world of cities; and no place should be seen as superior to the other in providing theoretical insights. In addition, as with the existing theories, the newly constructed ones are subject to reconstruction, a process that, in Peck's (2015) words, involves 'round trips between positional analysis and relational theorizing' (Figure 2.2b). The practice of this approach requires an attentiveness to unnoticed (or taken-for-granted) urban phenomena, to diverse contexts in which these phenomena take place, and to never-ending journeys between empirical investigations and theoretical conceptualisations. It is by no means an easy work, and is beyond a DPhil project; but it is a necessary work, to which I will be committed in future research.

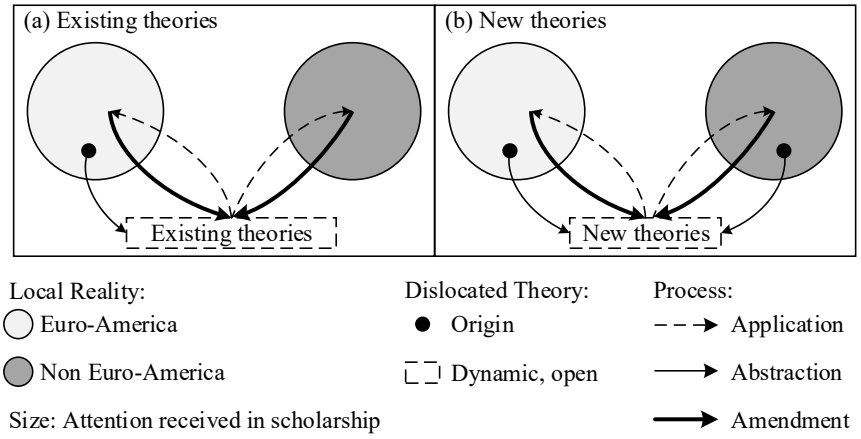


Figure 2.2. A new step to decolonising urban knowledge in schematic diagram

Empirical research: Comparative urbanism, global city, urban inequality

Comparative urbanism

Having decided that 'neglected' places should be investigated, not for the purpose of corroborating existing theories, but to renew and reconstruct them, the next question is how this investigation should be designed. The answer could be found in the field of comparative urbanism. This field, as it is currently known, underlines the imperative of thinking across city contexts kept apart by existing geographical divisions, and the potential of this thinking in (re)conceptualising urban theories (Robinson, 2003, 2014a). Its lineage to postcolonial theory is obvious. Geographical divisions, such as the Occident/Orient, were suggested by Said (1978) as 'imaginative geography' that needs to be unlearned; and the ostensibly 'universal' concepts, such as modernity, were argued by Charkrabarty (2000) as parochial ideas that need to be provincialized. Comparative urbanism can thus be viewed as emerging from a 'marriage' between postcolonial theory and urban studies. It can provide significant implications for a thesis that sits at

the boundary of these two fields.

The direct implication that comparative urbanism offers to this thesis is that 'neglected' places can, and should, be compared with historically powerful ones. Traditionally, these places are regarded as incommensurable, for in urban studies 'neglected' and powerful places are usually assumed to belong to different kinds, and comparisons are usually assumed to be possible only in the same kind of cities (Robinson, 2011). Both assumptions, however, are challenged in comparative urbanism.

Of the first assumption, the underpinning idea is that neglected places are not as modern, or as developed, as historically powerful ones, and that they belong to the 'other' of the modern/developed cities (Robinson, 2002, 2004, 2011). However, as postcolonial theory suggests, 'modernity' and 'development' are not 'innocent' concepts. Rather, they were produced on the basis of the experiences of powerful places, and for a purpose of separating 'us' from 'them' (Chakrabarty, 2000; Said, 1978). In this sense, practices of categorising cities according to their differences are more arbitrary than they appear to be; and the categorisations preventing cities from being compared are less a fact of nature than they are a fact of human production (Robinson, 2002, 2004). They could, and should, be destabilised and deconstructed, and to some extent they have been.

Of the second assumption, the underpinning idea is that:

> 'few aspects of urban life are common across these different contexts, and that the causal processes shaping cities are so different that

> comparative analysis is unlikely to bear any fruit.' (Robinson, 2011: 5)

However, both propositions of this idea are questionable. The problem with the first proposition is that different kinds of cities are not isolated entities, but are spaces where 'diverse range of relational webs coalesce, interconnected, and fragment' (Amin & Graham, 1997; Massey, 2005). These webs 'stretch beyond the physical form of the city and place it within a range of connections to other places in the world' (Robinson, 2002: 545). This was the case two centuries ago, when the rise of Europe was intimately connected with the fortune of the rest of the world (Amin, 1988; McMichael, 1990; Tilly, 1984). This is even more the case nowadays; for the intensified globalisation has drawn cities into a closer conversation with one another, be they in the same 'kind' or not (Jacobs, 2012; Mbembé & Nuttall, 2004; McNeill, 2009; Smith, 2000). Given these interconnections, cities that are traditionally categorised as different kinds may have more in common than they are assumed to have; and if this is the case, the resulted claim of incommensurability would be invalid. In light of this, one of the research questions of this thesis is that: Are cities that are traditionally categorised as different kinds so different from each other that they should be viewed as incommensurable?

The second of the two propositions, which claims that 'the causal processes shaping cities are so different that comparative analysis is unlikely to bear any fruit', assumes comparative methods as a quasi-scientific approach to universal causality. This assumption, however, is problematic in urban research. It sits uneasily with the recent

progress of this field, which puts an emphasis on understanding than on law-like explanation (Nijman, 2007). It also sits uneasily with the fact that the causality most strongly associated with cities is not universal but contextual (Berg-Schlosser et al., 2009; Massey, 2005; Pickvance, 1986; Robinson, 2011). It is not uncommon that a set of causally relevant factors entails different urban processes in different geo-historical contexts (Sayer, 1999; Yeung, 1997, 2019). Or in Nijman's (2007: 2) words, '*where* things happen affects how they happen'. Thus, thinking of comparisons as a quasi-scientific method is inappropriate, not only to the recent theoretical development in geography, but also to 'the multi-dimensional, contextual, interconnected, and endogenous nature of urban processes' (McFarlane & Robinson, 2012: 767). New comparative imaginations are needed (Robinson, 2016). Accordingly, comparisons in this thesis are made not on the assumption of universal causality. Instead, they are made by trying to attend to the possibility that the investigated urban issues may have different causes in different cities. This attentiveness underlies the key research question of Chapter 7, which is, of an urban issue (socio-spatial inequality), is the causal power of some factors (neoliberalism and service economy) contingent on certain urban conditions?

Comparative urbanism spills much ink on deconstructing the hidden assumptions that limit the scope of comparative imagination. Its insights have empowered me to think across different contexts; and this thinking has been put into practice in this thesis. Moreover, apart from feasibility, two other reasons for this practice are worth noted.

Firstly, a comparison of two cities could possibily disclose taken-for-granted connections that would otherwise remain unnoticed in studying cities separately. Secondly, comparing across different contexts could help us 'become aware of diversity and overcome ethnocentricism' (Pickvance, 1986: 163). Thus, it works well for the approach taken in this thesis to decolonising urban knowledge, which focuses on the power of different contexts in modifying theoretical accounts and in achieving 'pluralist universalism'. More details on this are provided in the chapter 3 on methodology.

Global city

Having positioned this thesis in the field of comparative urbanism, I further narrowed down the research topic to global cities. This step came not by chance. Most research on global cities has an analytical focus on the transnational global economy; and this focus can help draw our attention away from taken-for-granted categorisations of cities and extend the scope of comparative imagination (McFarlane & Robinson, 2012; Robinson, 2002, 2014b). Admittedly, this extension has its own limits, as the concept of global city can in turn be mobilised as a categorising device with which the field of urban research can be re-divided (Robinson, 2002). However, the contribution of this concept to thinking across different contexts is undeniable: New York and London, which used to be compared only with Euro-American cities, have been brought into conversations with Singapore, Tokyo, and Johannesburg, to name just a few (Hill & Kim, 2000; Robinson et al., 2020; Sassen, 1991). The recent entrance of Beijing,

Shanghai, and Dubai into the 'global league table' also means that this concept, even if used as a categorising device, can still help advance the agenda of comparative urbanism. This possible contribution is a reason why this thesis narrows down the topic to global cities.

The fact that most global city research places an analytical focus on the transnational global economy is not hard to understand; for the emergence of global cities is usually seen as a result of the arrival of a new era of economic globalisation (Friedmann, 1986; Friedmann & Wolff, 1982; Sassen, 1991). In this era, production is much less organised in vertically-integrated units and more dispersed around the globe to exploit (and reproduce) spatial differentiations (Harvey, 1989; Swyngedouw, 1989, 2004, 2019). Finance capital is much less subject to regulations and more mobile in the search for 'spatial fixity' (Harvey, 1981, 2001, 2017; Perraton, 2019). The operation of economic activities becomes both more global and more complex; and the ability to control and coordinate the operation needs to be increased accordingly (Sassen, 1991, 2005, 2011). This ability is not pre-given. It needs to be produced by a multiplicity of specialised services, for which geographical proximity and spatial concentration still remain imperative (Castells, 1989; Sassen, 1991; Thrift, 1987). The term 'global city' was coined exactly to refer to places with this concentration. They are described as the strategic nodes through which the world economy is managed, coordinated, and controlled (Brenner, 1998; Friedmann, 1986; Lipietz, 1993).

Given the focus on the transnational global economy, urban issues in global cities are frequently understood as 'the localisation of globalisation' (Brenner & Keil, 2014; Sassen, 2005). This understanding could be found throughout Sassen's (1991) seminal book, in which she detailed the effects of globalisation on the economic base, spatial organisation, and social structure of New York, London, and Tokyo. For example, her argument on the social structure of global cities is as follows. The defining control and command function of global cities, which comes directly from globalisation, needs to be performed not just by professionals, but also by cleaners, retailers, and alike who serve these professionals and keep cities working. Consequently, the upper and bottom ends of the social spectrum would grow at the expense of the middle; the social structure of global cities would 'polarise' (Sassen, 1991, 1996, 2011). This argument represents well the central proposition of Sassen's book, which is:

> 'In order to understand the pronounced social and economic changes in major cities today, we need to examine fundamental aspects of the new world economy.' (Sassen, 1991: 329)

The globalist perspective of seeing global cities has later been criticised. Firstly, if this perspective is true, then one would expect to see, and as Sassen (1991) has suggested, parallel changes across all global cities. However, results of many empirical studies failed to meet this expectation (Abu-Lughod, 1995; Baum, 1997; Hamnett, 1994; Tai, 2010; White, 1998). A well-known example is the work presented by Hill and Kim (2000). In this work, they found a departure of Tokyo and Seoul from the world city model on salient dimensions; and they ascribed this departure to the developmental

state in which the two cities are embedded. Secondly, the globalist perspective, according to Olds and Yeung (2004: 502), dismisses 'the sources and governance of the grounding process'. It fails to explain why specialised services have concentrated in one place, not the other; and how global cities have 'come into being' (*ibid.*: 489). To remedy this deficiency, one needs to shift the focus to the processes of global city formation; and this shift brings into view the role of the state. It has been widely found that pathways to global city formation are usually deliberately devised by the state, and are usually contingent on historical and geographical contexts (Acuto, 2011; Chiu & Lui, 2009; Chubarov & Brooker, 2013; Olds & Yeung, 2004). Given these results, it is argued that neither urban processes in global cities, nor global city formation, is free from the influence of the state; they are both subject to state interventions.

Thinking across the globalist perspective and its critiques, it becomes clear that global city formation is not resulted by the processes at the global level alone, but by the dialectics of global-local dynamics (Knox, 1996; Shatkin, 2007). On the one hand, the globalisation of capital is a prerequisite for global city formation, without which there would be no need in the world for having global cities, in their current forms (Harvey, 2001; Sassen, 1991). On the other hand, the grounding of the control and command function in certain cities usually requires the efforts of rescaled 'glocal' states and local agencies, without which this function would tend to be 'fixed' in elsewhere (Brenner, 1998; Hoyler et al., 2018; Olds & Yeung, 2004; Swyngedouw, 1997). Global cities thus present a 'particular complex superimposition and interpenetration of social spaces at

the interface between multiple, overlapping spatial scales' (Brenner, 1998: 27). This understanding of global cities has guided the work of this thesis, in which how global and local factors contribute to the urban issues under study is always a key question to be investigated. This question is particularly pertinent to Chapter 6, in which how earnings inequality in global cities is shaped by the dialectics of global-local dynamics is invesitaged.

Urban inequality

Having decided to study global cities, and in a comparative manner, the next question is which specific aspects of global cities are to be studied. In this thesis, I chose to focus on the issue of inequality. This issue constitutes one of the seven theses of Friedmann's (1986) world city hypothesis, in which he suggested that:

> 'World city formation brings into focus the major contradictions of industrial capitalism – among them spatial and class polarization.' (*ibid.*: 76)

It is also an important topic of Sassen's (1991) book, in which she wrote a chapter entitled '*Economic Restructuring as Class and Spatial Polarization*'. Their shared focus has then stimulated much discussion on the social and spatial processes in global cities; and this discussion has even escalated into a heated 'global city debate' (Baum, 1997; Fainstein, 2001; Hamnett, 1994, 2020; Van der Waal & Burgers, 2009). Moreover, inequality is perhaps a defining characteristic of cities and has grown sharply

in recent decades (Beauregard, 2018; Dorling, 2018). It has become a watchword among policymakers and activists; and reducing inequality is now an important Sustainable Development Goal (Gourzis et al., 2019; Griggs et al., 2013; McDermott, 2019; Nijman & Wei, 2020; Rokem & Vaughan, 2019). Thus, in focusing on inequality, this thesis engages actively with one of the heated debates of global cities; it also responds to a rising call for redressing our increasingly unequal world.

The particular economic structure that global cities have is frequently suggested as the primary source of their inequalities (Brenner & Keil, 2014; Sassen, 1991, 1996). This suggestion, which is evident in the work of both Friedmann (1986) and Sassen (1991), can be detailed as follows. At the global level, the increased movement of capital has entailed, and has been enabled by, the emergence of global cities where capital has been fixed to an extent that this movement can be effectively coordinated (Harvey, 2006). At the local level, the fixity of capital and the grounding of the coordination function in certain cities have been intertwined with a shift of the economic base there from manufacturing to producer services (Moulaert et al., 2003; Yeoh, 1999). This shift has significant consequences for the social order. On the one hand, semi-skilled manual workers employed in manufacturing have shrank in size (Crankshaw & Borel-Saladin, 2014; Wood, 1998). On the other hand, the number of highly-skilled professionals who work in the new leading sectors in these cities has grown; and this growth has then generate a new demand for low-skilled service workers (Friedmann & Wolff, 1982; May et al., 2007; Sassen, 1991, 2005). Consequently, the distribution of the demand for

skills has become more bi-polar; and the level of inequalities, both socially and spatially, should change accordingly.

The above argument resonates deeply with the functionalist theory of inequalities. This theory sees inequalities as a result of differences in talent and the different values that society places on different positions (Abrahamson, 1973; Davis, 1949; Davis & Moore, 1945; Huaco, 1966; Parsons, 1951). This theory is also what underpins the meritocratic ideology that is widely spread nowadays (McNamee & Miller, 2004; Saunders, 1990; Scully, 2015; Treiman, 1977). As Davis and Moore (1945) famously suggested:

> 'It does make a great deal of difference who gets into which positions, not only because some positions are inherently more agreeable than others, but also because some require special talents or training and some are functionally more important than others….Inevitably, then, a society must have, first, some kind of rewards that it can use as inducements, and, second, some way of distributing these rewards differentially according to positions.' (*ibid.*:243)

Thus, inequalities in global cities could be interpreted as reflecting the polarised demand for skills in the labour market, which is in turn a direct result of the economic base that these cities have. In this sense, social and spatial inequalities seem to be an inevitable, 'unconscious', outcome of being a global city, the reduction of which would seem to require a complete withdrawal from this status.

The functionalist view of inequalities has long been argued against by those who locate themselves within Marxist traditions and regard inequalities as manifestations of class

domination and subordination (Anderson & Snow, 2001; Gouldner, 1970; Lenski, 1966; Treiman, 1977). These scholars (conflict theorists) have argued that inequalities are caused not by differences in talent, but by the unequal distribution of power in the society (Knapp, 1994; Mills, 1956). Specifically, the powerful class use their resources to stratify the society to their advantage; and this stratification is used in turn to retain and reinforce their power (Hoerning, 1971; Jacobs, 1979; Rigney, 2001). In this interpretation, inequalities are not a functional prerequisite for a society; they are an outcome of class conflicts.

The influence of the conflict theory of inequalities on global city research is evident in the studies that see inequalities with reference to public policies. In these studies, the rising inequality in global cities has been related to the liberalisation of financial sectors, the privatisation of public services, the deregulation of the labour market, and the retreat of welfare provisions (Esping-Andersen, 1993; Hamnett, 1996, 2020; Musterd & Ostendorf, 2013). These policies have been implemented not without a purpose. In the eyes of many critical researchers, they amount to a political project to restore the power of the economic elites and to revitalise global capital accumulation that these elites advocate for and benefit from (Harvey, 2007; Kotz, 2015; Smith, 1998). Viewing the situation from this perspective, rising inequalities in global cities are not simply a result of economic restructuring; they are also deeply intertwined with a 'class project' of increasing the power of economic elites.

Despite the contrast, functionalists and conflict theories of inequalities share one thing in common: they both tell a grand story of inequalities without an attentiveness to the distinctive ways in which this story is unfolded in different places; their grand stories have obscured heterogeneities in economic restructuring and class conflicts. These heterogeneities, however, are what the scholarship of variety of capitalism primarily concerns with. In this scholarship, economic structures and relations are recognised as 'politically enabled, institutionally mediated, and socially embedded'; and trajectories of economic restricting and forms of class conflicts are context-specific (Boyer, 2005; Hall & Soskice, 2009; Peck & Theodore, 2007; Zhang & Peck, 2016). This recognition has significant implications for the work in this thesis. It has motivated me to go one step further: from identifying the factors (global/local/economic/political) contributing to urban inequalities in a place, to exploring how these factors, in their specific forms, are related to the social, cultural, and institutional contexts of that place. This exploration can be seen in all of the three papers that comprise the remainder of the thesis (Chapter 5, 6, and 7 below).

Conclusion

This chapter has provided the theoretical framework that this thesis has been based on, and has reviewed the literature that has informed the direction for the research of this thesis. It has put the thinking behind this thesis in conversation with several different, but interrelated, academic fields, including postcolonial studies, comparative urbanism,

global cities, and urban inequalities.

The theoretical framework of this thesis, and the motivation behind writing the chapters which follow, has been informed by the scholarship of postcolonial studies. This body of work seeks to challenge the Eurocentric production of knowledge, and it reveals how this Eurocentrism was produced by colonial practices. This revelation has highlighted two directions of action to decolonise urban knowledge. First, the Western dominance could be undermined by exposing the parochial nature of the so-called universal concepts and by provincializing these concepts. Second, the inferiority of other places in knowledge production could be overcome by reimagining these places as a production site for urban theories, a re-imagination that could even be pushed to an extent that these places replace the existing ones as the centre of theory-making. Actions in these two directions are what have been called for by many critical urban researchers, some of whom have been cited above.

In this chapter, I have suggested that these two directions of action have limitations which would prevent the goal of decolonising urban research from being genuinely reached. The call for moving the centre of theory-making might entail new hegemonies and urban paradigms; and the recovery of the theoretical potential of 'neglected' places, unless they are put in conversation with historically powerful places, might re-inscribe the us-and-them binary and jettison the defining ambition of urban research. Given these limitations, I have suggested a new step to decolonising urban knowledge. This

step centres around two principles. First, the theoretical potential of neglected places should be recovered, but should not replace that of historically powerful places. Second, this recovery should be used to engage with urban experiences in other parts of the world and with ongoing and emerging urban debates. This step has served as the theoretical framework of this thesis; it can also be viewed as a contribution of this thesis to the agenda of decolonising urban research.

The specific direction for the research of this thesis has been informed by the literature of comparative urbanism, global cities, and urban inequalities. The location of this thesis in these academic fields came not by chance. Firstly, comparative urbanism emerges due to a growing postcolonial call for a more global scope for urban studies. Secondly, the emergence of global cities has provided a chance to bring into conversations the cities that have long been separated by existing imagined geographical categories; and these conversations are what comparative urbanism calls for. Thirdly, the issue of urban inequalities is not only discussed in detail in the founding work of global city research; it has also attracted constant attention in this field and has escalated into a heated global city debate. These connections have helped narrow down the research topic of this thesis. In this thesis, the urban inequalities of global cities are compared with an objective of revising existing theories and promoting a more equal landscape for future urban theorisations.

Chapter 3 Methodology, method, and data

Introduction

This chapter shows the path leading to a research design that serves the aim of the thesis (reconfiguring the landscape of urban theories closer to that of the real urban world). It discusses both the broad and practical issues central to the design. The broad issues include: what is my worldview, how it has been acquired, and in what ways the answers to these two questions have allowed me to do the research presented in the thesis. They also include the rationales for two methodological decisions running through the thesis, decisions on doing research comparatively, and quantitatively.

On the practical side, the chapter details the processes in which a specific comparative method was chosen, the specific definitions on the urban issues being studied were given, and the specific quantitative methods were reached. It also shows what data sources have been used in the thesis and why they were preferred over the alternatives. In other words, the chapter paints the terrain in which methods and data sources were decided. The way in which they were used are left for discussion in the papers that comprise the remainder of the thesis (Chapter 5, 6, and 7 below).

Methodology

This section deals with the broad questions. It elicits the ontology (concepts/ideas) and

epistemology (what can be known and how) underpinning the research, and how they have contributed to the primary objective of the thesis. It goes deeper into the question of how this specific worldview has been acquired, and of how the process of acquiring it has contributed to the formation of the thesis. In doing so, this section explains the rationale for why I have done this research and designed it in this way. It highlights the situatedness of the research. The rationales for two methodological decisions running through the thesis are also discussed.

Overall approach

From the outset this thesis aims to reconfigure the landscape of urban theories closer to that of the real urban world. What underlies the aim is my belief that these two landscapes are only partially overlapping; and this belief in turn rests upon my philosophical worldview and research experience, with the two intertwining with each other.

I share the critical realists' position that the world is largely independent from the researcher's thoughts about it, that 'reality' is largely separated from our knowledge of 'reality' (Bhaskar, 2014; Sayer, 2006; Shaw et al., 2010).[1] Acknowledging this

[1] This separation does not deny that, to a certain extent, many social phenomena are socially constructed and are dependent on the ways of thinking. Critical realists argue that, even if these phenomena are socially constructed, the construction is usually a lengthy process which depends on concepts of actors in the past, not today. Once they have been constructed, these phenomena then gain a degree of independence from the subsequent observers who take them as a research object. Hence, the things a researcher studies are separated from his/her knowledge about them, even though in the future they may

separation points to a possibility that neither does our knowledge of the urban world necessarily reflect that world; nor is that world simply a product of our knowledge of it. Urban theories and urban realities are likely to overlap only slightly.

The possible mismatch becomes larger when knowledge in general and urban theories in particular are viewed as being relative and situated. Being relative means that reality can only be known via available discourses; and the discourse-mediated knowledge of an object is not an exact account of it (Sayer, 2004). For example, a demographic description of the labour force relies on existing concepts such as age and gender. But the demographic characteristics may be more than these dimensions and include the ones that have yet to be named.[2]

The idea that knowledge is situated means that it is always a view from somewhere. It bears the specific social marking of the origin, and is a selective and situated view on the researched object (Harraway, 1991). The original world city hypothesis, for example, was proposed by Friedmann, a white man who spent the professional life

be (re)constructed by his/her inquiry (Archer, 1995; Sayer, 1999). For example, social structure is a socially constructed concept. But this concept is not constructed by me and is independent from my knowledge and inquiry on it.

[2] Chapter 5 compares the demographic composition of the labour force in Beijing and London and contributes to our knowledge on this issue. The contribution lies not in enhancing the knowledge to an extent that it becomes an exact account of the demography of the labour force. Such knowledge (absolute truth) is unattainable given the relativity of knowledge suggested here. Instead, the contribution is to improve the knowledge such that the expectations it informs are realised to a greater extent than before; or the research achieves 'epistemic gain' (Stones, 1996). In the view of critical realists, achieving this gain is the purpose of research.

mostly in the US. This hypothesis is marked by his standpoint and social context: it pays little attention to the role of the state which is highly valued by researchers based in Asia (Friedmann, 1986; Hill & Kim, 2000). Having this social marking, the knowledge offered by Friedmann on world city is not an exact account of it, nor is that offered by other researchers. Given the relativity and situatedness of knowledge, the urban world informed by theories is inevitably different from the real one. One way to make it less so is to synthesise differently situated views (Fay, 1996; Sen, 1992). This way is advocated and practiced in the thesis.

In hindsight, the philosophical worldview underpinning my thesis was acquired (albeit unconsciously) from my past, mostly from the higher education that I had received and the research that I had done. These experiences have also directly shaped the thesis. Originally educated as an urban planner, I was exposed to the topics on built environment, socio-economic phenomena, and their interactions. In my course projects, a description of these topics was generally requested for a selected course case and was always differentiated within class. From this experience came the idea that at least some urban realities are out there to be observed, and that their description is contingent on who is the observer. This experience has directed my focus onto processes occurring at the city level. It is a reason explaining why the unit of analysis in the thesis is two cities.

The subsequent education that turned me into a human geographer has nourished my philosophical worldview and contributed to the research from which this thesis is a

step-change enhancement. This education was received in China. It introduced the Western geographical thoughts and usually referred to them (albeit not always explicitly) as general theories. It also put an equal weight to the study of geography in China.[3] Moreover, these two themes were usually presented separately and were frequently suggested as being in tension with each other. This tension conveys an idea, that existing urban theories are neither universally applicable as claimed, nor provide an urban imagination that aligns comfortably with the real world. Providing empirical evidence for this idea then became the primary objective of my research,[4] from which this thesis has gone even one step further with an aim of using the evidence to modify existing urban theories. This step represents a reconceptualization: rather than simply seeing unexpected urban results as deconstructive, I now also see them as having potential for reconstructing existing knowledge.

The interplay between my philosophical worldview and research experience lays a foundation for this thesis. It entails my passion for reconfiguring the landscape of urban theories closer to that of the real urban world, from which comes the primary objective of the thesis. It also underlies the research design of the thesis: two cities were chosen as the primary object of study, their instances of urban phenomena were 'observed', the

[3] This study includes both geographical thoughts (although most of them are ancient) and practices.

[4] Prior to my DPhil, I have investigated the urban issues in Chines cities and attempted to show how they contradict with the expectations informed by existing urban theories. These issues include spatial structure (Cao et al., 2016), social structural changes (Shi et al., 2017), and the spatial expansion of metropolitan areas (Shi & Cao, 2020).

deeper structures underpinning these instances were then contemplated, and the views on these structures were then synthesised. Two major methodological decisions have been made within this design: the two cities were analysed comparatively, and the instances were 'observed' quantitatively.

In explicating my worldview and research experience, I am not simply showing the rationale for why I have done this research and designed it in this way; I am also implying that the output of the thesis is not a mirror image of reality, but a product of an interaction between reality and me, a DPhil student who holds a specific worldview, has been educated in specific ways, and has done specific research. In doing the thesis, I have tried to be as transparent as I can about questions, methods, and interpretations; I have been aware of the influence of my positionality on research findings; and I have been prepared to accept and respond to the views of others (most often by reading their views).

Rationale for comparative approach

A comparative approach was adopted for its strength in revealing geographical variation in the extent to which a theory of an urban phenomenon holds, variation that can expose a need to modify the theory (Ragin & Amoroso, 2011; Berg-Schlosser et al., 2009). For example, the idea that socio-spatial inequality in cities increases in neoliberal times has been rethought in Chapter 7 because the idea was found to make more sense in London than in Beijing. Thus, the adoption of the comparative approach came not by chance; it

was informed by the objective of the thesis.

Another reason for employing a comparative approach is that it can help reduce the ethnocentricity of urban theorising and raise the extent of knowledge revision (McFarlane & Robinson, 2012; Pickvance, 1986). Ethnocentric assumptions shape, and are shaped by, research practices: with a Eurocentric perspective, research is unlikely to be practiced in a way that juxtaposes cities within and outside Europe, which in turn is taken to validate the perspective.[5] Ethnocentric bias also produces a myth that not every place can be a basing point for knowledge production: with a Eurocentric perspective, places outside of Europe are largely dismissed as unqualified for offering theoretical insights to urban theories, and the dismissal in turn strengthens the bias (Chakrabarty, 2000; Clement, 2019; Said, 1978). Research practice, ethnocentricity, and urban theory are thus interconnected and mutually reinforcing (Graham, 2005). In bringing different cities into conversation with one another and giving them an equal weight, the comparative approach effectively puts them on level ground in urban theorising, acknowledges each city's potential in it, and encourages mutual learning from one another. This approach is not only useful in the identification of the need for knowledge revision; it could also help me meet this need as best I can.

The comparative approach's sensitivity to conditions is another major reason for its

[5] This argument is presented in detail in Chapter 5. The empirical results of that chapter also directly challenge the Eurocentric perspective.

adoption in the thesis. On the one hand, with a very small number of cases, it can provide a much more detailed description of far more conditions for each case than 'large-N' research designs can do (Berg-Schlosser et al., 2009; Ragin, 2014). On the other hand, by laying one case's conditions vis-à-vis those of another, it can shine a light on the issues that are otherwise overlooked in single-case research designs. In other words, the comparative approach not only offers an extensive account of conditions; it also attends to their nuances. It is well-suited for a thesis that is underpinned by a critical realist philosophy, one that takes geo-historical contexts not as background but as constitutive of urban phenomena (Sayer, 1999). It is also well-suited for a thesis that engages actively with the global-local debate, an engagement that requires careful attention to contextual nuances as is shown in Chapter 5. The adoption of a comparative approach was decided not only by the objective of the thesis as suggested earlier, but also by the thesis's philosophical worldview and specific research topics.[6]

Rationale for quantitative methods

Quantitative methods were adopted largely due to the nature of the urban phenomena being studied and my past as explained above. This rationale is based in a view that quantitative methods are techniques to collect and analyse data (Greene, 2007; Johnson

[6] In fact, the objective, the philosophical worldview, and the specific topic are interdependent on one another and constitute an integrated whole.

& Onwuegbuzie, 2004); and that their employment is determined by the nature of object of study than by the research paradigm (admittedly the two are related).

The urban phenomena being studied are the demographic composition of the labour force, the earnings inequality, and the socio-spatial inequality. They are patterned social arrangements in society; and this nature enables them to be measured quantitatively. Having said that, a description of these patterns is not simply about numbers, it is also about the way in which they are conceptualised (Sartori, 1970; Brady & Collier, 2010). As shown in Chapter 7, the socio-spatial inequality can be viewed as socioeconomic differences between areal units, or as different residential patterns between population groups. Subsequently it can be measured and analysed in at least two different ways. Thus, like other urban phenomena, patterned social arrangements have to be subjectively defined prior to any description. But once a definition has been reached, it is possible to measure them quantitatively and without a wishful bias (Visser & Jones, 2010a).

At the very beginning of the study I decided to use secondary data to measure the patterned social arrangements at the city level. Collected by governments and organisations, secondary data almost always have a larger and more representative sample of the population than what an individual researcher could hope to collect.[7] Some of them are even collected repeatedly at regular time intervals and cover multiple

[7] Details of the datasets can be found later in the data section.

years, a quality that is hard to be found in primary data given the limited resources (including time) at the disposal of an individual researcher. Thus, secondary data were used not only for the ability to provide a more valid description of urban social structure than primary data, but also for being able to study changes over time.

Employing secondary data is not without caveats. Secondary data are collected in specific cultural, political, and economic contexts and reflect the interests and ideas of that place, at the collection time (Kertzer & Arel, 2002; Walter, 1998). Thus, even the datasets concern the same topic, inconsistencies in data content between cities and across time are not uncommon. In the census data, the categories of occupation are specified differently not only between China and the UK, but also between the censuses in each country. Thus, in using secondary data for comparative research, reconciliations between datasets are generally needed; and they have been performed in this thesis when necessary. Moreover, although data reconciliation is a solution to the problem of inconsistencies, it reduces the accuracy of the results, as more often than not data cannot be perfectly reconciled. In recoding the data in this thesis, I have always tried to find a balance between consistency and accuracy; the quantitative results in this thesis should be interpreted with this caveat in mind.

Another caveat comes from the fact that secondary data are socially produced for specific objectives (Cloke et al., 2004; Simpson & Dorling, 1999). The purpose for which the data are produced influences the decisions on what information needs

collected, how the collected information is coded, and which coded data are released. The released data in turn influence the researcher's ability to answer certain questions (Dorling, 2005). For example, in Chapter 6, my ability to answer how unequal earnings are in London has been reduced by the decision of the Office for National Statistics (ONS) to top-code the variable of earnings prior to release. Thus, even though the quantitative results in the thesis have been produced without a wishful bias; their accuracy is not necessarily guaranteed but is contingent on how the data are socially produced. In each empirical work (Chapter 5-7) of the thesis, I have used a section to discuss this issue. Provided with this section, readers are welcome to evaluate the accuracy of the quantitative results using their own judgement.

Comparative method

Having answered the most important broad questions, the rest of the chapter deals with the practices of doing the research. This section elicits the specific comparative method being used in the thesis and the process in which this method was reached. It then specifies which two cases were chosen to be compared and how this choice was made.

Comparative strategy

Variation-finding comparison is the primary comparative strategy used in the thesis. It is one of the comparative-historical methods provided by Tilly (1984); it is also one of the existing strategies for comparing cities (Brenner, 2001; Walton & Logan, 1990).

The focus of this strategy is on finding variation across cases, and this focus can help the primary objective of thesis to be met.

As elucidated earlier, the primary objective of the thesis is to reconfigure the landscape of urban theories closer to that of the urban world, with finding geographical variation in instances of urban phenomena as a way to identify areas of reconfiguration. In this thesis, researching cities comparatively is thus not to grasp the peculiarities of each instance (individualising comparison). Nor is it to reveal the common properties across instances (universalising comparison). Nor is it to explain instances with reference to the cases' positions within a broader system (encompassing comparison). The primary goal is to 'establish a principle of variation in the character and intensity of a phenomenon by examining systematic differences among instances' (Tilly, 1984). This primary goal underpins the use of variation-finding comparison in the thesis.

Two research designs can be applied to variation-finding comparison: the 'most similar systems design' (MSSD) and the 'most different systems design' (MDSD), of which the latter is more appropriate for the research in this thesis (Pickvance, 1986, 2001; Przeworski & Teune, 1970). In the MSSD, comparisons are made between cases that are as similar as possible to each other except with regard to the variables of interest (Berg-Schlosser & De Meur, 2009; Lijphart, 1971). Consequently, variables that seem irrelevant to existing knowledge but actually have a casual influence on the object of study are 'controlled' and are left unattended (Robinson, 2011). For a thesis that attends

to new conceptual developments this consequence is unpleasant. Moreover, in constraining comparisons to very similar cases, the MSSD is effectively reinforcing the parochial and ethnocentric nature of urban studies (Masotti & Walton, 1976). This nature, however, is what this thesis attempts to challenge.

The MDSD does not suffer from the above consequences; but the conventional way in which it is applied limits its potential for developing new conceptualisations (Robinson, 2011). Conventionally, comparisons are made between cases that have similar instances of urban phenomena but are as different as possible in geo-historical contexts (Berg-Schlosser & De Meur, 2009; Lijphart, 1971). As with the MSSD, controlling for difference is still the basic logic; but unlike the MSSD, what is being controlled is instances of urban phenomena, not the contexts in which they occur (Anckar, 2008; Denters & Mossberger, 2006). The goal of the MDSD is to distinguish the contexts that are irrelevant for the explanation of urban phenomena, a goal echoing the idea of falsification (Popper, 1959). This goal, however, is not shared by the thesis. On the contrary, this thesis aims to explore the contexts relevant to the urban issues being investigated and to develop new conceptualisations based on them.

With some reformulations, it is possible to raise the MDSD's potential for developing new conceptualisations. As argued both in this chapter and by Robinson (2016a), the diversity of instances of urban phenomena is precisely what provides 'the grounds for conceptual innovation and invention'. Thus, one way to reformulate the MDSD is to

appreciate the difference in instances and to abandon the application of a quasi-scientific rigour to case selection (*ibid.*: 194). Associated with this reformulation is a conceptual change: comparisons are viewed not just as imitating the experiments of natural sciences but also as involving the broad practice of thinking one case *vis-à-vis* another. Accordingly, comparators which establish the grounds of comparability of cases should no longer be confined to similar contexts or instances (Jacobs, 2012). The conventions surrounding the determination of comparators should be reformatted (Robinson, 2016a, 2016b).

Inspired by the literature on comparative urbanism, in this thesis I have seen the global urban system in which cities are embedded and interconnected as the basis for comparison. This 'thinking with both the interconnections and the differences', as Robinson (2016b) suggests, 'places a multiplicity of urban outcomes within the same analytical frame' and contribute to 'strongly revisable broader conceptualisations and wider conversations about (aspects of) the urban'. Advocating for and practicing with this new way of comparing is one methodological contribution of this thesis.

The above discussion leads to a more specific description of the comparative strategy used in this thesis: comparisons are purposively composed in a way that instances of urban phenomena are compared between cases that are different in geo-historical conditions but are similarly embedded in the global urban system. In composing comparisons, effort is paid not to controlling for difference, but to incorporating as

much variation as might be anticipated across cases. The goal is to explore the possible variation in instances of urban phenomena, which then leads to a conceptual endeavour of revising existing knowledge.

Case selection

Beijing and London are the chosen case study cities. London was chosen primarily because it is a city which has inspired many concepts that are now (still) commonly used in the field of urban studies. The concept of global city is one recent example (Sassen, 1991). Thinking of London and 'elsewhere' thus has a potential to reflect critically on a wide range of extant theories and to help achieve the objective of the thesis.

Informed by the comparative strategy used, the city with which London is compared should differ from London in geo-historical conditions but should be similarly embedded in the global urban system. The first criterion excludes the Euro-American cities, comparisons with which belong to the MSSD rather the reformatted MDSD used in the thesis. The second criterion draws the attention to global cities which have a similar status to that of London in the global urban system. This attention is drawn not because conversation is impossible to be initiated between cities on and off the map of the global cities cartography which in fact is possible (Robinson, 2002). Rather, it is for a pragmatic consideration: cities that are closer to each other in the global urban system might have more urban phenomena in common on which comparisons can be made.

The number of theories on which their comparisons with London can reflect should be larger than what would otherwise be possible.

Having applied the above two criteria, the range of choice narrows down to the non-Euro-American global cities. Hong Kong, Singapore, Shanghai, Beijing, Dubai, and Tokyo are the possible candidates based on the latest work of the Globalisation and World Cities (GaWC) research network (2020). Of these cities, Hong Kong and Singapore used to be colonised by the British Empire. This history means that, compared to the rest of the candidates, their geo-historical contexts are likely to be more similar to those of London. Likewise, Tokyo has long been under the influence of Euro-America, not to mention that it has already been compared with London for decades (Hill & Kim, 2000; Sassen, 1991). Thus, Shanghai, Beijing, and Dubai meet the criteria of case selection better than the rest of the non-Euro-America global cities.

Given my intention to challenge the ethnocentricity of urban theorising, Shanghai and Beijing were preferred over Dubai as the city with which London should be compared. China is not just tagged with South, Third World, and socialist; anti-China bias is also entrenched, widespread, and even subconscious in the West (Brown et al., 1999; Roy, 1996). To see this bias one needs look no further than the reactions from the West to China in the pandemic that was ongoing in 2020 when I was writing these words. For example, measures such as lockdowns that China took to contain the virus were initially portrayed more as representing ‘an unprecedented level of surveillance’ than as being

effective (Stivas & Smith, 2020). This portrayal has delayed the adoption of these measures and contributed to the serious situation we were seeing at the time of writing. Thus, comparing Chinese global cities with London is a practice that exposes and challenges one, if not the most, severe geographical bias in today's world.

Between Shanghai and Beijing the latter was chosen as the one with which London is compared due primarily to my familiarity with it. Urban issues of Beijing was studied in my undergraduate and master dissertations, and also in my course projects and academic research. Beijing is also the city where I had lived for eight years and received the higher education. Accordingly, most urban experts that I have personal connections with are based in Beijing and know the city well. All these experiences enable me to develop a high degree of 'intimacy' with Beijing and to accumulate more knowledge on it than on other cities. This deep knowledge of the empirical field is indispensable for doing small-N comparative research (Ragin & Amoroso, 2011; Berg-Schlosser & De Meur, 2009).

Apart from the rationale discussed above, comparisons between Beijing and London are also of great practical significance. Both China and the UK are significant countries with global influence and have been changing in significant ways (Cassis & Wójcik, 2018). Comparisons between their capital cities would have relevance to countries that fall behind or beneath them in any imagined hierarchy. Moreover, for the two capital cities, their comparisons may suggest some alternative ways of addressing the urban

issues that they share with. Results from their comparisons could possibly provide some fresh ideas about the ways in which the two cities can learn from each other.

The methodological issues of comparative methods are not limited to case selection, but also include the choice of the spatial unit of analysis and the comparability of data (Nijman, 2007). These issues are intertwined with those in quantitative methods, and are discussed in the following section. Moreover, the focus of this section is on the process in which Beijing and London were selected as case cities. Details on how they are different in geo-historical conditions and how they are embedded in the global urban system are provided as a separate chapter (Chapter 4).

Quantitative methods

As discussed earlier in this chapter, studying social phenomena quantitatively is premised on reaching a definition of them and is influenced by which definition is reached. Thus, the following section first clarifies the choices made in the thesis regarding definitions and puts these choices in a broader context. It then gives a synopsis of the quantitative techniques being used.

Reaching a definition

The urban phenomena being studied in the thesis are the demographic composition of the labour force (Chapter 5), the earnings inequality (Chapter 6), and the socio-spatial

inequality (Chapter 7). As is shown below, there is no single way to define them; and each way has its own rationale. The intention here is not to claim the definitions adopted in the thesis as superior to alternatives, but to show that they come from human choices. Available options and the underlying rationale are discussed; and which one was chosen in the thesis is briefly described. For more specific and detailed descriptions of the chosen definitions, please refer to their respective chapters.

- Demographic composition of the labour force

There are two issues concerning the demographic composition of the labour force: who is counted into the labour force and what characteristics are to be described. To the first question, the answer provided by the International Labour Organisation is that 'the labour force comprises all persons of working age who furnish the supply of labour for the production of goods and services during a specific time-reference period'. This answer, however, masks considerable underlying complexity. One ambiguity concerns the geography of the population. Should 'all persons' of a city be those living in its administrative area or in its commuting area? Another ambiguity concerns working age, the meaning of which varies over time and across societies (Kulik et al., 2014). The rise of the pension age in the UK which was already higher than that in China even before the rise is a case in point. The coverage of the labour force is thus affected by the geography and the age range chosen in the work; both are in turn affected by the work's objective, its specific topics, and the data availability.

In this thesis, I chose to define the labour force of a city as people who live in the administrative area, are aged 16 and above, and are either employed or unemployed in the reference period indicated in the datasets. It is so defined because the geographical focus of the thesis is cities, the data employed were collected based on administrative units, and re-entering the labour market after retirement has become increasingly prevalent.

Demographic composition can be described along a wide range of factors such as age, gender, and marital status. Which specific factors are studied largely depends on the researcher's conception of their importance to a specific population, in a specific place, and at a specific time. Age is more frequently studied in workforce demographics than in school demographics given its close relation to productivity (Feyrer, 2007; Skirbekk, 2004). Educational attainment, which is particularly vital to the urban economy, receives more attention in demographic studies of cities than in those of rural areas (Florida, 2002). Gender has attracted more interest than it did a decade ago from demographers as its importance in social processes has become increasingly recognised (Riley, 2019). All these three factors were chosen to be studied in this thesis, as the thesis focuses on the demographic composition of the labour force in two global cities over the first decade of the 21st century.

- Earnings inequality

There are three ingredients in earnings inequality (and inequality in general): an

individual social unit, a particular attribute, and the allocation of attribute among social units (Cowell, 2011).

First, an individual social unit can be a single person, a family, or even a country; and which unit is used depends upon the social context and the question under study (*ibid.*: 13). For example, with the growing female labour participation and the expanding feminist research, households and male family heads have become less popular as a social unit in inequality research; an individualist approach has become increasingly popular (Acker, 1973; Curtis, 1986; Delphy, 1981). Having said that, households are still the dominant social unit for studying income inequality, as income includes money received on the basis of household characteristics, such as state benefits. In this thesis, I chose individuals as the social unit, in that I think of individuals as the elementary particles constituting society and due to the fact that earnings are the money received by an employee from his/her employment.

The second ingredient concerns inequality of what (income, wealth etc.). This issue seems unambiguous for earnings inequality, but in fact it is not. As the way in which people are employed and rewarded are (and are becoming) full of complexity, so is what counts as earnings. Should earnings include money received on second job, from part-time work, and from overtime work? At what time scale (hour, week, or month) should earnings be counted? Apart from wages, should earnings also include bonuses, subsidies, or commissions? Answers to these questions are not definite but contingent

on the social context and the research objective. For example, part-time work was generally discounted decades ago but is now usually counted in earnings research given its increasing prevalence in society (Bell et al., 1994; Walker et al., 2010). In this thesis, I chose to answer the above questions as follows: earnings are money received from labour, on the main job, and including part-time and overtime work; they are counted on an hourly basis. These answers are based on my interest in unequal reward for work in different jobs, an interest that requires a one-to-one correspondence between jobs and workers. They are also based on the fact that flexible working is one characteristic of the 21st century.

Thirdly, allocation of attribute concerns the criteria of 'inequality'. One criterion is whether the quantity of attribute is the same size across units, a mathematical statement on which most of the inequality measures are based (Cowell, 2011). Albeit popular, this criterion is not without criticism. Critics argue that, at least when income is the attribute, its ideal allocation among social units varies across societies with different societal goals; and that a simple uniformity is almost never a goal given the variation in need and merit (Rein & Miller, 1974). In putting forward this argument, inequality is understood as a socially constructed concept to describe the deviation of a distribution from an ideal one which is in turn socially defined. An example is the slogan of 'equal pay for equal work', under which a uniform distribution of pay is regarded not as ideal but as unequal. Thus, 'inequality' can be read as a mathematical statement or as a deviation from a socially-defined goal. In this thesis, the former was used because the

ideal distribution of earnings is elusive and because inter-city comparisons require a consistent criterion.

- Socio-spatial inequality

The definition of socio-spatial inequality is constituted by three factors: an areal unit, a way to classify individuals into socioeconomic groups, and the distribution of groups among areal units.

An areal unit can be a community, a neighbourhood, or a district given the fact that socio-spatial inequality plays out at multiple scales (Nijman & Wei, 2020). The specific choice is usually a product of an interplay between the researcher's geographical interest, his/her idea on the appropriate scale for interventions, and the availability of spatial data (Prouse et al., 2014). The choice in turn affects the analytical results due to the well-known modifiable areal unit problem (Openshaw, 1984; Wong, 2009). For example, as a heterogeneous population becomes more likely with a larger area, a city can be reported as less segregated simply by scaling up the spatial resolution from neighbourhood to district (Wong, 1997). This effect means that, no matter which areal unit is chosen, the derived results only provide a partial description of a city's socio-spatial inequality, and cannot be used to infer the situation in another areal unit.

In this thesis, districts/boroughs were chosen as the areal unit. They are the scales at which the microdata used in the thesis are provided; a finer resolution would risk the

identification of a data subject (for details see the section of data sources below). They are administrated by local authorities and are subject to policy interventions. The analytical results have been interpreted only with reference to this areal unit.

There are multiple ways to classify individuals into socioeconomic groups. A Marxist might classify them on the basis of the relation to the means of production; a Weberian would often adopt a multidimensional approach in which population is stratified along economic (class), social (status), and political (power) lines (Bendix, 1974; Panday, 1983). Moreover, even in this approach, the relevance of each dimension varies across places, over time, and by topics (Clark & Lipset, 1991). For example, compared to status, class was found to be more relevant to economic prospects and less to cultural consumption in present Britain (Chan & Goldthorpe, 2007). Thus, which way is used to group individuals socioeconomically depends on one's understanding of social stratification and on the specific social phenomena being studied.

In grouping individuals, I have paid equal attention to their economic situation and social status, and have used earnings and occupation as the respective measurements. There are three reasons: I take the Weberian approach to social stratification; my focus is on the spatial results of residential choices which are contingent on both economic situation and social status; and I think of occupation as 'one of the most salient positional characteristics to which status attaches in modern societies' (*ibid.*: 515).

Socio-spatial inequality can be read as the unequal distribution of socioeconomic

groups among areal units, and the idea of 'unequal distribution' is subject to multiple interpretations (Simpson & Peach, 2009). Viewing the distribution as a matrix, inequality can be interpreted as different socioeconomic profiles between areal units or as different spatial distributions between socioeconomic groups. More interpretations emerge when the spatial attributes of areal units are considered. These units vary in physical size and in distance to a central point, and they do or do not adjoin one another. Thus, socio-spatial inequality can also be interpreted along the axes of concentration, centralisation, and clustering (Massey & Denton, 1988). Moreover, new interpretations can be added if socioeconomic groups are seen not as categories but as being constituted by human beings who encounter and interact with one another in spaces. The extent to which they feel that they are spatially isolated from those from other socioeconomic groups is another interpretation of socio-spatial inequality (Valentine, 2008).

In this thesis I have adopted most of the interpretations listed above, in that I view them as non-conflicting and as representing different facets of 'unequal distribution'. However, the subjective dimension has not been investigated. This investigation needs the humanistic approach and would thus align uneasily with the overall research design.

Researching quantitatively

Once a definition of an urban phenomenon has been reached, the next step is to use quantitative techniques, process the data, and present them in an appropriate form for revealing the characteristics of that phenomenon that would otherwise remain unseen.

In this thesis, quantitative techniques have been used to 'describe' than to 'explain', as I see causation as depending on the causal power inherent in the structure of an object and on the historical-geographical contexts in which this power is activated (Sayer, 1999). In other words, causal explanation is not 'couched in terms of sequential occurrence' which is usually disclosed quantitatively (Yeung, 2019b). Three types of quantitative techniques have been used in this thesis; they are summarised below.

The first type of quantitative techniques is frequency statistics and their visualisation. These techniques are particularly useful in describing how the values of a variable are distributed. They have been frequently used in this thesis as distribution is central to all the urban phenomena being studied (Visser & Jones, 2010b). For example, frequency tables and bar charts have been used in Chapter 5 to describe how the labour force of the two cities was composed by different age groups; Lorenz curves have been used in Chapter 6 to show earnings distribution of the two cities, at different time points; and ternary plots, which are rare in social science research, has been introduced in Chapter 7 to visualise the ratios of three socioeconomic groups in different districts/boroughs.

The second type of quantitative techniques refers to descriptive statistics: indices that summarise certain characteristics of a distribution (such us variation) or those of the relationship between multiple variables (such as correlation coefficients). Appearing as a single number, values of an index can be compared with one another, and this makes it particularly powerful in comparative research (Pennings et al., 2006). For example,

in Chapter 6, the level of earnings inequality has been compared between the two cities using several inequality indices; and decomposition method has been used to get the indices that can describe the relationship between earnings inequality and personal attributes. In Chapter 7, an index has been invented to summarise the total difference among districts in socioeconomic composition. This index can be used in future research and can be viewed as a methodological contribution of this thesis.

The third type of quantitative techniques is mapping the data (and statistics). Maps (including spatial diagrams) can help investigators to search for the spatial properties in the data that are hard to be discerned otherwise (Orford, 2005). They have been used in Chapter 7 to explore the geographical patterns of residence by different socioeconomic groups. It is worth highlighting here that the maps used in this thesis are not 'equal land area cartograms' as are often the case in conventional maps. They are tile maps in which areal units are assigned equal size regardless of land area. In doing so, maps are viewed as graphic representations that facilitate a particular spatial understanding of the world; and mapping is viewed as a subjective practice reflecting the cartographer's interest in the specific aspect of the world (Dorling & Fairbairn, 1997; Hanna, 2010). The way in which tile maps align with the interest of the work is elaborated in Chapter 7.

The above discussion focuses more on why these techniques have been used than on how they have been used. For details on the latter, please refer to the papers that

comprise the remainder of the thesis (Chapter 5, 6, and 7).

Data sources

The unit of analysis in this thesis requires data sources that are representative of the whole population at the city level. This requirement means that the target population should be based on a city's resident population; that information should be collected either on the whole population or on a sample of it that is selected by a proper sampling technique; and that if the latter is the case then the sample size should be sufficiently large (De Vaus, 2013). There are two principle data sources that can meet this requirement: census data and (some) survey data. The choice between these sources depends on the information required to describe a specific urban phenomenon.

The following section shows the process in which the data used in the thesis were chosen. It aims to tell the story up to the point that the data decisions were made; stories after this point are told in Chapter 5, 6, and 7.

Describing the demographic composition of the labour force

A study of the demographic composition of the labour force would ideally utilise a data source that has the information on both demographic attributes and economic activity and has full population coverage. Census data thus come to mind first.

In the UK, the census aggregate data include contingency tables of age, gender,

educational attainment, and economic activity of all the people living in London. But their counterparts in China are not so ideal. In the censuses in China, the question of economic activity is administrated to a 10 per cent sample of the population; and the resulted outputs do not cover the full population.[8] This deficiency has brought alternative data sources into consideration, such as the data provided by the statistical yearbooks and the survey data collected by academic institutions. However, these alternatives have been found to either fail to provide the information required; or the information provided is built on a sample that is much smaller than that of the censuses. Thus, despite the deficiency in population coverage, the census data are nevertheless the most appropriate source in China for this study.

Estimating earnings inequality

Estimating earnings inequality requires a data source that provides individual records of earnings and preferably has full population coverage from a census. However, the censuses in both the UK and China do not have questions on earnings. Survey data become the only option. In the UK, there are three sources of data on earnings: Average Weekly Earnings (AWE), Annual Survey of Hours and Earnings (ASHE), and Labour Force Survey (LFS). The first two are surveys of employers and are strong in data accuracy; whereas the last one is a survey of households and provides rich information on individual characteristics (Healey, 2020). This rich information is what decides LFS

[8] Details on the census data in the UK and China can be found in the Appendix of this chapter

to be preferred, as the thesis also concerns how earnings inequality is structured along personal attributes.

LFS still has limitations despite that it provides the information required. Non-response to the specific earnings questions is not uncommon in the LFS; and one way to address it is to increase the sample size (*ibid.*: 10). This way gives rise to the Annual Population Survey (APS) datasets, which are produced by combining two waves of LFS quarters with data collected on additional boost samples (Ashton & Kent, 2008). Thus, APS, which is built on the LFS but has a larger sample size, has been used in the thesis.

In China, household surveys are the primary means by which earnings data are collected. The National Bureau of Statistics (NBS) collects the data via the Household Income and Expenditure Survey and uses them to report the official statistics such as the Gini coefficient (Gustafsson et al., 2014). The survey is conducted annually and has a large sample size. But the data quality is hard to measure as documents describing the data-generating process are largely unavailable. Likewise, information on how to access its microdata is neither made public nor is provided in the work that used the data (Cheng et al., 2002; Meng et al., 2013). These concealment practices thus make non-official household surveys become the only option for the thesis.

To serve the purpose of the thesis, non-official household surveys need to satisfy three requirements: 1) questions on earnings are asked; 2) households in the case city Beijing are surveyed and are sampled in a way that can ensure the representativeness at the city

level; and 3) it is a repeated cross-section survey. These requirements are met only by China Household Income Project (CHIP) and Chinese General Social Survey (CGSS) (Gustafsson, Shi, & Sato, 2014; Xie & Zhou, 2014). Of the two data sources, CHIP has a larger sample size and a closer relationship with the NBS in data collection. It is thus more widely used in studying inequality in China, and has been used in the thesis as well (Appleton et al., 2014; Khan & Riskin, 1998; Xie & Hannum, 1996).

Analysing socio-spatial inequality

A study of the multiple dimensions of socio-spatial inequality requires a data source that provides individual records of social attributes and residential location in city. Admittedly, relevant questions are asked in both censuses and in most, if not all, household surveys. However, to protect personal privacy, not all information collected is released. Rather, there is always a trade-off between the accuracy of geographic information and the richness of data content; and the latter is often preferred for that individual-level studies are what microdata are supposed to support (Armstrong et al., 1999; Kwan et al., 2004). Thus, whereas household surveys collect more information than censuses, the geographic scale on which their released microdata are based is larger, usually at the city, if not regional, level. This trade-off explains why census microdata have been used in this thesis, and more generally in the research on spatial patterns in cities (Butler et al., 2008; Cunningham & Savage, 2017; Davidson & Wyly, 2012).

To summarise, the thesis has used census aggregate data to describe the demographic

composition of the labour force, for such data have full population coverage. It has used the APS and CHIP microdata to analyse earnings inequality, not only because they provide the information on earnings and personal attributes but also because they have a relatively large sample size. The thesis has used census microdata to describe urban socio-spatial inequality, as the geographic information provided is finer than that available in survey microdata. These data sources are either publicly-available aggregated data or fully anonymised microdata, for which ethnical approval is not required.

Conclusion and discussion

This chapter has shown the path leading to the research design of the thesis. This path starts at my philosophical worldview and research experience, with the two intertwining with each other. For one thing, 'reality' is viewed as largely separated from our knowledge of it; and our knowledge is viewed as relative and situated. For another, being trained as an urban planner and then as a human geographer (both in China), I have formed an idea that some urban phenomena are 'observable'; I have acquired an awareness that many urban experiences in China align uneasily with existing knowledge; and I have developed a geographical interest that directs my attention to the city-level phenomena. My standpoint and experience thus have entailed a passion for reconfiguring the landscape of urban theories closer to that of the real urban world, and for synthesising differently located views on urban phenomena, a passion that

constitutes the core of the thesis.

The aim of reconfiguring the landscape of urban theories, together with my standpoint, then has led to my decision on studying cities comparatively. The comparative approach can expose the geographical variation in instances of urban phenomena, which is viewed as an entry point to knowledge revision. It can challenge the ethnocentricity of urban theorising, a problem that limits the potential of knowledge revision. It attends to the geo-historical contexts and their nuances, which, according to critical realism, are part of causation. However, these potentials cannot be achieved by existing comparative strategies, as they follow a quasi-experimental model and control the difference either in instances or in contexts. Reformulation is thus made for the MDSD: similar instances are not presupposed as the comparator but can also vary along with contexts. This reformulation echoes the idea of comparative urbanism, that comparing cities can be more than a practice of quasi-experiments, it can also be a way of thinking.

The nature of social structure in which I am particularly interested, due to my previous research experience, has led to my decision on researching it quantitatively with secondary data. This decision does not mean that the results of the thesis are free from subjectivity. Instead, they are contingent on my definitions of labour force, earnings inequality, and socio-spatial inequality, which are in turn contingent on the objective of the thesis, the social contexts of the investigated cities, my research interests, and data availability. These definitions then have guided my decisions on using frequency

statistics, descriptive statistics, and advanced visualisations to describe these urban phenomena. They have also guided my choices of data sources: aggregated census data, census microdata, APS, and CHIP have been used in this thesis.

In making the methodological decisions, not only has the research design gradually taken shape, my understanding of research has also developed. Questions on why I have done this specific research in this specific way have helped me to think deeply about and reflect critically on my worldview and to compare my worldview with the alternatives. In so doing, I came to understand research as a human practice not simply in a sense that it is conducted by human beings, but also that it bares the marking of the researcher who holds a specific worldview and lives in a specific society. Likewise, questions on why I have used one specific method and not another, and specific data, have encouraged me to dig deeper into the (human) purposes underpinning the production of methods and data. This experience has made me realise that methods and data are not objective but are socially constructed, and that cautions are needed in using them and in interpreting the findings produced. These reflections, I think, are more valuable than the DPhil project *per se*; they have huge significance to my development as a researcher in particular and as a social being in general.

The research design is not without limitations. It is both enabled and limited by my own subjectivity. As illustrated in this chapter, socio-spatial inequality can be studied in a way that puts people's feelings at the centre of research. This people-centred approach,

when combined with the work in the thesis which focuses on numbers, can hugely enhance our understanding of inequality. But it had not been thought of when the research was designed three years ago. I was then only familiar with studying structures. Also, as frequently indicated in this chapter, the secondary data used in the thesis are not collected for the purpose of this research. They do not necessarily offer the exact information needed by the research; and this limits my ability to answer certain research questions. For example, socio-spatial inequality at the neighbourhood level was also intended to be investigated; but this intention was later dropped as no data available support this investigation. These limitations remind us of the fact that research is intensively social and point to the avenues of future research.

Appendix: Population censuses in the UK and China

History

The census in the UK has been undertaken decennially since 1801, apart from 1941, and there was an extra census in 1966. The most recent one took place in 2011. Although aiming at including every individual and household in the land, the censuses are always inevitably under-enumeration due to some unreturned census forms or missed residents.[9] In addressing this problem, One Number Census approach was introduced in 2001 and developed into a Coverage Assessment and Adjustment Process

[9] For the 2001 and 2011 Census, the overall response rates were estimated to be 94 per cent.

in 2011 (Brown et al., 1999).[10] Since then the census data released by the ONS technically represent 100 per cent of the population, albeit in an estimated way.

The Population Census of China has been conducted roughly every ten years since 1953 with an exception in the 1970s due to the political and economic turmoil. The latest one was taken in 2010 (sixth census). Having said that, it is not until 2000 that the census in China was brought into a 'modern stage' and became internationally comparable (Wu, 2014; Wu & He, 2015). Several innovative improvements were introduced in that year. For example, long-form questionnaires were added to collect much more detailed information on individuals; and the reference period by which a person is enumerated as a usual resident was revised (Lavely, 2001).

Censuses in China are not free from under-enumeration; but this problem is addressed fairly well in the socialist country. Unlike the UK in which census questionnaires were administrated largely by post and since 2011 by mixed online and post; in China, enumerators are sent to every identified household space and communal establishment and are requested to fill and collect census forms by fact-to-face interviews (Cai, 2013; Lavely, 2001). The number of enumerators were approximately 5 million in 2000 and 6.5 million in 2010. Accordingly, the undercount rate was estimated at only 1.81 per cent in 2000 and at 0.12 per cent in 2010 (National Bureau of Statistics of China, 2011).

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10 https://www.ons.gov.uk/census/2011census/2011censusdata/2011censususerguide/qualityandmethods. Accessed 29/01/2018.

They both meet the international standard, which considers 2% as 'acceptable' (Walfish, 2001).

Questionnaires

The 2001 and 2011 UK Census used a combination of household and individual questionnaires. The former focuses on housing; and the latter covers a wide range of information, such as demographic attributes, qualification, and employment.[11] The 2001 census was the first time that asked a question on religion (Walfish, 2001); and information on national identity, language proficiency, and passport held were further included in the 2011 census. These changes lend support to the idea suggested earlier, that data are collected in specific cultural, political, and economic contexts and reflect the interests and ideas of that place, at the collection time.

In China, a combination of short-form and long-form questionnaires was introduced in 2000 and has been adopted ever since. Whereas short-form questionnaires are answered by 'all' usual residents; long-form ones are administered to a 10 per cent sample of the population (Chan, 2003; Wu & He, 2015). The information collected by short-form questionnaires is rather basic; it includes housing condition, demographic attributes such as age, household registration status, and education. More detailed information, such as birthplace, fertility, and economic activity, is collected by long-form

[11] Information on qualification and employment is collected only for those within a certain age range. This range is 16-74 in the 2001 census and is 16 and over in the 2011 census.

questionnaires.[12]

Today, questions relevant to the concept of unemployment are included in the census questionnaires of both countries. They are used in Chapter 5 to assess whether or not a person without work should be counted into the labour force, an assessment that was made possible only very recently. In China, unemployment has not been officially recorded until 1994 (Qian & Wong, 2000).[13] The highly planned economy that China used to have spawned the idea that a person was either employed or waiting for a job assigned by the central authority, and that no one should be unemployed (Giles et al., 2005; Solinger, 2001; Xue & Zhong, 2003). Admittedly, in the UK, a capitalist country, unemployment data can be traced back to 1881. But using survey, rather than claimant count, to obtain such data is nevertheless a very recent practice that started in 1971 (Denman & McDonald, 1996). Thus, the rich information in the census data makes possible an investigation of the labour force as is shown in the thesis. But at the same time, the availability of data, which is out of the researcher's control, affects the specific way in which the investigation is conducted.

[12] Information on economic activity and unemployment were collected for those aged 15 and over in the 2000 census, and for those aged 16 an over in the 2010 census.

[13] Unemployment was recorded by the 'claimant count' approach in the 1990s. In this approach, only those who are officially registered as being unemployed in the local labour administrations are counted. Thus, unemployment rate was highly underestimated in China in the 1990s.

Outputs

In both the UK and China, two types of outputs are produced from the census data which are available to researchers. The first type is census aggregate data which appear in the form of tabulations. The second type is census microdata in which a sampled individual records are provided. Both types of outputs are used in the thesis.

- Aggregate data

UK census aggregate data are tables of aggregated information on a wide range of demographic and socio-economic characteristics of all the people living in specific geographical areas or 'zones', ranging from the smallest output areas with an average of 150 persons to the nation as a whole.[14] These tables can be categorised based on how many topics they cover, how much statistical detail they provide, and how small geographical areas they reach.[15] Commissioned (ad hoc) tables can also be required from the ONS.

The China census tables are arranged by topics. Tables coming from short-form

[14] https://census.ukdataservice.ac.uk/use-data/guides/aggregate-data. Accessed 07/12/2017.

[15] For example, the Key Statistics (KS) in the 2001 and 2011 censuses, and the Univariate Tables (UV) in the 2001 Census and their equivalent Quick Statistics (QS) in the 2011 Census provide information about a single census topic from the national level down to the very small census Output Areas (OA). The Census Area Statistics (CS) in the 2001 Census and their equivalent Local Characteristics (LC) in the 2011 Census, and the Standard Tables (ST) in the 2001 Census and their counterparts Detailed Characteristics (DC) in the 2011 Census provide cross tabulations on two or more topics, with the CS and LC having smaller geographical unit whereas the ST and DC giving more detailed information.

questionnaires cover the topics of gender, age, nationality, ethnicity, residence, household registration place and type, first migration time, education, and literacy. More topics are covered in the tables coming from long-form questionnaires; they include economic activities, place of birth, marriage, family, and fertility. For all these tables, prefecture is the lowest geographic level.[16] Moreover, as long-form questionnaires are administrated to a 10 per cent sample of the population, values in the resulted tables are more sensible in relative than in absolute terms.

- Microdata

The UK census microdata is a random sample of up to 5 per cent of individuals records in the census output database.[17] Microdata samples are available for every UK census since the 1961. They provide a wide range of variables at the individual level which allows *ad hoc* tabulations.

China census microdata is a one per cent sample of records of individuals who took the long form questionnaires. Thus, it is a 0.1 per cent sample of all the population in China. Although China has a larger population than the UK, the sample size of its census microdata is smaller given the much lower sampling ratio in China than in the UK. For

[16] There are five practical levels of local government in China: the provincial, prefecture, county, township and village. Beijing Municipality, together with other three municipalities, belongs to the province-level administrative divisions, though they are called as cities in the mainstream. Thus, detailed information at the district level in Beijing are contained in the census data.

[17] https://www.ons.gov.uk/census/2011census/2011censusdata/censusmicrodata/safeguardedmicrodata. Accessed 07/12/2017.

example, the population in London in 2011 is 8 million; the corresponding microdata contains 5.1 per cent of the population at 417,237 records. By contrast, the population in Beijing in 2010 is over 19 million; the corresponding microdata contains 0.09 per cent of the population at 18,167 records. Despite the sample size, both microdata are highly representative of the total population they correspond to, and can be used to describe the population at the city level (Table 3.1).

Table 3.1. Population and microdata samples of London and Beijing

London, 2011			Beijing, 2010		
	Population	**Microdata**		**Population**	**Microdata**
N (thousands)	8,174	417	**N**	19,612	18
Age (%): 0.077			**Age (%): 0.295**		
0-15	18.73	19.81	0-15	8.6	8.53
16-64	70.2	69.31	16-64	82.7	81.24
>64	11.07	10.88	>64	8.7	10.23
Gender (%): 0.003			**Gender (%): 0.002**		
Male	49.24	49.49	Male	51.69	51.92
Female	50.76	50.51	Female	48.31	48.08
Qualification (16+) (%): 0.004			**Education (16+) (%): 0.370**		
None	17.6	17.51	None	1.96	2.37
Primary	10.73	10.61	Primary	7.56	7.64
GCSE	11.85	11.79	Junior secondary	32.84	30.81
Apprenticeship	1.64	1.64	Senior secondary	22.96	23.13
A Level	10.47	10.45	College	13.35	13.36
Degree	37.72	37.9	Undergraduate	17.45	18.09
Other	10	10.11	Postgraduate	3.88	4.6

Notes: chi-square statistics are reported after each attribute. None of them are significant.
Sources: London 2011 census data; Beijing 2010 census data.

Apart from being representative of the total population, census microdata also has a much larger sample size than other surveys conducted in the UK and China. For example, Labour Force Survey (LFS) interviewed only 9,587 Londoners in 2011; and the Migrants Population Dynamic Monitoring Survey contained only 4,000 respondents in Beijing in 2010.[18] Thus, compared to other survey data, census microdata are more

[18] Declining response rates and sampling errors are another major disadvantages of LFS. The response

suited if there is a need to break down the population by very detailed characteristics.

rate of LFS is much lower than that of the census, dipping below 60 per cent recently (Office for National Statistics, 2012). Moreover, it is suggested that the non-respondents might be particularly disadvantaged individuals, recent arrivals, or those with poor English language fluency, as the interviews are carried out exclusively in English (Heath & Cheung, 2006; Jones, 1996; Wheatley Price, 2001). If this is the case, then LFS also suffers from the non-response bias.

Chapter 4 Beijing and London as global cities: Characteristics and contexts

Introduction

This chapter centres on the characteristics of being a global city and the contexts and processes in becoming a global city. It tells the story of Beijing vis-à-vis that of London. There are three objectives in doing so.

First, I aim to provide the background information on the two cities as they are the chosen cases for this thesis. Knowing this information can facilitate the understanding of the two cities in general and that of the research results presented in later chapters in particular.

The second objective is to show how the choice of Beijing and London as case cities aligns with the comparative method and the criteria of case selection used in this thesis. As discussed in the previous chapter (Methodology), in this thesis, I view a similar embeddedness in the global urban system as the basis for comparison; and I think of different geo-historical contexts as sources of conceptual innovation. This chapter shows how these two points are manifested in Beijing and London.

The third objective is to demonstrate that global cities can be analysed from two seemingly contradictory but actually complementary perspectives. On the one hand, global cities can be taken as a rigorous concept, the core of which is that they adhere to

strictly-delineated attributes. On the other hand, global cities can be analysed as a result of urban processes which not only involve global actors such as multinational corporations, but are also embedded in specific geo-historical contexts and are driven by more situated actors such as the state. Thus, there is no obvious conclusion on whether there is only one type of global city or a variety of global cities. The answer largely depends on which perspective is deployed as is shown below in the following comparative analysis of Beijing and London.

'Global city-ness': Characteristics of being a global city

Comparable status

Beijing and London can both be described as 'global cities' through which the world's economy is managed and coordinated. They are 'basing points for global capital', articulating and organising the space of global accumulation (Friedmann, 1986, 1995). They are 'production sites for today's leading economic sectors', producing the high-level services essential to the management of the global production system (Sassen, 1991, 2005). They score high in almost all measures of 'global city-ness', no matter on which world/global city concept the measure is based (Table 4.1).

Table 4.1. Performances on measures of 'global city-ness', Beijing and London, 2018

Conceptual underpinning	Measurement	Year	Beijing	London
Friedmann's world city hypothesis	Inward FDI flow (billion US dollars)	2018	17.3[a]	23.0[*]
	Outward FDI flow (billion US dollars)	2018	6.5[a]	14.6[*]
	Global headquarters (Fortune Global 500)	2020	54[c]	15[c]
	Regional headquarters (Fortune Global 500)	2017/18	161[d]	87[e]

	Producer services as % of employment	2018	24.85[a]	22.97[b]
Sassen's	# Finance	2018	5.19[a]	6.41[b]
global city	Location quotient for producer services	2018	2.64	1.67
concept	# Finance	2018	4.06	2.02
	Connectivity ranking in the WCN	2020	6[f]	1[f]

Notes: * This is an estimated figure, for details please see footnote 1. FDI is the abbreviation for Foreign Direct Investment. WCN is the abbreviation for World City Network

Sources: a: Beijing Statistical Yearbook 2019; b: Office for National Statistics JOBS05; c: Fortune Global 500 website (https://fortune.com/global500/2020/search/); d: news on the State Council website (http://english.www.gov.cn/news/top_news/2017/03/22/content_281475603444523.htm); e: Deloitte 2019 report (https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/international-business-support/deloitte-cn-ibs-power-up-uk-inward-investment.pdf); f: the world according to GaWC 2020 (https://www.lboro.ac.uk/gawc/world2020t.html).

Beijing and London are top sending and receiving cities for Foreign Direct Investments (FDI) and are leading destinations for the headquarters of multinational corporations (MNCs). These two measures have been widely used to assess a city's place in the global urban hierarchy; and their conceptual underpinning is Friedmann's original hypothesis in which MNCs are regarded as the major actors in the world city formation (Friedmann, 1986; Godfrey & Zhou, 1999; Musil, 2009). In 2018, Beijing received 17.3 billion US dollars and sent 6.5 billion US dollars of FDI flows, a level equivalent to that in Belgium. While exactly comparable figures for London are not available, they can be estimated to be 23.0 and 14.6 billion US dollars respectively, as 35 per cent of the FDI projects in the UK landed in London in 2018 and the inward and outward FDI flows in the UK stood at 65.3 and 41.4 billion US dollars in that year.[1] Even though London is just a city, these estimations exceeded those of most of the European

[1] The UK National Statistics does not break down the level of inward and outward FDI flows by region. However, information on the geography of the new FDI projects in the UK is released annually by the Department for International Trade (DIT). The level of inward and outward FDI flows in London are thus estimated from this information, with the assumption that the geographical distribution of the level is the same as that of the projects.

countries.[2] Moreover, according to the fDi Markets, in the decade prior to 2018, London and Beijing received the second and seventh highest levels of capital investment globally, respectively (Deloitte, 2019). Both cities are highly attractive to global investors; and Beijing is not far away from but just close behind London in the degree of attractiveness.

Beijing and London are major centres in which MNC headquarters are concentrated, a concentration that, to a certain degree, represents a city's control ability over the global production network (Cohen, 2018; Friedmann, 1986; Hymer, 1972). In 2020, Beijing hosted 55 global headquarters of the world's largest 500 corporations by revenues (Fortune Global 500), the highest number in the world; and London took the fifth place with 15 global headquarters. Admittedly, Beijing's top position is primarily due to the strong economic performance of Chinese companies, as 51 of the 55 corporations are state-owned enterprises (SOE). But given the rapid and aggressive global expansions of these SOEs, Beijing's level of control in the world's economy should by no means be dismissed (Lim, 2010, 2018). Beijing and London also hold strong positions in hosting regional headquarters. In 2017, 161 major multi-national corporations have set their regional headquarters in Beijing (The State Council, 2017); and of Fortune Global 500 companies, 87 have set their European headquarters in London in 2018 (Deloitte, 2019). Both cities are leading destinations for headquarters, and Beijing is not just

[2] According to the data released by the United Nation, exceptions are France, Germany, Italy, Netherlands, and Spain.

comparable to but even outcompetes London in this measure.

Beijing and London have a strong economic base in producer services. According to Sassen (1991), it is the products of these services rather than the power of MNCs that 'constitute the capability for global control'. By the end of 2018, these services collectively occupied 25 per cent of the total employment in Beijing and 23 per cent of that in London, a share that was similar to one another but was far above that of the national average at 9 and 14 per cent respectively.[3] The two cities' strength in producer services becomes even more evident if location quotients are used, which were 2.64 for Beijing and 1.67 for London. This strength is also directly reflected in the two cities' urban spaces (Figure 4.1). Both Beijing and London have an internationally renowned financial centre in the west (The Financial Street and The City of London) and a world-class central business district (CBD) in the east (the CBD in Chaoyang and Canary Wharf). Beijing and London are the sites in which today's leading economic sectors are produced. Their specialisation in these sectors is not too different from each other.

[3] The calculation is based on the Standard Industrial Classification (SIC) codes in China and in the UK respectively. Hence, for Beijing and China, producer services included in this calculation are finance, real estate, and leasing and business services; and for London and the UK, these services include finance, insurance, real estate, and professional, scientific and technical activities.

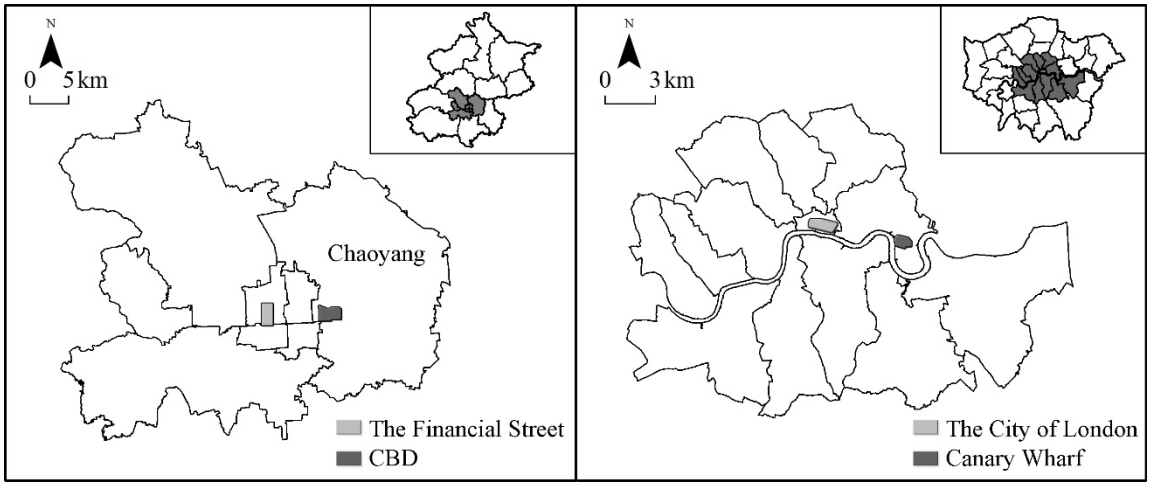


Figure 4.1. Dual city centres, central Beijing and inner London

Beijing and London enjoy a high level of integration into the world city network (WCN). This network builds directly upon Sassen's (1991) original thesis in which advanced producer service firms are treated as producers of global cities. In the WCN, these firms are treated as agents, their locational strategies as linkages, and cities as nodes of which the global network connectivity can be measured (Taylor et al., 2002). Results of this connectivity across cities are released biennially by the Globalisation and World Cities (GaWC) research network, and are widely used to rank cities in the world (Derudder & Taylor, 2020; Kleibert, 2017). The latest release of the GaWC in 2020 named London the world's most connected city, and placed Beijing three spots above Tokyo, an exemplar global city in Sassen's book (1991), at the sixth position (GaWC, 2020). Beijing and London are not just on this WCN-based global city list; their places in the list are also extremely close.

Today, no matter which measure is used, Beijing and London can be concluded as global cities with a comparable level of 'control and command' ability. Both cities are

centres for FDI investments and MNC headquarters. Beijing receives less FDI flows and houses more global headquarters than London, but the margin is small in both aspects. Both cities are specialised in producer services and are highly connected to cities worldwide by advanced producer service firms. Beijing has a higher location quotient for producer services and a lower global connectivity than London, both by a small margin. The two cities no longer stand far away from each other in the global urban system. They are close to each other, almost as London, New York, and Tokyo were when Sassen published her seminal book in 1991.

Closed and closing gap

Even though London has been a leading global city since the term was coined, its lead over Beijing has been narrowing apace. Beijing has been globalising rapidly, especially after China's accession to the World Trade Organisation (WTO) in 2001. By contrast, London has recently experienced the 2000 dot-com crash, the 2008 financial crisis, and the 2016 referendum. The speed at which Beijing catches up with London might be further accelerated by the coronavirus disease 2019 (COVID-19) pandemic. At the time of writing, China has already shown signs of a firm economic recovery, whereas the UK is struggling with the second coronavirus wave with a new national lockdown.

Within just thirty years, Beijing has not only put itself on, but also moved to the centre of, the global city map. This journey started in the early 1990s, when the city, for the first time, expressed an aspiration to become a first-class, modern global city in its 1992

Master Plan (Wei & Yu, 2006). The FDI flow then received by Beijing was 0.35 billion US dollars, the employment share of producer services was less than 5 per cent, and even four years later in 1996 only one company on the Fortune Global 500 list set its global headquarter there (Table 4.2). However, by 2000, these figures had increased to 2.46 billion US dollars, eight per cent, and eight respectively, the year when Beijing was also placed on the GaWC's world city list, at 36th.

Table 4.2. Measures on the 'global city-ness', Beijing, 1992-2018

Year	Inward FDI flow (billion US dollars)[a]		Global headquarters (Fortune Global 500)[*, b]		Connectivity ranking in the WCN[#, c]	
	Value	Average yearly absolute growth[§]	Number	Average yearly absolute growth	Rank	Average yearly absolute growth
1992	0.3					
1996	1.6	0.3	1			
2000	2.5	0.2	8	1.8	36	
2004	3.1	0.2	12	1.0	22	-3.5
2008	6.1	0.7	31	4.8	10	-3.0
2012	8.0	0.5	48	4.3	8	-0.5
2016	13.0	1.2	57	2.3	6	-0.5
2018	17.3	2.1	53	-2.0	4	-1.0

Notes: * The current form of the Fortune Global 500 list started in 1995; # the world according to GaWC started to release the ranking in 2000; § average yearly absolute growth between the previous time point and the current one.

Sources: a: Beijing Statistical Yearbooks; b: Fortune Global 500 website (https://fortune.com/global500); the world according to GaWC (https://www.lboro.ac.uk/gawc/gawcworlds.html).

China's accession to the WTO and Beijing's winning bid to host 2008 Olympic Games, both occurred in 2001, signalled the beginning of a new era in Beijing's integration into the world. The capital city, which by then had appeared on the global stage, has since set off for the central position at a speed unparalleled both in its own history and across the world. As shown in Figure 4.2, a steady acceleration in the level of inward FDI flows was seen by Beijing since 2001, an acceleration that had nearly tripled the level in just six years. Beijing also soared upwards in the GaWC's world city ranking, from

36th in 2000 to 10th in 2008, a rise that was then unmatched by any other city. Admittedly, a city cannot accelerate forever: slowdowns become inevitable as Beijing gets closer to the pinnacle of the global urban hierarchy. But the movement towards that pinnacle has not stopped: a decade later in 2018, inward FDI flows have tripled again in Beijing, and the city has replaced Paris as the fourth most connected city in the world (Table 4.2).

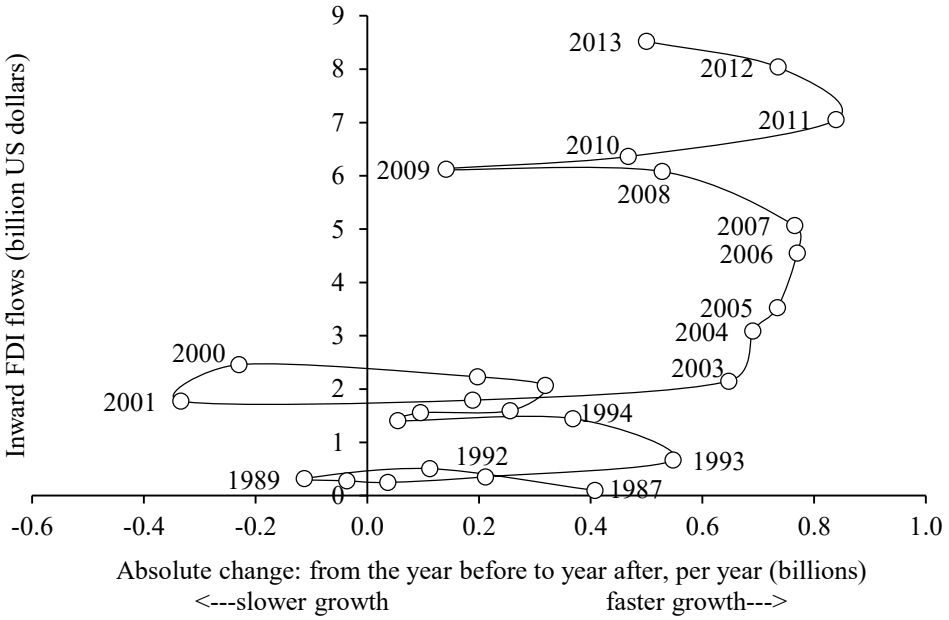


Figure 4.2. The absolute value and growth of inward FDI flows, Beijing, 1987-2013

Notes: y-axis is the amount of inward FDI flows; x-axis is the absolute change in inward FDI flows from the year before to year after, per year; each circle represents a single year. The technique used to draw this graph is introduced in (Dorling, 2020).

Sources: Beijing Statistical Yearbooks.

London's central position on the global city map has become not as stable as before since the city's return to boom and bust economics. The bursting of the dot-com bubble in 2000 put an end to London's decade-long growth in producer services, with the loss of at least 34 thousand jobs in wholesale financial services and related professional services. Eight years later in the 2008-09 financial crisis, similar loss occurred again,

and the scale was even greater at 49 thousands (Roberts, 2018). Admittedly, these losses did not directly lead to London's fall from the global top position overall (Aalbers, 2009; Wójcik, 2013). They nevertheless set in train a fall in the city's Global Financial Centres Index (GFCI) rating, which dropped noticeably in the financial crisis and has been on a descending trend ever since (Figure 4.3).

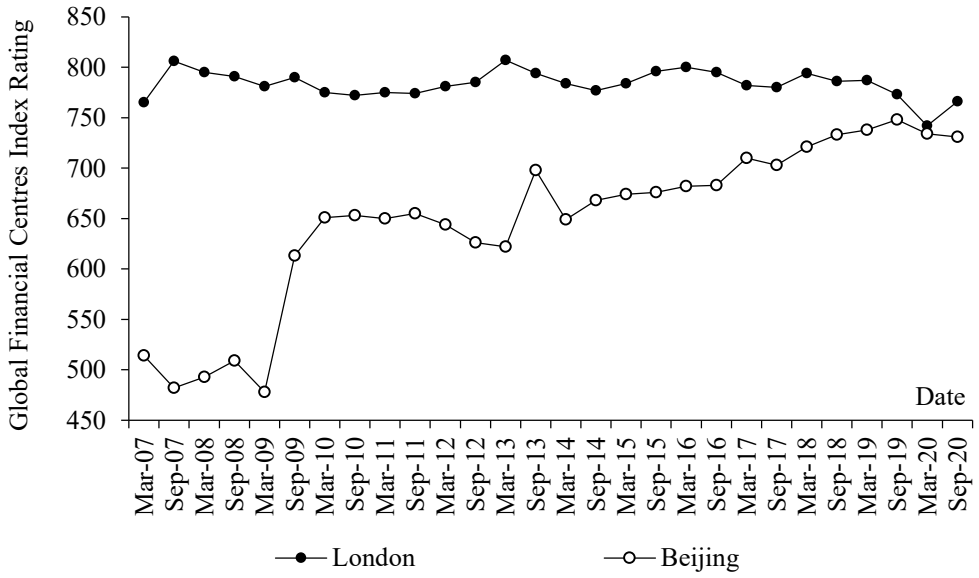


Figure 4.3. Trends in the GFCI rating, Beijing and London, 2007-2020

Source: The Global Financial Centres Index, Z/Yen Group, https://www.zyen.com/.

London's descending trend has become more apparent with the UK's 2016 decision to leave the European Union (EU). Its attractiveness to global investors has reduced with the prolonged Brexit uncertainty: over the past four years, the number of FDI projects and the total jobs created by them have dropped by 28 and 52 per cent respectively (Figure 4.4a). The political stability that underpins the capital's prosperity has also been threatened. The UK has seen one parliament suspension, two general elections, and three prime ministers in just four years; all were in an effort to get Brexit done but all

ended up with disappointment. More profoundly, it is widely expected that the extent to which London acts as a gateway to the European market and as a destination for European talent will fall after Brexit (Hall & Wójcik, 2018; Sohns & Wójcik, 2020). This expectation has entailed relocations of employees, such as that by JP Morgan, of EU agencies, or that by the European Medicines Agency, and also of company headquarters, such as that by Panasonic. With these resources ebbing away, London's decline in the level of control over the global economy should come as no surprise.

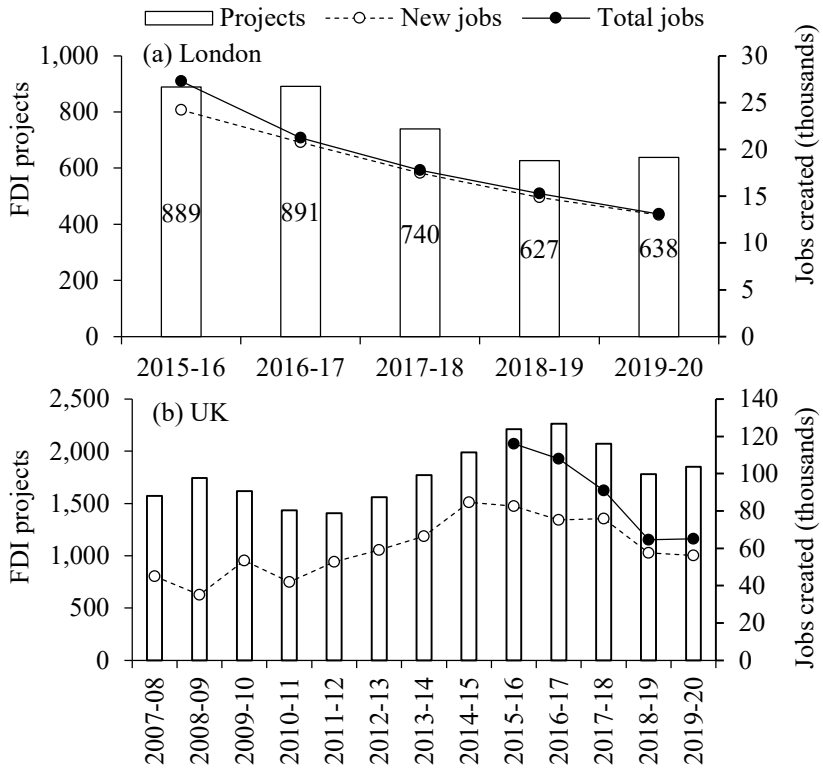


Figure 4.4. Number of FDI projects and their related jobs, London and the UK, 2007-2020

Notes: total jobs are jobs created by the FDI projects. They include new jobs that are likely to be created within 3 years from the start of the project and safeguarded jobs that are retained as a result of the additional new inward investment. Regional breakdowns are available since 2015-16 financial year.
Source: Department for International Trade, Inward Investment Results.

Beijing's extraordinary gain and London's perceptible loss have brought the two cities closer to each other in 'global city-ness'. Their gap may be further closed amid the

COVID-19 pandemic that was ongoing at the time of writing. While the full picture is still emerging, lockdowns have hitherto lasted longer in London than in Beijing. Also, an effective control of the virus and a robust economic recovery, both instrumental to attracting global investors, have already been shown by Beijing but has yet to be recorded in London. Moreover, East Asia, with which Beijing is deeply integrated, has delivered much better economic results in this pandemic than Western Europe, London's largest trading partner. The future in which Beijing overtakes London as a leading global city is no longer unimaginable but may be just around the corner. Bringing the two cities into a conversation with one another becomes increasingly viable and highly imperative as I explain next.

Geo-historical contexts: Processes of becoming a global city

While the 'control and command function' is perhaps the gold standard in defining global cities, there is no standard in the process of acquiring this function. As urban process is contextually contingent and situated, process of becoming a global city should also vary according to geo-historical contexts in which a city is situated. This contextual contingency is the underlying cause of the 'varieties of global cities' advocated by Olds & Yeung (2004). In this section, I tease out three main themes in which the contexts of the two cities are different, and elucidate how these themes affect the two cities' processes in becoming global cities. These contextual differences are sources of conceptual innovation: they can help reveal the 'limited scope of some

concepts', 'disturb wider theorizations', and 'generate more global understandings of the urban' (Robinson, 2016a). They reinforce the conclusion that Beijing and London should be compared.

Latecomer and predecessor in corporate globalisation

Beijing and London faced different world-systems when they acquired the 'control and command functions' (Knox & Taylor, 1995; Shi & Hamnett, 2002). London's emergence as a modern global city occurred in the 1970s. At that time, corporate globalisation was still in the cradle, and the transnational urban hierarchy was just a 'hypothesis' (Friedmann, 1986). 20 years later when Beijing set off for the central global position, these developments were no longer embryonic. Global value chains which had advantaged those advanced countries that first adapted to and advocated for globalisation had by then been well established (Quentin & Campling, 2018). The global urban hierarchy of which London and New York had invariably sat at the apex had also become a reality (Beaverstock et al., 1999). The world in which the first batch of modern global cities like London emerged was in reconfiguration. Two decades later, that world had become stratified again, leaving latecomers like Beijing fewer opportunities and more challenges in attaining global city status.

The fact that London is a predecessor and Beijing is a latecomer in contemporary globalisation is largely attributable to their historically accumulated positions in the world. Prior to the transition to a global city, London was the capital of the British

Empire. This empire was the one on which 'the sun never sets'; and its capital was 'the city of the world' in which a multicultural and cosmopolitan identity had been forged (Eade, 2000; Keith, 2003). The empire lasted up to the 1960s, for over two centuries; and the prolonged prosperity not only funded the constant (re)building of London's infrastructure to the world-class level, but also turned many British practices, norms, and values into the global ones (King, 1990a). Moreover, the empire established a colonial system of production where its capital city acted as the 'central switchboard' (Anderson, 1987). This function not only made London thrive in commerce, trade, and finance, but also put it atop the colonial hierarchy to which the contemporary world hierarchy is intimately connected (King, 1990b; Wallerstein, 1991). In being the imperial capital, London had developed an unparalleled mix of factors that made it privileged at the onset of corporate globalisation – its cultural identity, built environment, economic foundation, and international relations.

Beijing's role in the world was then opposite to that of London. It was the capital of the Qing Empire which, in 1792, rejected the British Empire's request for a permanent embassy with expanded access and trade (Farrell & Brunero, 2018). A letter was then sent to King George III, explaining that the Qing 'set no value on objects strange or ingenious', nor were its manners and customs possible to be transplanted to 'alien soils'. Inherent in these words is a powerful sense of a common Chinese identity, to which Beijing as the capital was (and still is) strongly attached (Jacques, 2012). Answer to the letter came in 1842: Britain opened China's door by force and turned it into a semi-

colonial country. In the following one hundred years, China was no longer the 'Middle Kingdom' but an area of imperialistic expansion; and Beijing was pillaged by foreign (predominantly European) powers in 1900, demoted from the capital status in 1928, and occupied by Japan in the Second World War. The city fell to an inferior position in the world and became impoverished within a century of turmoil.

Beijing was reinstated as the capital and was under reconstruction following China's independence in 1949. However, two decades later when corporate globalisation began to take shape, Beijing was still far behind London in international status and built environment. For example, China's representation in the United Nation was not approved until 1971; and by that year Beijing had only one underground line in operation as compared to ten in London. In addition, unlike London which was specialised in commerce, trade, and finance, Beijing was reconstructed as a city for industrial production. Its GDP share in mining, quarrying, and manufacturing peaked in 1970 at 67 per cent; and its employment share in the secondary sector peaked in 1985 at 46 per cent. While this focus on production was consistent with China's then urgent need for industrialisation; it was also underpinned by the fact that China chose a socialist path, rather than the capitalist one developed and spread by Britain (Gu et al., 2015). This fact brings Beijing another disadvantage as compared to London: the socialist capital, at least in terms of political system, is an 'outlier' in corporate globalisation, a process initiated and dominated by the capitalists in capitalist countries (Robinson, 1996; Smith, 1998).

The fact that London had benefited from a virtuous circle, in which pre-eminent global position, favourable pre-condition, early entry to globalisation, and little international competition reinforce each other, means that it could easily transit into a global city without substantial national effort. In this transition, the state acted more as a facilitator than as an instructor. Its major contribution was not to set London in train to become a global city: most of the effort was made in the 1980s, by which time London had already seen a trend of going 'global' (Hamnett, 2003b; Pryke, 1991). Rather, its major contribution was to remove the brakes that had capped the train's speed. For example, the Bank of England lifted the locational restrictions on financial institutions in 1984; the City's planning department loosened the controls over new building in 1986; and in the same year the Thatcher government removed many financial regulations in what was famously known as the 'Big Bang' (King, 1990b; Pryke, 1994). Given the virtuous circle, the state did not have to play a primary role in London's transition to a global city; all it had to do was to facilitate the circle's operations.

The virtuous circle that had set London in train to become a modern global city operated in the reverse manner for Beijing. Thus unlike London, neither can Beijing transit to a global city with ease; nor can the transition be achieved without substantial national effort. Instead, the state had to act as an instructor in this transition and had to deploy significant resources to make the transition happen. Its planning to build Beijing into a global city came before the city's trend of going 'global'; nor is Beijing's going global likely to happen had the plan not been executed (Gu & Shen, 2003). Moreover,

governments at all levels have participated in globalising Beijing; and their participation was substantial and direct. For example, the central state appointed and supported Beijing to bid for the 2008 Olympic Games, far more than the state helped London in 2012 (Ren, 2008); the municipal government invested hugely in urban infrastructure and promulgated a series of preferential policies (Ren, 2008); and the district governments planned and implemented urban redevelopment projects (Gaubatz, 2005). Just as other cities lacking the virtuous circle London had, the state played a primary role in Beijing's transition to a global city; it was the architect and builder of this transition (Olds & Yeung, 2004; Timberlake et al., 2014).

Buoyant and stagnant national economy

When the two cities were becoming global cities, the economic development of their home countries were at different stage and progressed at different speed. For London, this process occurred centuries after the UK's evolution into an industrial economy and alongside with the country's advance to a post-industrial one. However, Beijing's global rise occurred when China had not yet been fully industrialised, and when it had very recently rushed to develop a service economy (Nijman, 2019). In other words, economic progresses were achieved in the UK one after the other, over centuries, and with economic downturns in between. These progresses were advanced in China all at the same time, within a few decades, and amid a continuous economic boom (Beck & Grande, 2010; Heger, 2020). It is within this economic context that Beijing and London

had become global cities.

In the years when London was in transition to a global city, Britain, the first industrial nation, was de-industrialising rapidly and was in economic decline (Greenhalgh & Gregory, 2000; Rose et al., 1984). Between 1968 and 1976, the economic readjustment years, nearly a million manufacturing workers were made redundant (Sigh, 1977). Admittedly, in net terms it appeared as if everyone found another job in service sector in this period. This however was no longer the case after the country's turn to the neoliberal economics in 1979. In the following decade, the new international division of labour, a process which had accounted greatly for the de-industrialisation in previous years, had intensified; and Thatcher's economic policies, such as privatising nationalised industries, raising interest rates, and cutting public spending had further accelerated the erosion of manufacturing and slowed down the growth of service sector (Hudson, 2013; Massey & Meegan, 1982). Consequently, Britain's economy was under restructuring but was also in stagnation (Halsey, 1988; Rose et al., 1984; Taylor & Bradley, 1994). As shown in Figure 4.5, GDP dropped in real value three times between 1971 and 1991 and had limited growth; and unemployment rate soared upwards after 1979, reached the highest level in record in 1984, and did not return to the 1979 level until 2000.



Figure 4.5 GDP and unemployment rate, UK, 1971-2016

Source: Office for National Statistics, Labour Market Statistics time series dataset; GDP quarterly national accounts time series (QNA)

When Beijing was rising as a global city, China was seeing a large-scale city-based industrialisation and an economic boom (Lin, 2007; Yeh & Chen, 2020). Since 1990, growth in China's secondary sector has risen to a new level: its output increased much faster than before (Figure 4.6c); its share in GDP rose sharply between 1990 and 1993; and since then the share had remained stable until 2010 (Figure 4.6a).[4] As with Britain's Industrial Revolution, this accelerated growth contributed to China's economic take-off: the real size of the economy nearly tripled across both the 1990s and 2000s, and in 2010 China became the world's second largest economy (Table 4.3).

[4] This accelerated industrialisation came from the synergy of a myriad of factors. Internationally, the trend of offshoring manufacturing to less developed countries has continued and intensified, and China has welcomed this trend by reasserting an export-oriented development strategy in the early 1990s (Cartier, 2001). Domestically, economic reforms and power decentralisation were consolidated after Deng's southern tour in 1992, and this not only allowed but also motivated local governments to attract investments and boost local economy. The motivation was further raised by the nation-wide land reform in 1988 and the introduction of a new tax-sharing system in 1994, after which inter-city competition for investments has escalated and providing land to enterprises at low price has become a common strategy among local governments in this competition (Lin, 2009).

This rapid industrialisation also entailed dramatic urban expansion (Gaubatz, 1999; Ma, 2002; Wong, 2016; Yeh et al., 2015). Between 1990 and 2010, the built-up area in China nearly doubled twice, urban population increased by 368 million, and the urbanisation rate soared upwards, arriving at 50 per cent in 2010 (Table 4.3).

Table 4.3. Economic boom and rapid urban expansion, China, 1990-2019

	1990	2000	2010	2019
GDP (trillion US dollars, 1978 fixed price)	0.62	1.66	4.53	8.58
Built-up area (thousand km^2)	12.86	22.44	40.06	60.31
Urban population (million)	301.95	459.06	669.78	848.43
Urbanisation rate (%)	26.41	36.22	49.95	60.60

Notes: The exchange rate provided by the World Bank is used to convert the GDP into US dollars at 1978 fixed price; urbanisation rate is the ratio of urban population to total population.

Source: China Statistical Yearbooks 2020

Unlike Britain's Industrial Revolution in which the secondary sector gained almost all the GDP share lost by the primary sector (Crafts, 1985), the share of the tertiary sector in China has increased alongside the rapid industrialisation. Initially, this increase was a result of a re-introduction of the market system, as the growth in the wholesale and retail sector was the major contributor. However, since 1995, other services than these traditional or low-order ones started to take the lead. Growth in the tertiary sector started to accelerate (Figure 4.6d). This acceleration came first from the local practices of a few large cities, where the secondary sector was ordered to relocate to suburbs and the tertiary sector was intentionally introduced to urban core (Li et al., 2015; Lin, 2007; Yang & Yeh, 2013). Actions from the central state soon came out. In 2001, even though growth in the secondary sector was robust and strong, the state decided to list 'developing an effective service sector' as a national development agenda and issued

related policy suggestions which were then adopted across the country (Yeh, Yang, & Wang, 2015; Yeh & Chen, 2020). Consequently, unlike Britain, China has experienced industrialisation and tertiarisation side by side, within a few decades, and amid a prolonged economic boom.

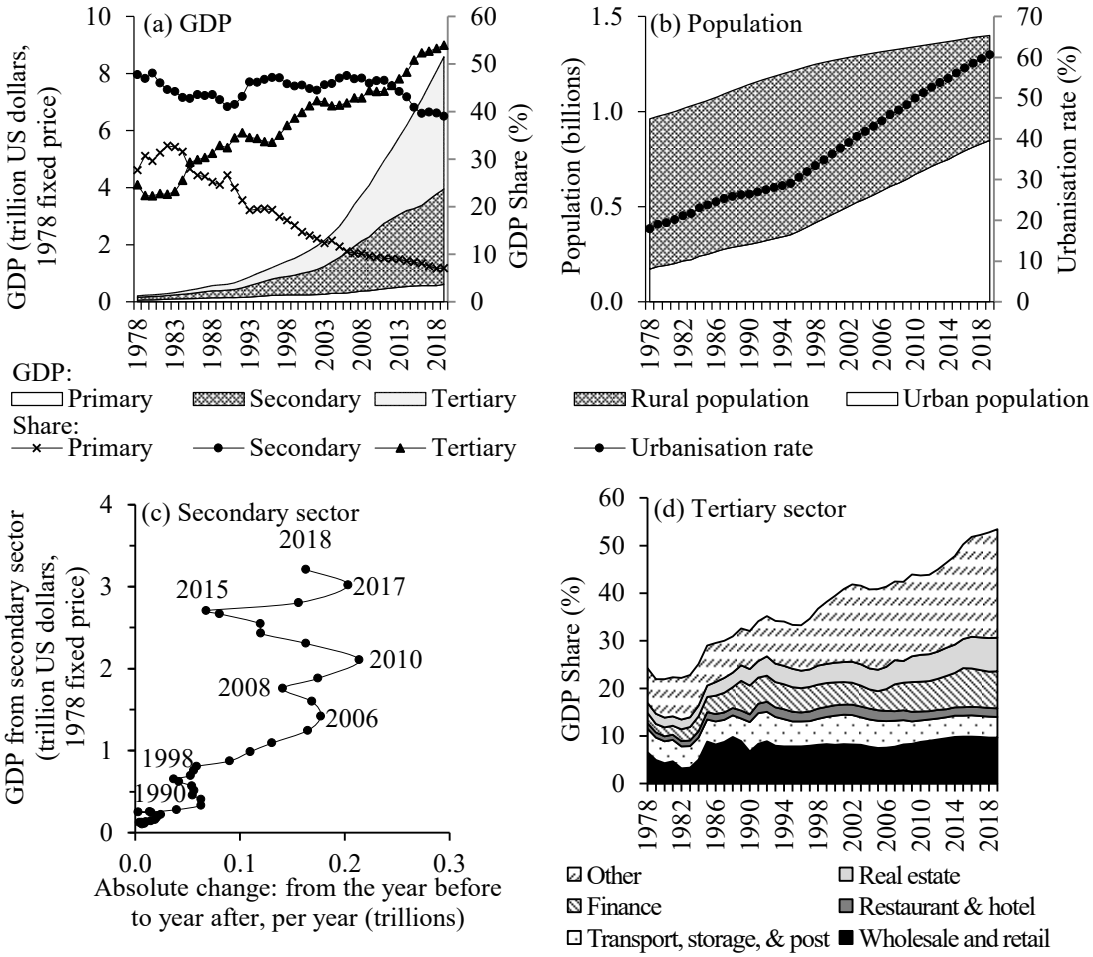


Figure 4.6. GDP, population, and their compositions, China, 1978-2019

Notes: The exchange rate provided by the World Bank is used to convert the GDP into US dollars at 1978 fixed price. Urbanisation rate is the ratio of urban population to total population. In figure c, y-axis is the amount of GDP from secondary sector; x-axis is the absolute change in this output from the year before to year after, per year; each circle represents a single year; the technique used to draw this graph is introduced in (Dorling, 2020).

Source: China Statistical Yearbooks 2020

Given the contrast between China and the UK in the pace of development, Beijing and

London showed different urban expansions in their transitions to global cities. Beijing saw extensive growth in both urban space and population during its ascent as a global city. As the capital of a fast-developing country under industrialisation and tertiarisation, Beijing experienced significant industrial development in suburbs, and simultaneously (re)developed its urban core to promote the growth of the service sector (Deng & Huang, 2004; Gaubatz, 1995). This dual process gave Beijing extraordinary urban growth: in just two decades, its built-up area, total employment, and total population all nearly doubled (Figure 4.7). But in London, neither urban space nor population saw significant gains between 1971 and 1991. Their marked increase actually happened in the nineteenth century when Britain took the lead in developing a modern capitalist society (Ball & Sunderland, 2001). Instead, what London saw in this period were little urban expansion, enormous workforce reduction, and significant population decline, all of which were part of a larger national picture shown above (Figure 4.7). Hence, whereas Beijing's global rise occurred in an expanding background, London rose as a global city from the ashes of decline, a contrast that might give them different urban experiences in the (re)globalising process (Shi & Dorling, 2020).

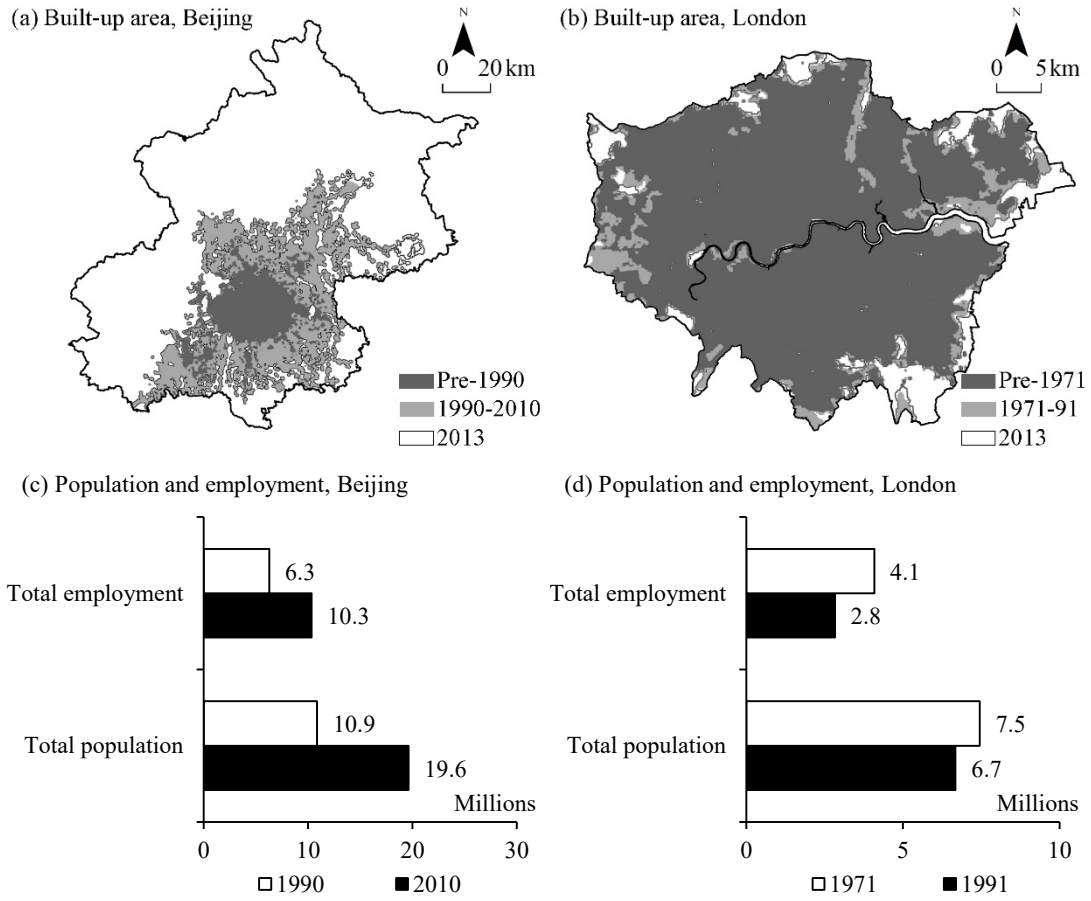


Figure 4.7. Built-up area, population, and employment, Beijing and London

Source: Atlas of Urban Expansion, http://atlasofurbanexpansion.org/; Greater London Authority (GLA), Historical Census Tables; Young & Mills (1983); Beijing Statistical Yearbook 2019

The two countries' contrast in the pace of development is one (albeit not the only) reason why Beijing and London redirect external global capital to different places. With an expanding economy, China has received large volumes of inward capital flows. These flows are distributed across China's vast and variegated territory and in its distinctive cultural and institutional settings. They are also redistributed frequently due to the country's rapidly-developing economy (Sit & Yang, 1997; Wu, 2014). Their (re)distribution needs to be coordinated; and the capital city Beijing is one of the places where the coordination is located (Wei & Leung, 2005). Thus, redirecting global capital flows further down China's urban hierarchy becomes the city's one important function.

By contrast, London tends to redirect these flows to elsewhere outside of its home country. This global orientation is partly due to the city's historical role as an imperial city and Britain's entrenched belief in liberalism (Hill & Kim, 2000; Ma & Timberlake, 2013). It is also a result, and a likely cause, of the weak economy and limited investment opportunities in the rest of the country (Massey, 2007). Hence, whereas Beijing serves as a 'coordination/channelling centre responsible for receiving or channelling inward flows'; London is 'an interactive strategic node in the coordination of the global economy' (Olds & Yeung, 2004). Whereas Beijing has extensive economic linkages with the rest of China; London is often suggested as being disconnected from, if not exploiting, the national economy (King, 1990b; Ma & Timberlake, 2013; Sassen, 1991).

State and market centrality

The rise of Beijing and London as global cities is embedded in different state-market relations. In China, the state is both the builder and the regulator of the market and an active market actor (Ma, 2002; Peck & Zhang, 2013; Wu et al., 2006). It is the state that re-introduced the market that it had once annihilated and decided the sphere, time, place, extent, and form of this re-introduction (Yeh, Yang, & Wang, 2015). The state's objective in doing so is not to concede its power to the market. Instead, as performance has become the primary basis of state legitimacy after the public's reduced faith in the communist ideology, the state has come to use the market as an instrument to promote economic growth and hence to strengthen its power (Wu, 2015b; Yang & Zhao, 2015).

Likewise, as a market regulator, the state's real interest is not in 'securing the general external conditions for capital accumulation', but in achieving political objectives (Jessop, 2002a; Wu, 2018). The regulations on the urban housing market which vary both temporally and geographically depending on the political priority are just one example (Wang et al., 2012). Moreover, the state not only uses but also 'acts through the market' (Wu, 2020b). Its continued ownership over certain resources (such as land) and enterprises (SOEs) enables a direct participation in the market economy. Again, this participation is not simply for profit but for achieving national developmental strategies (Yu, 2014). As Wu (2018) summarises, China's state-market relation is characterised by 'planning centrality, market instruments'.

In Britain, the state acts as an instrument for profit-oriented, market-mediated capital accumulation. It is a 'capitalist type of state' in general, the economic role of which is to 'compensate for partial or total market failure in the provision of the important conditions for capital accumulation' (Jessop, 2002a). It is a liberal capitalist state in particular, emphasising the role of market as coordination mechanism and regarding more state intervention than required as an obstacle to this mechanism (Jessop, 2002b; Schmidt, 2003). This philosophy of economic liberalism has a historic root. In Britain, capitalist development took place earliest, was largely a spontaneous chain of events sweeping over agriculture, commerce and industry, and had transformed many of the landed aristocrats, a governing class, to gentlemanly capitalists (Brenner, 1977; Cain, 1997). This philosophy also gets consolidated over time, by Adam Smith's work '*the*

Wealth of Nations', by the British Empire's gains from 'free-trade', and by Gladstone's policies of laissez-faire (Hall, 1986). Britain is always categorised as a liberal model in the typologies of capitalism; the state-market relation there can be described as market centrality, state instruments (Esping-Andersen, 1990; Hall & Soskice, 2009).

Arguably, both China and Britain were subject to neoliberalism when their capital cities went global;[5] but the difference in the state-market relation still persisted (Harvey, 2007). Over the last forty years, neoliberalism as a process has been unfolded in both countries (He & Wu, 2009; Peck & Tickell, 2007). Market rules, for example, have been legitimised in China and consolidated in Britain in housing provision. However, the form of neoliberalism is essentially different between the two countries despite similar measures. Britain has taken a neoliberal regime shift: consistent with the longstanding philosophy of liberalism, free-market is worshiped (by some) to an extent that the state has 'no alternative' but to be restructured (Jessop, 2002b; Peck & Tickell, 2007). Yet in China, neoliberalism appeared in the form of policy adjustments and was adopted to consolidate the state's position and achieve 'the China Dream' (Wu, 2010,

[5] 'Neoliberalism' has been defined in diverse (and contested) ways; and here the one used by Jamie Peck, Nik Theodore, and Neil Brenner is adopted. They define neoliberalism as a 'process' rather than a 'state', and hence whether or not neoliberalism is in a place is judged on what process is that place undergoing rather than what status it has reached (Peck & Theodore, 2012). It is thus fair to say that neoliberalism has occurred in China over the last forty years, as the logic of 'self-governing and free play of market forces' has penetrated into ever more economic fields despite the still highly regulated status of these fields (Ong, 2007). As with many other researchers, I am suspicious of China reaching a status equivalent to the neoliberal state in Western societies, and aruge that its process to the current status shows at least a neoliberalism with Chinese characteristics, if not the orthodox one (He & Wu, 2009; Wu, 2010, 2018).

2018). Even though the state in both countries has (and will) take several turns in economic strategy; its relation to the market has (and is likely to) remain largely unchanged.

The two countries' contrast in the state-market relation contributes to the different visions created for their capital cities. Beijing is taken as a showcase for the state's performance and an evidence for its legitimacy. Although economic growth is an important dimension by which the performance is measured, the full matrices also include political, cultural, social, and ecological progresses (Gilley & Holbig, 2009; Wei, 2018). Moreover, the relative importance of these dimensions is not fixed; they shift over time in response to both external and internal changes (Holbig & Gilley, 2010). Hence, capital accumulation is neither the only nor a longstanding target in Beijing. Instead, serving as the national political centre is always at the top of the agenda, with the secondary goal changing over time among becoming: the national cultural centre, a global city, a hi-tech and innovative city, and an ecological, humanistic city (Gu, Wei, & Cook, 2015; Liu & Shi, 2019). By contrast, regardless of which mayor is in charge, market-mediated capital accumulation is always at the centre in London's vision. For Ken Livingstone (on the left-most fringe of Britain politics), London is to be developed as 'an exemplary, sustainable world city' with 'strong, diverse long term economic growth'; for Boris Johnson, London 'must retain and build upon its world city status as one of three business centres of global reach'; and for Sadiq Khan, London should 'excel among global cities, expanding opportunities for all its people and

enterprises' (Greater London Authority, 2004, 2008, 2016). Thus, urban development in Beijing has more goals than that in London, and an economically competitive global city is the primary vision of London but not of Beijing.

The particular state-market relation in China means that compared to London, Beijing's success as a global city is more related to the capital city status. First, being the capital city is one key reason why MNCs tend to put their China main office in Beijing (Taylor et al., 2014). For MNCs, following the market logic might be enough to run business in Britain and other capitalist countries, but in China it is not enough. As the Chinese state is both the builder and regulator of the market, knowing policy details and verifying policy interpretations are equally essential (Zhao, 2013). The capital city's unmatched richness in policy information thus adds an additional pull on MNCs to locate their central corporate functions there (Meyer, 2018; Wang et al., 2011). Second, as the capital of China, Beijing also hosts the global headquarters of most of the largest SOEs. These enterprises are the key agents of China's 'going global' strategy and have become significant players in the global economy (Lim, 2010, 2018). Their concentration in Beijing thus becomes an important part of the city's 'control and command' functions. In other words, unlike London which is 'a global basing-point for the operations of stateless MNCs' (Hill & Kim, 2000), the role of the Chinese state as a market actor and its ambition of going global entail an alternative way for its capital city to coordinate the world economy: a coordination that is achieved primarily though the global operations of the SOEs headquartered there.

Conclusion

This chapter has compared both the characteristics of, and the process in, becoming a global city between Beijing and London. It has shown how similar they are in 'global city-ness' and how different they are in geo-historical contexts and in the process of global city formation. In describing the story of Beijing vis-à-vis that of London, this chapter has provided a considerably better understanding of the two cities than otherwise possible. In elucidating their similarities and differences, this chapter has argued that a comparison between the two cities is both viable and conceptually innovative. In juxtaposing characteristics and processes, this chapter has added to the idea that global cities should be analysed both as a concept and a process.

Beijing and London are now global cities with similar levels of control ability over the global production network regardless of which measure of 'global city-ness' is used. Both cities are centres for FDI investments and MNC headquarters. They are also both specialised in producer services and are highly connected to cities worldwide by advanced producer service firms. Moreover, the lead of London over Beijing in 'global city-ness' has been narrowing apace. On the one hand, Beijing has been globalising rapidly, especially after China's accession to the WTO in 2001. On the other hand, London's global leading position has become increasingly unstable with the 2000 dot-com crash, the 2008 financial crisis, the 2016 referendum, and the 2020 COVID-19 pandemic. The vastly narrowed gap means that neither should Beijing be

conceptualised as the periphery of the world system, nor should London's core position be taken for granted. They now have similar levels of embeddedness in the global urban system.

Beijing and London are embedded in different geo-historical contexts, and their (re)globalising experiences are very different. First, being the capital city of the British Empire which had occupied much of the world until the 1960s, London had accumulated the conditions that put the city in a favourable position in corporate globalisation, and had faced limited international competition during its transition to a global city. This story was the opposite for Beijing: just like all backward cities, Beijing lacked appropriate urban conditions, was a latecomer in globalisation, and faced fierce competition. Thus, whereas for London becoming a global city is mostly a result of cumulative causation; for Beijing, and other cities alike, it is a state-directed construction.

Second, in Britain, economic restructurings occurred one after another, over centuries, and with economic downturns in between. But in China, industrialisation and tertiarisation occurred side by side, within decades, and amid a prolonged economic boom. Hence, whereas London rose as a global city when its economy was under restructuring but stagnant, Beijing's global rise occurred in an expanding background. The expanding economy in China also means that the country is very attractive to global capital flows for which Beijing functions as a channelling centre. This function,

however, is not found in London: the city is largely disconnected from the rest of the country, much of which is yet to recovery from deindustrialisation.

Third, the state-market relation in China can be characterised as 'planning centrality, market instruments', but the other way around is the case in the capitalist county Britain. Thus, Beijing is developed not primarily for capital accumulation as is the case for London. Instead, the capital city is a showcase of the state's performance, and this performance includes not just the economic dimension but also political, cultural, social, and ecological progresses. Moreover, while in Britain the state keeps at arm's length from the market given the country's strong belief in liberalism; in China the socialist state is the owner of many resources and enterprises and is an active market actor. Thus, Beijing's global rise has benefited enormously from being a city where the central government and ministries are located, and its global control is partly exercised through SOEs which operate worldwide. In other words, whereas London is a global basing-point for the operations of stateless MNCs (Hill & Kim, 2000), Beijing is a national-basing point for the global operations of SOEs.

Beijing and London should be juxtaposed and compared given their similarities and differences. On the one hand, the intensified globalisation process has brought ever more cities into a single system, and Beijing and London are no exceptions. Being embedded in a shared system is already enough for them to be compared; not to mention that the two cities have reached a comparable global city status in this system (Robinson,

2016a). On the other hand, the two cities are different in the contexts in which that status was reached and in the processes of, and experiences in, becoming a top global city. This variation becomes a fertile ground for pressing the contextual limit of the existing concepts and revising them accordingly. Hence, whereas a similar level in 'global city-ness' adds to the viability of a comparison between Beijing and London; different geo-historical contexts, and different globalising paths, add to the conceptual innovation of this comparison.

Despite a geographic focus on Beijing and London, the analysis presented in this chapter benefits the understanding of global cities in general. It has shown that, on the one hand, 'global city' can be analysed as a concept. This concept is based on the essential functions shared by the most economically influential cities around the world. Thus, research in this line generally focuses on the attributes brought by these essential functions, and usually relies much on a quantitative approach. On the other hand, this chapter has demonstrated that global cities can also be analysed as a result of a series of processes. Taking this perspective thus leads to a research interest in the path of becoming a global city and in the geo-historical contingency of the path. Working with this interest would normally require a qualitative approach. In juxtaposing these two understandings of global cities, this chapter has shown that neither is more superior to the other. In fact, they complement each other; and together they contribute to a more complete knowledge of global cities.

Chapter 5 Compositions of the labour force: Is Beijing different from London?[1]

Abstract: This paper studies the labour force in Beijing in relation to that in London. Through this comparative approach, the paper breaks the current isolation of Chinese studies, crosses the categorical divides in comparative research, and addresses local-global dialects in global cities. A very similar description of the labour force between these two cities is revealed. The labour forces in both cities had a young age profile with that in Beijing being only slightly younger, both shared a male-dominated characteristic with a stronger dominance in Beijing, and comprised primarily highly educated individuals who were slightly less represented in Beijing. Such a dominance of young, male and highly educated individuals in both cities is due to the two cities' similar attraction to these people as both now being a global city. The different extents of dominance in Beijing, however, are influenced by its various institutional practices. Yet with an aging population and a fast-developing urbanisation in China, these practices are very likely to be altered in the near future. It is therefore foreseeable that the labour force in Beijing will become yet more similar to that of London very soon. Based on these findings, it is untenable to claim Chinese cities as being greatly different. To largely exclude such cities from the comparative research is also no longer justifiable.

[1] This paper has been published in *Habitat International* (Shi, 2019). Full reuse permission has been granted for the purpose of reuse in this thesis.

Introduction

The rapid rise of China as a powerhouse in the global economy has put its largest cities in the leading positions in the global urban system (Timberlake et al., 2014). Measured by the connectivity with the world in terms of advanced producer services, Beijing was the fourth most connected city in the world, Shanghai ranked sixth, and Guangzhou was in the top 30 in 2018 (GaWC, 2018). The global connectivity of these cities is now not only way above that of second-tier global cities such as Amsterdam and San Francisco but also very close to that of London and New York. This gap with London and New York is also expected to close, given that China has a dramatic growth in its outbound FDI in recent years, the UK is struggling with the Brexit deal, and the US is under unprecedented protectionism (Colantone & Stanig, 2018). In this sense, Chinese cities, especially Beijing and Shanghai, is and will be highly engaged with the global economy and closely connected to other globalised cities.

The rise of China in the global arena has attracted the curiosity of urban and many other researchers (Lin et al., 2003; Zhang, 2002). Albeit arousing great interest, this curiosity is largely satisfied by a parochial frame in which Chinese studies are isolated from the Western orthodoxies that dominate today's academy (Bunnell et al., 2012; Ren & Luger, 2015). Admittedly, the fact that China differs from the West in values, ideology, culture and much more has contributed to this isolation. But what underlies it is a conceptualisation that categorises the 'Chinese city' as an exotic 'other' and a denial of

its commensurability with elsewhere (Ren, 2015). Consequent efforts thus usually stress different experiences of Chinese cities and conclude that new theoretical and conceptual tools are needed to understand them (Lin, 1994, 2001; Shen, 2006; Sit, 1985). But in the absence of impartial concrete comparisons between Chinese cities and Western ones, the validity of these findings is hard to be proved. Not only Chinese studies, comparative research itself is also often spoiled by the categorical divide. Although being extensively conducted, comparisons are largely confined to cities within the European Union (EU) and North America (Denters & Mossberger, 2006; Moulaert et al., 2003; Musterd & Ostendorf, 2013). This geographic scope might have been acceptable and valuable before the 21st century in creating a theoretical framework for doing comparative urban research and in exploring the importance of various factors in structuring the urban profiles (Musterd & Van Kempen, 2009; Van Kempen & Murie, 2009). However, it is obviously now too limited in the current urban landscape where the heartlands have moved elsewhere (McFarlane & Robinson, 2012; Ward, 2008). This limitation thus contributes to a reorientation of comparative urbanism, in which comparisons across rather than within the categorical divides are at the centre (Nijman, 2007; Robinson, 2011, 2016a). Therefore, this paper attempts to break the current isolation of Chinese studies and respond to the new wave of comparative urbanism by studying Beijing in relation to London.

The extraordinary extent of globalisation has brought in a new way to think of cities together based on their mode of integration with the world economy (Knox & Taylor,

1995; Robinson, 2011). Cities with 'the control and command functions' of the world economy are now put together as 'global cities' and compared in various dimensions (Friedmann & Wolff, 1982; Sassen, 1991). Comparisons were first made by globalist researchers in an effort to establish the concept and thesis about global city, and a universalist-seeking approach was adopted accordingly (Abu-Lughod, 1995, 1999; Sassen, 1991, 2005). These researchers focused on the direct and overwhelming links between capital and labour and argued for very similar changes and outcomes of the workforce in global cities (Cohen, 1996; Dick & Rimmer, 1998; Sassen, 2011). This 'urban convergence hypothesis', however, has been criticised by more recent comparisons. Critiques first came from the North America and Western Europe where differences were found in the labour markets among global cities. This finding questioned the central role of capital and argued for the importance of institutional arrangements and place-specific contexts in shaping labour (Hamnett, 1994; Samers, 2002). For example, the proportion of low-skilled workers in the labour market is now believed to be dependent more on immigration policies and welfare regimes than on economic structures (Burgers, 1996; Burgers & Musterd, 2002; Van der Waal & Burgers, 2009). Additional critiques came from outside the US-European contexts where variations were found in the ways through which a city becomes a global city and exerts its global influence (Chubarov & Brooker, 2013; Olds & Yeung, 2004). These variations have moved global city from a paradigm to a typology, in which between the state-centred Tokyo and the market-centred New York lies many other

types of global cities (Hill & Kim, 2000; Ma & Timberlake, 2013). They have also moved the comparative research on global cities towards a privileging of grounded uniqueness over universal similarity (Peck, 2015; Tai, 2010, 2006). This privileging thus dismisses the co-consideration of similarities and differences among global cities, limits the mutual dialogue between these two aspects, and more fundamentally bypasses the local-global dialectics in these cities. To fill the gap, this paper attempts to compare two global cities in a way that combines universalist-seeking and variation-finding approaches and values both similarities and differences. In doing so, it serves the investigation of the interplay between the economies orchestrated at a global scale vis-à-vis the urban contexts structured at more local scales in shaping global cities.

To achieve the abovementioned aims, this paper studies the labour force in Beijing in relation to that in London. By adopting a comparative gesture that is established on global connectedness, seeks both similarities and differences and strikes the relationship between global flows and local contexts, two research questions are answered. First, what are the similarities and differences of the labour force between these two cities, and is Beijing so different from London that it should be considered as unique and incommensurable? Second, what are the reasons underlying these characteristics in both cities, do these reasons have something to do with global city status and local contexts, and will the features of any substantial differences in Beijing be changed in the near future for obvious reasons? Labour force is chosen here to be analysed and compared due to its close links with both jobs and people. For global cities,

jobs are largely influenced by their 'control and command functions' in the global economy whereas people's behaviour is still impacted by various arrangements of the local society. In this sense, labour force serves as a good entry point into an investigation of the interplay between the global and local factors in global cities. Specifically, age, gender and educational structures of the labour force are compared between Beijing and London. These compositions are the basic information known for every city, on which more complicated ones such as occupational structure are built up (Dixon, 1983). In this sense, delving into these basic compositions is also the first step to understand a city, which, unfortunately, is often so basic that it is bypassed by many urban researchers. In addition, compared with other cities, Beijing is now much closer to London and New York as regards the global economic status (GaWC, 2018). But it stands closer to London than it does to New York as regards the function in the national urban system. In other words, Beijing and London are highly embedded in their respective nation-states but at the same time influenced by the global economy to a similar extent. A comparison between them can thus serve the interests in breaking the current isolation of Chinese studies, cutting across the categorical divides and addressing local-global dialectics in global cities.

The rest of the paper is arranged as follows. First, it introduces the data, justifies their quality, and explains the way in which some of them are processed. This is followed by an endeavour to 'measure' the age, gender and educational compositions of the labour force in Beijing respectively – all with London being a yardstick. Then this paper seeks

to suggest reasons for the similarities and differences in these compositions, and attempts to build up an integrated story. Finally, research findings are summarised and further implications are discussed.

Data

The data in this paper are mainly drawn from the 2010 China Census and the 2011 UK Census. They are the latest Population Census in both countries. Apart from the application of census tabulations, their microdata samples are also employed.

A comparative perspective adopted by this study prioritises the demands of completeness, precision and reliability over others for the datasets. These priorities favour census over survey data (Finney & Simpson, 2008; Scott & Vickers, 2002). For both countries, the Census is the only endeavour that includes every individual and household in the land into the questionnaires. It had 19,612,368 persons for Beijing in 2010, and 8,173,941 persons for London in 2011[2]. Admittedly, in the 2010 China Census, the question on economic activity was only asked in the long-form questionnaires, which were administered to about 10 per cent sample of the population. It nevertheless covered as many as 1,849,475, or 9.4 per cent of, Beijing residents in 2010. In addition, even for census microdata samples[3], their sample size is still much

[2] Despite the aim of including everyone, the 2010 China Census and the 2011 UK Census, like all other censuses, are inevitably under-enumeration, the overall response rates of which are estimated to be 99.88% and 94% respectively (National Bureau of Statistics of China, 2011; Office for National Statistics, 2013).

[3] It is a 1 per cent sampling data of the long form in China and a 5 per cent sampling data of the total

larger than other surveys. This sample contains 18,617 records for Beijing and 417,215 records for London. Even the microdata therefore contains such a great many records that it allows us to break down the labour force by more detailed characteristics. Another advantage of census microdata samples lies in sampling errors. The Labour Force Survey, for example, has been reported to have a continuously declining response rate since the early 1990s, and the non-respondents tend to be particularly disadvantaged individuals, recent arrivals, or those with poor English language fluency (Heath & Cheung, 2006; Jones, 1996; Wheatley Price, 2001). Similar problems have also troubled various surveys in China. So that when depicting the general landscapes of the population, the use of survey data is often a compromise to the lack of access to census microdata samples (Cai & Wang, 2003; Zeng & Wang, 2014). Consequently, neither the survey-based quantitative studies nor the interview-based qualitative ones can draw a complete and accurate picture of the aggregate situation of the labour force. Such an objective, however, can be achieved by this paper.

The geographical coverage of the labour force in this study is in accordance to the one based on which the Census data were collected. It is the Greater London Region for London and Beijing Municipality for Beijing, both of which are administrative concepts. These administrative areas are also the ones that have been frequently mentioned in academic discussions and targeted for public policies. In addition, the labour force here

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population in the UK.

is based on residence rather than on workplace. This choice is made mainly because the purpose here is to explore the demographic, instead of the economic, characteristics of the city. Albeit important as well, barely can the economic characteristics be captured by the 2010 China Census which did not report any information on workplace population. In these regards, this study will focus only on the residents of both cities, and therefore shed some lights on their demographic aspects.

Several aspects are paid special attention to when the data were processed. First, the labour force here is not restricted to those in the working age but includes all of those aged 16 and over. This choice is made because there is a trend in postponing the retirement age, there are many retirees re-entering into the labour market, and the information on economic activity was collected for all of those aged 16 and over in both countries. Second, the grade-based educational system in China and the qualification-oriented system in the UK were reconciled into a four-level one. This reconciliation is made to improve the comparability of the educational structures in Beijing and London and is based on years for which a grade or a qualification is usually obtained. The correspondences between the four-level scheme and the original classifications are provided in the Appendix. Third, although the 2011 UK Census collected the data on both economic activity and qualification for people aged 16 and over, the cross tabulations of these two variables were generated only for those aged between 16 and 64. Fortunately, for individuals aged 16 and over, the tabulation of the highest qualification by age and the tabulation of qualifications for those in employment are

also provided. Moreover, the microdata sample tells the qualification structure of the unemployed with an age of 65 and over. Combining these tables, the entire qualification structure by economic activity for those aged 16 and over in London can be obtained.

Compositions of the labour force

Age

The age structure of the labour force in Beijing was very identical to that in London. For both cities, the proportion of the labour force taken by a five-year age group peaked at the 25-to-29-year-old group and declined constantly thereafter (Figure 5.1). In Beijing, people aged between 25 and 29 accounted for 18% of the total labour force, and this proportion in London was 16%. Such a dominant position taken by this group is not only due to its high labour participation rate (LFPR) but also to its considerable contribution to the overall population. For one thing, the LFPR of this group in both cities was above the city's average at about 85%. For another, 13% of the individuals aged 16 and over in both cities came from this young age group (Table 5.1). Therefore, the conjunction of an extraordinary abundance of this specific population and their significantly high participation rate in both labour markets has led to their dominance in the workforce. Within the very much alike age structure, the labour force in Beijing had a slightly younger profile than that in London. This difference is most obvious in the portion taken by those in older age groups (55 and over). In Beijing, only 5% of the workforce was aged 55 and over, whereas this figure in London was 13%. Such a huge

gap is mainly due to the different LFPR in two cities. For people aged between 55 and 59, their LFPR in Beijing was less than half of that in London. And for those aged 60 and over, this rate was only about one fifth (Table 5.1). These differences have largely lowered the median age of the labour force in Beijing to 35, whilst that in London was a bit larger, albeit not so dissimilar, at around 37.

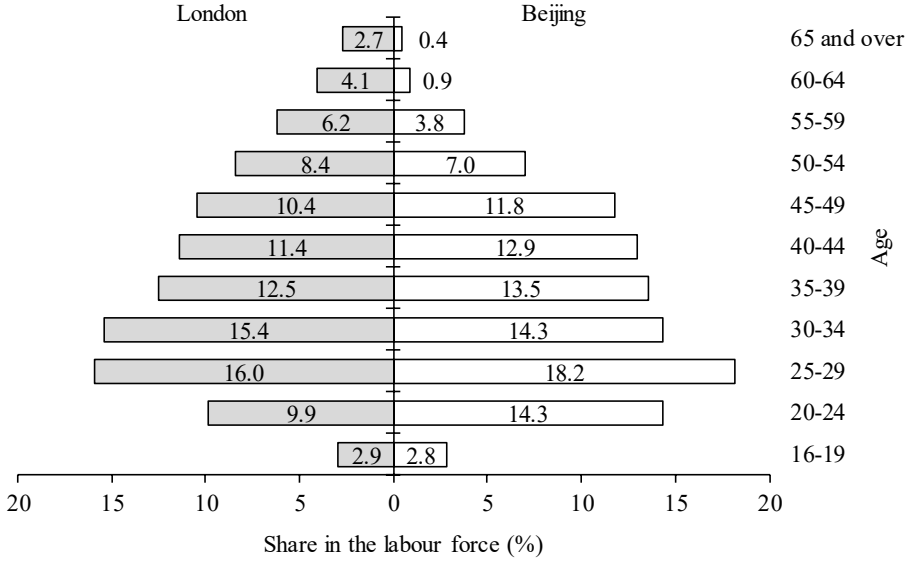


Figure 5.1. The age structure of the labour force in Beijing (2010) and London (2011)

Gender

The gender structure of the labour force in Beijing closely paralleled that in London. For both cities, there were significantly more men than women in their labour forces, and this male dominance is mainly due to their higher LFPR than that of females. This is especially the case for London. With a much greater LFPR for men at 74% than for women at 61%, a larger share of its labour force was taken by males, even though men were outnumbered by women in its total population. The extent of this dominance was

slightly larger in Beijing than in London. Beijing had 58% of its workforce being male and a consequent sex ratio of 138, whereas these figures in London were 54% and 115 respectively. This difference is mainly due to a larger gender gap in the LFPR in Beijing than in London. In Beijing, the LFPR of men was 1.34 times that of women whereas this figure was only 1.20 in London (Table 5.1). Taken together, it is clear that both cities shared a male-dominated structure of the labour force, although this characteristic was slightly more pronounced in Beijing than in London.

Table 5.1. Share of each group and their LFPRs in Beijing (2010) and London (2011)

Compositions	Beijing (%)			London (%)		
	All	Labour force	LFPR	All	Labour force	LFPR
Age						
16-19	5.10	2.84	34.00	5.77	2.94	34.26
20-24	13.86	14.31	63.00	9.62	9.91	69.32
25-29	12.94	18.19	85.76	12.72	15.96	84.45
30-34	10.04	14.34	87.14	12.17	15.43	85.34
35-39	9.52	13.54	86.69	10.14	12.51	83.07
40-44	9.23	12.94	85.48	9.31	11.38	82.24
45-49	9.34	11.76	76.86	8.50	10.44	82.66
50-54	7.86	7.02	54.55	7.04	8.41	80.38
55-59	7.17	3.76	32.02	5.68	6.20	73.52
60-64	4.56	0.86	11.55	5.23	4.09	52.65
65 and over	10.39	0.43	2.54	13.81	2.72	13.26
Total	100	100	61.00	100	100	67.30
Gender						
Male	50.70	57.97	69.75	48.90	53.55	73.70
Female	49.30	42.03	52.01	51.10	46.45	61.18
Sex ratio	102.85	137.92	1.34	95.72	115.3	1.20
Educational level						
Primary or other	10.11	5.17	31.21	27.59	18.58	45.31
Junior secondary	31.16	33.86	66.28	24.22	23.80	66.13
Senior secondary	22.56	22.03	59.58	10.47	10.96	70.49
Higher	36.17	38.94	65.68	37.72	46.66	83.26
Total	100	100	61.00	100	100	67.30

Notes: LFPR is the labour force participation rate, which is the number of economically active people in a specific group divided by the total population in that group.

Sex ratio is the ratio of males to females in a population. The sex ratio of the labour force participation rate (LFPR) here is the LFPR of males divided by that of females.

See Appendix for definitions of educational level.

Educational attainment

Beijing in 2010 shared one striking feature with London as regards the educational structure of the labour force. In both cities, people with a higher education background prevailed by taking the largest share in the labour force. This share was nearly 40% for Beijing and over 40% for London (Figure 5.2). Such a prevalence is partly due to their strong willingness and great ability to participate in the labour market and more importantly to their large contribution to the total population. Just like their ranking in the share of the labour force, highly educated people also outcompeted others in the share of the total population at about 37% for both cities (Table 5.1). Yet this structure was not completely the same in the two cities. Compared to London, Beijing had smaller proportions taken by people standing at both ends of the educational spectrum. For people with a higher education background, their LFPR in Beijing was only 66%, which was much lower than that in London at 83%. For people with a primary or other education background, their occupation in the total population in Beijing was only 10%, in contrast to 28% in London (Table 5.1). These factors together contributed to a highly-educated profile of the labour force in both cities, although Beijing had slightly fewer labourers with either higher or primary or other education background than London.

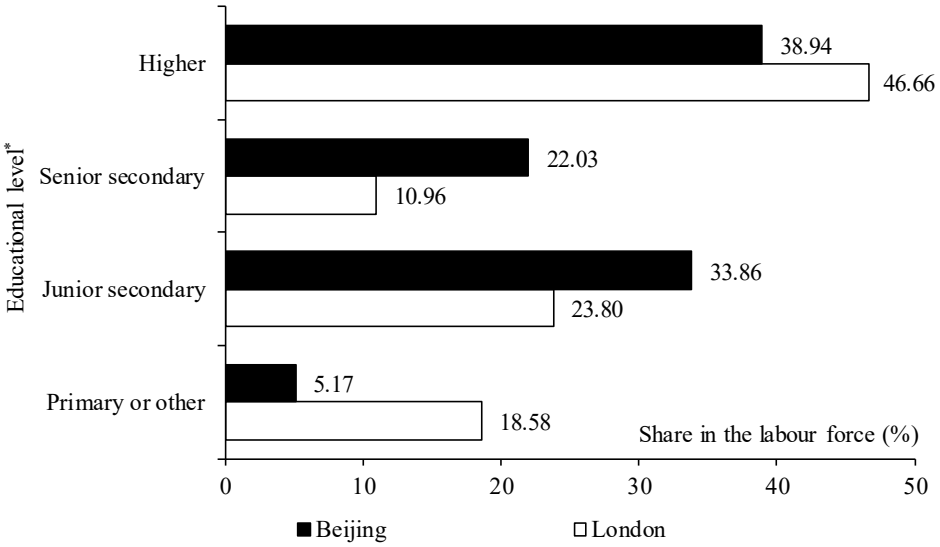


Figure 5.2. The educational structure of the labour force in Beijing (2010) and London (2011)

* See Appendix for definitions.

Reasons for the compositions

The previous section has drawn a very similar picture of the labour force between Beijing and London, although the extent of some of the common attributes slightly differs in interesting ways. It has also indicated that all the similarities and differences can be mainly ascribed either to the structure of the total population or to the labour force participation rate of specific population groups. In the following section, some factors shaping these two dimensions are suggested and an integrated story is told.

Migrants: How do they shape the structure of the total population

Beijing and London share a similarly strong and constant appetite for migrants. But unlike London that receives many international migrants, Beijing has invariably had

new entrants more from within China than from other countries[4]. This fact explains why neither the questions on international migrants in Beijing nor those on long-term domestic migrants in London have hitherto been asked in their respective censuses[5]. This data limitation restricts our definition of migrants to domestic ones for Beijing – those Chinese born outside the city[6], and international ones for London – those born

[4] Beijing has always been a centre for domestic migration (Lee & Wong, 1991). Yet, previous migrations are relatively small in scale, although by no means small in number, as compared to the one since the mid-1980s (Gu & Shen, 2003). In 1984, Beijing only had 0.2 million floating population – those whose households are not registered in Beijing. This number has increased to 2.6 million by 2000, and further soared to 7 million by 2010 (Liang et al., 2014; Liang & Ma, 2004). In 2010, floating population has already accounted for 36% of its total population. Foreigners, by contrast, only made up less than 0.5% with a number of 91,102. It is therefore without doubt that foreigners are negligible in the face of the domestic migrants.

London was the most popular destination in the UK for domestic migration in the nineteenth century (Boyer & Hatton, 1997; Humphries & Leunig, 2009). Its attractiveness to internal migrants, however, has been gradually replaced by that to international ones. This process is exemplified by several waves of large-scale international migration – first from its former colonies in the early post-war period, then 'the new immigrants' since the early 1990s, and finally the recent arrival of Eastern Europeans after the 2004 EU accession (McDowell et al., 2009; Robinson, 2010). Between mid-2010 and mid-2011, according to Office for National Statistics, London had a net international migration at 103,017 but lost 40,352 residents due to domestic migration. It is therefore not surprising that, for a 'super-diversified' city like London, the scholarly and policy debate on migration is always on those born outside the UK than on those migrated from other UK regions (Vertovec, 2007; Wills et al., 2009).

[5] The question on the usual residence one year ago is asked in the UK Census. But this question can only identify the 'flow' of domestic migrants, not the 'stock'. Such a deficiency therefore explains why almost all the studies on domestic migration in the UK use the data from the ONS Longitudinal Study rather than from the Census (Champion et al., 2014; Fielding, 1992).

[6] This definition is different from some of the current Chinese studies, which simply regard people without local household registration (the floating population) as the only composition of domestic migrants ((Fan, 1999; Liu & Shen, 2014). These studies, however, fail to include another type of migrants in China – those who have migrated and then changed their household registration to their destinations (Goldstein & White, 1997). This type is also termed as permanent migrants by some scholars in comparison to temporary ones who still lack of local household registrations (Cai, 2003; Chan et al., 1999; Fan, 2002). Therefore, in order to capture the characteristics of all migrants, not only the temporary ones, in Beijing, and to improve the comparability of its migrants to those in London, this paper defines migrants by their place of birth – a method that has been widely used internationally (Boyle et al., 1998)

outside the UK. Despite this slightly restricted definition, migrants still constitute a major part of the total population in both cities. For Beijing, nearly half of its residents in 2010 were born elsewhere in China; and for London, foreign-born residents made up almost 40% of its entire population in 2011. In addition, when comparisons are made with census microdata samples using a chi-squared test[7], a very distinctive pattern of migrants from that of local residents in age, gender and educational structures can be found in both cities. Given their large presence and distinctive pattern, migrants undoubtedly have a substantial influence on the structures of the total populations in both cities.

The most eye-catching feature of migrants is the overrepresentation of young and educated individuals in both cities. Among all migrants in Beijing, 16.7% were aged between 25 and 29 in 2010, and this figure in London was 14.4% in 2011. When migrants were broken down by educational levels, the largest share was taken by those with higher education at around 38% for both cities (Table 5.2). In fact, these two characteristics come from the overrepresentation of one specific group – those aged 25-29 with higher education. They made up more than half of those aged 25-29 and about 21% of those with higher education (Figure 5.3). This finding parallels the results of the earlier research, one that studies London, and more recently, Beijing, as a global city, and one that argues such young and educated flows as ‘an established part of the

[7] The difference was significant at 0.001 level.

scene' in global cities (Beaverstock, 2012; Shi et al., 2017; White, 1998). Indeed, both London and Beijing have a large concentration of corporate headquarters and transnational corporations, especially within financial industries and producer services (Sassen, 2011; Zhao, 2013). This concentration thus gives them the highest 'functional and control capabilities within the urban hierarchy' (Beaverstock, 2012; Beaverstock & Smith, 1996). When translated into the spatial organisation of the division of labour, such capabilities are evident in these cities' attraction for young educated individuals who believe that, by migration, job opportunities can be obtained, careers can be advanced, and wealth can be created (Knox & Taylor, 1995). Given this particular economic power of Beijing and London, it is therefore not surprising to find many migrants in these two cities being young and highly educated.

Table 5.2. Share of each age group and educational level in Beijing (2010) and London (2011)

		Beijing (%)		London (%)	
		All	**Migrants**	**All**	**Migrants**
Age	16-19	5.10	3.74	5.77	3.43
	20-24	13.86	16.93	9.62	8.90
	25-29	12.94	16.68	12.72	14.42
	30-34	10.04	13.82	12.17	15.03
	35-39	9.52	11.68	10.14	12.16
	40-44	9.23	10.09	9.31	9.53
	45-49	9.34	6.99	8.50	7.77
	50-54	7.86	3.33	7.04	6.95
	55-59	7.17	4.34	5.68	5.69
	60-64	4.56	3.17	5.23	4.58
	65 and over	10.39	9.25	13.81	11.55
	Total	100	100	100	100
Educational level*	Primary or other	10.11	9.07	27.59	36.22
	Junior secondary	31.16	35.52	24.22	16.97
	Senior secondary	22.56	18.07	10.47	8.00
	Higher	36.17	37.33	37.72	38.81
	Total	100	100	100	100

* See Appendix for definitions.

The story about the large presence of young educated migrants in Beijing and London

is not all that pretty. Some scholars have pointed out that what hides behind the scenes of a government-led 'war of talent' is *de facto* a relentless 'war on the poor' (May et al., 2007; Wills et al., 2009). The way Beijing tries to win this war is through the use of indirect institutional barriers (Wang & Zuo, 1999; Zhang et al., 2014). These barriers segregate migrants who are denied the local household registration (Beijing *hukou*) from many social welfare and benefits, without which their lives in Beijing would be much harder (Chan & Buckingham, 2008; Fan, 2008). Moreover, the only chance to overcome these high social walls is at the disposal of the Beijing government – the only decision maker on who should be denied, or can be granted, the local *hukou*. Although such decision is usually made in a 'black box' (Chan & Zhang, 1999), my analysis from the 2010 Census microdata sample revealed that only 10% of those who migrated to Beijing between 2005 and 2010 have been granted the local *hukou*, and 94% of them had a degree. This result means that the Beijing government, perhaps more than any local authorities in China, has effectively selected the 'educated talents' as its desirable migrants and excluded those who are conceived as more redundant to the new advanced economy (Wang, 2004). Similar regulative practice has also been argued as responsible for the 'brain gain' experienced by London. But this time, it is the direct border control that comes to the fore (Kofman, 2005; May et al., 2007). This practice is best illustrated by the current UK points-based system, within which those who arrive as highly skilled workers are placed at the top (Ho, 2011; Wills et al., 2009). These indirect and direct practices have contributed to 'a selective inflow of highly skilled migrants' and helped

shift the population to a more educated one (Anderson, 2010). In this regard, the presence of young educated migrants and a consequent young educated workforce in Beijing and London are a product of their celebrated economic power on the one hand and their biased institutional barriers on the other. In both China and the UK government tries to exert enormous and very similar control over migrants. In the UK it was primarily political issues concerning migration that lead the government to call a referendum on exiting the EU in 2016 – to increase its ability to control migrants.

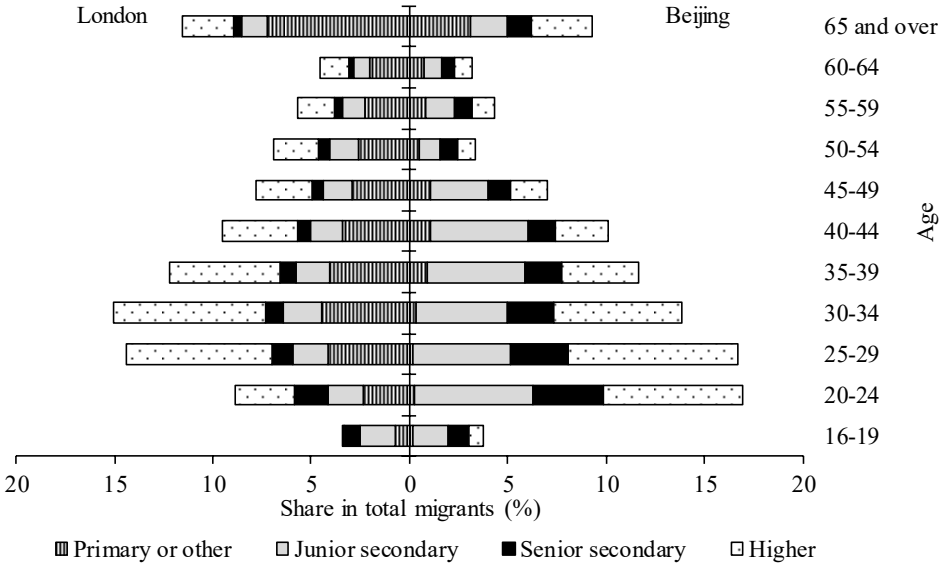


Figure 5.3. The age and educational structure of the migrants in Beijing (2010) and London (2011)

Another feature of migrants in Beijing is that, compared to those in London, they are composed of more young newcomers and more movers with secondary education. Migrants aged 20-24 took the largest share in Beijing, but in London that share went to those aged 30-34. In addition, more than half of the migrants in Beijing had secondary education, yet this proportion was less than a quarter in London (Table 5.2). These two

characteristics are associated with Beijing's particularity in the migrants' places of origin. That is, they all come from the same country China where the gross enrolment ratio in higher education was only 24% in 2010, and the qualification is easily recognised within a single unified education system (Lewin & Hui, 1989; Tsang, 2000). But for London, a quarter of migrants in 2011 came from the European Union (EU) where the gross enrolment ratio in higher education[8] has already reached 66% in 2011, and the qualifications are not always transferable between its member states (Oreopoulos, 2006; Roser & Ortiz-Ospina, 2018). Accordingly, for people in China it is very common to migrate just after the completion of secondary education. But for those from the EU it is more common to move abroad after higher education, although many of them are recognised as other qualifications in the UK Census[9] (Evans et al., 2005; Johnston et al., 2015). Therefore, the larger proportion of young migrants with secondary education in Beijing than in London can largely be credited to the educational development in China, one that still lags behind many countries, but one

[8] This is the ratio of total enrolment in higher education, regardless of age, to the population of the five-year age group following on from secondary school leaving.

[9] This is especially the case for people from the accession countries in general and from Poland in particular, which constituted 12% of the total migrants in London in 2011 (Cook et al., 2011). According to the 2011 UK Census, 40% of Polish migrants in London have been categorised as having other qualifications and this percentage was 31% for those from other accession countries. In this sense, the seemly more polarised education structure in London than in Beijing is more due to the barrier of getting the qualification recognised in foreign countries than to a *de facto* large number of low educated migrants. This fact can be further proved by the occupational structure. In London, 24.9% of the workforce in 2011 were engaged with consumer services, whereas this figure in Beijing in 2010 was 33.8%. In other words, the social polarisation was actually more pronounced in Beijing than in London and was developed between slightly higher levels of education and the higher.

that is catching up quickly.

Institutional arrangements: How do they produce heterogeneities in LFPR

The labour force participation rate differed between Beijing and London for people aged 55 and over, women, and highly educated individuals, and these differences are mainly produced by the localised institutional arrangements. For people aged 55 and over, their higher propensity to leave the labour market in Beijing is mainly driven by a lower official retirement age in China than in the UK. At present, this age in China is 60 for men, 55 for female professionals and cadres, and 50 for other females. While in the UK, it is 65 for both men and women. At this point it is worth asking which country is more developed: the one where you can retire from work at age 50 or 55, or the one where you have to go on working to at least 65 or older. Moreover, unlike the official retirement age in the UK that has gradually increased in the past years, that in China has remained unchanged since the 1950s (Department for Work Pensions, 2017; Liu, 2012). Consequently, of people aged 55 and over, only 14% still stayed at or sought after work in Beijing, whilst this number in London was 35%. Particularly, of people aged 55-59, more than half had retired in Beijing, whilst this number in London was merely 6% (Table 5.3). This institutional arrangement in China has undoubtedly added pressure on its state pension fund. It is estimated that the shortfall of the fund has reached 600 billion *yuan* in 2018 (Bloomberg, 2018). In the face of a potential 'debt bomb', Chinese scholars have persistently urged policy makers to extend the current

statutory retirement age (China Daily, 2016; Zeng, 2011). Recently, this appeal has finally been responded by the government with an agreement on unveiling a detailed reform plan in the near future (China Daily, 2016). When this future comes true, Beijing will retain more old people in its labour market, raise the median age of its workforce, and make the age structure more similar to that in London, even though people in China may never have to work for as long as they are required to work in the UK, where future pension ages are already now set to be 67 or 68 for both men and women.

Table 5.3. Economic activities for people aged 55 and over in Beijing (2010) and London (2011)

Age	Beijing (%)		London (%)	
	Economically active	Retired	Economically active	Retired
55-59	32.02	51.30	73.52	6.19
60-64	11.55	69.26	52.65	36.77
Aged 65 and over	2.54	73.76	13.26	81.10
Total (>=55)	13.95	65.56	35.44	54.51

For women, their LFPR was roughly the same in both cities for those aged under 50, but the rest had a much lower LFPR in Beijing than in London. In 2010, only 12% of women aged 50 and over in Beijing were economically active, whereas this figure in London was 39% in 2011. This difference is mainly because, as compared to London, Beijing had more women in their 50s being retired and more women at older ages being family carers. Of women in their 50s, 42% in Beijing were retirees, which was more than ten times of the share in London. This gap is understandable, given a lower official female retirement age in China than in the UK. Of women aged 60 and older, 15% were family caregivers in Beijing, in contrast to merely 1% in London (Figure 5.4). One important contributor to this huge gap is the lesser role played by the Chinese state than

the UK state in the care-giving process. In fact, the dire shortage of care homes and nurseries and their poor qualities in China have emerged as widespread concerns in recent years (China Daily, 2015; Global Times, 2017). Even in Beijing, a metropolitan with 1.7 million elderly people in 2010, there were only about 350 care homes by then, among which more than one third were private ones that are usually out of reach for most families (Xi & Cheng, 2015). The provision of day nurseries for 0-3 year olds is even scarcer in the city. Except for some unaffordable private nurseries, most of its 0.6 million infants and toddlers with working parents usually have no other places to go but to be taken care by their grandparents (Global Times, 2017). This scarcity is further aggravated by an aging population and the newly-launched two-child policy in China. Confronting these issues, the central authority has asked for steady progress to be made in 'ensuring people's access to childcare and elderly care' (Xi, 2017). With a prolonged retirement age and a comprehensive system of care just around the corner, it is very likely that women would participate more in Beijing's labour market in the foreseeable future, which will help move its gender structure of the labour force closer to that of London.

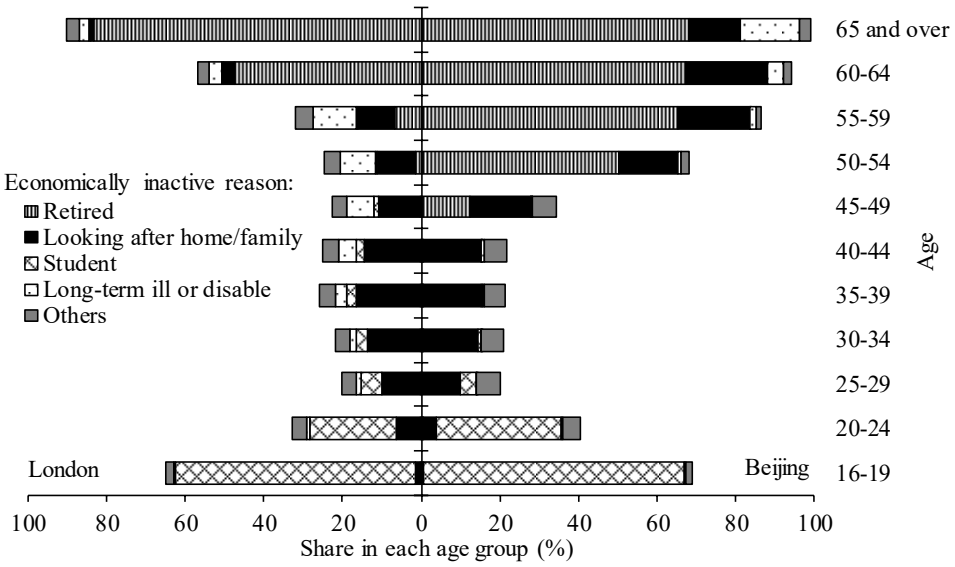


Figure 5.4. Share of women with different economically inactive reasons in each female age group in Beijing (2010) and London (2011)

The lower LFPR of the highly educated individuals in Beijing should largely be credited to the prominence of its higher education institutions (HEI), one that is evident in both quantity and quality. By 2010, Beijing had 89 HEIs with a total number of 1.2 million students, and 26 of these institutions were listed in China's top 100 universities. By comparison, London, a net loser of undergraduate students, had only 0.2 million students being accommodated in its 40 HEIs, and only 6 of them were included in the list of the top 50 in the UK[10]. More young people aged 18-21 leave London, often to study at university elsewhere in the UK, than enter London to become university students in the capital each year. Further, the leading position taken by Beijing in higher education was primarily built up by the early socialist practices. Specifically, to achieve 'the great leap forward in industry and elsewhere', an unprecedented reorganisation and

[10] These data were obtained from the 2011 Beijing Statistical Yearbook, the Higher Education Funding Council for England, and the University league table published by the Guardian.

expansion of Chinese universities was carried out by the central authority between 1949 and 1966 (Kang, 2004). In this movement, the forerunner within a socialist country was undoubtedly the capital city Beijing. Over one third of its current HEIs were established by the government in this period, and 14 of them later ranked among China's top 100 universities. This practice of state planning is also expressed in space. Unlike London where HEIs are small in size and scatter in the city, those in Beijing not only cover large areas but also mainly cluster along and around the *Xueyuan* (college) road (Zhao, 1998). Therefore, the socialist endeavour to build a strong capital on all fronts gives Beijing an excessive advantage in higher education, a larger number of students in pursuit of degrees, and consequently a lower participation rate of highly educated individuals in the labour market.

An integrated story

Both migrants and institutional arrangements have played important roles in structuring the labour force. The significant presence of migrants substantially impacts who are in the city, and the various institutional practices influence how they participate in the labour market. These two factors together create an integrated story about the labour force in Beijing, of which the general pattern is very similar to but the extent of the pattern is slightly different from that in London (Figure 5.5).

Migrants in both cities are not only large in number but also similar in characteristics. For both cities, migrants made up nearly half of their population, and most of them were

young and highly educated. This similarity shared by Beijing and London comes mainly from their very much alike status in the global economy, and to a lesser extent, from a comparable localised practice towards migrants. On the one hand, high skilled jobs are created by the 'command and control functions', and many young, ambitious, well-educated individuals are allured by these jobs. On the other hand, both cities have practiced biased migration practices to deter the entrants of less educated ones. In this sense, the similarities in the global city status and local migration policy have led to a similarly young and educated profile of the labour force in Beijing and London, with the global factor being the momentum and the local one the moderator. The broad similarity notwithstanding, Beijing had more migrants with secondary education whereas London had more migrants with primary or other education. The lower performance of Chinese education than many developed countries and the barrier of education recognition across countries have contributed to this difference. But a rapid advance of China's education and very likely decreased migration levels in the UK after Brexit are expected to reduce this difference. In this sense, the education structure of the labour force in Beijing is very likely to move even closer to that in London in the near future.

Due to the localised institutional arrangements, older people, women, and highly educated individuals in Beijing all participated less than their counterparts in London. But such lower LFPRs do not challenge the fundamental similarities between these two cities, and are expected to rise in the near future. First, the lower retirement age in

Beijing than in London should bear the responsibility for a lower LFPR of its older people. Yet, this age is about to increase in recent years, so do the LFPR of older people in Beijing. Second, the deficiency in the Chinese caregiving system has added extra burden on its women, moved them from the labour market, and lowered their LFPR. This burden, however, can be simply reduced by the establishment of a comprehensive caregiving system, which is destined to happen in the foreseeable future. Third, being a socialist country, China has long mobilised its valuable resources to build a strong capital in all aspects. Higher education is not an exception. Such a centralised state planning has therefore endowed Beijing with an excessive advantage in higher education, with much more university students than elsewhere in China, and consequently with a lower LFPR of those with higher education than that in London.

The story of the labour force in Beijing shares the bare bones with but differs in the flesh from that in London. The bare bones of the story are globally-oriented: the very strong economic power of Beijing and London in the global arena, together with their biased migration policy, has made their labour force into a young and highly educated one. The flesh, however, is more locally-rooted: the under-developed education, low retirement age, poor care-giving system and strong state planning have made the labour force in Beijing being younger, more male-dominated, and with more secondary educated persons. Yet, this different flesh tends to be reshaped by some recently promulgated policies as well as many more to come. It is therefore very likely that the stories about these two cities will become more similar in the future.

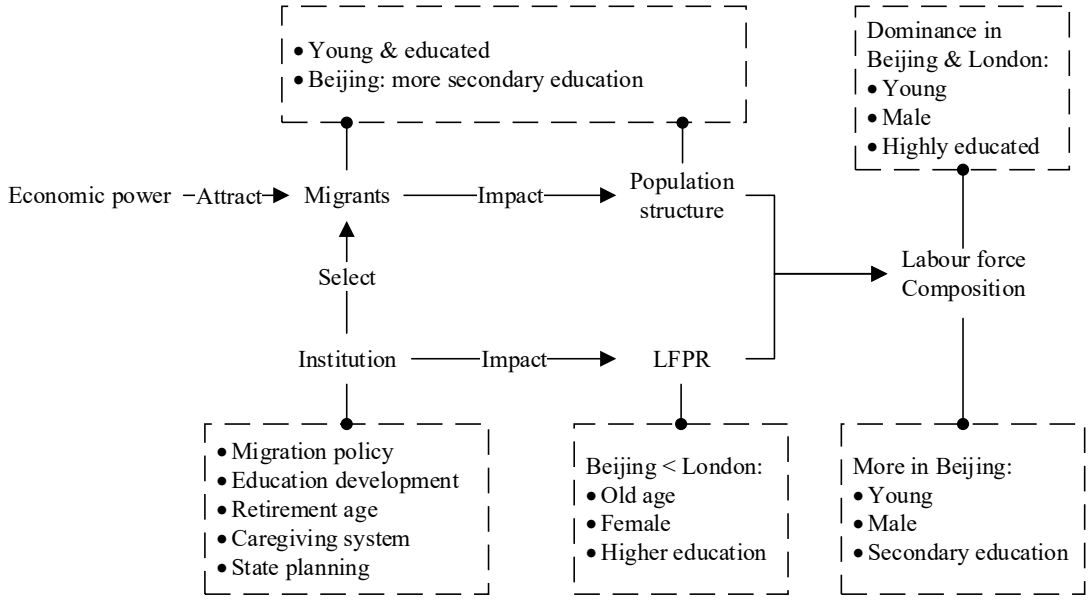


Figure 5.5. An integrated story behind the compositions of the labour force

Conclusion and discussion

The rise of certain Chinese cities has broken the dominance of Western cities in the global city league tables but not the range of cities attended to be compared. The comparisons on global cities have drifted from seeking similarities to finding variations but not to considering both. These two facts reflect that neither the categorical divide in comparative research has been crossed so that the commensurability of Chinese cities has been properly acknowledged, nor has the relationship between global economic flows and local urban contexts in global cities been well examined. To fill the two gaps, this paper uses the labour force as an entry point to study Beijing in relation to London. By comparing three basic compositions of the labour force between the two cities with the census data, it asks whether Beijing is very different from London so that it should be considered unique and incommensurable. By analysing the factors contributing to

the similarities and differences between the two cities, it asks whether for global cities economy orchestrated at the global scale is more influential than the contexts structured as more local scales.

The answer to the first question is that Beijing shared very similar compositions of the labour force with London, although the extent of some of the common attributes still differed. The labour forces in both cities had a young age profile with that in Beijing being only slightly younger, both shared a male-dominated characteristic with a stronger dominance in Beijing, and comprised primarily highly educated individuals who were slightly less represented in Beijing. Given these findings, it is untenable to claim that Chinese cities are so different from the Western ones that they should be considered as unique. Alternatively, the dominant characteristics, at least in these compositions aspects, are rather identical. This broad similarity therefore confirms the possibility of analysing cities in China and elsewhere in the same framework, and challenges the legitimacy of the analytical divides across regions assumed by many urban studies. Yet, it should also be noted that this similarity does not necessarily mean a void effect of historical trajectories and city contexts on current urban outcomes. The different extents of experience in Beijing of some attributes are actually the manifesto for the importance of these factors. This importance, together with the possibility of a universal analytical framework, is exactly why comparative urbanism nowadays has been invested with new interests.

Behind a young, male-dominated, and highly educated labour force, there existed a story on migration and institution. On the one hand, just like the traditional global city London, the economic power of Beijing has also attracted many young, ambitious and well-educated newcomers. This attraction shared by global cities thus contributes to a similar population structure therein, so as to similarities in their labour forces. On the other hand, various institutional practices in Beijing have also played significant roles in shaping its labour force, and thereby made its compositions slightly different from those in London. A lower official retirement age in China, for example, has reduced the LFPR of the older people in Beijing. So have a less developed caregiving system for its women and a stronger intervention in resource allocation for its highly educated people. Such lower LFPRs for these groups in Beijing explain why its labour force had a younger profile, a more male-dominated characteristic, and a less representation of the highly educated. Combining these two aspects, it is therefore reasonable to confirm the power of globalisation and yet acknowledge the strength of local contexts in global cities. Indeed, globalisation has made global cities become similar in many ways, even though some of them are located in developing countries and are usually considered as peripheries in this globalisation feast. But it is not only this global factor that plays out in urban space. Institutional practices at various scales, *inter alia*, also manifest themselves, albeit not as explicitly as before, in cities. Bearing these in mind, it is necessary and possible to expand the globalisation debate to the (still routinely labelled) developing world. It is also needed for both sides in this debate to slightly relax their

arguments and to recognise the insightful points from each other.

A future move of Beijing towards London as regards the labour force has also been predicted. Under the pressure of an indebted pension fund, an aging population, and a disappearing demographic dividend, governments in China have planned to alter some of its previous institutional practices. The one-child policy, for example, has already been replaced by a two-child one. The extension of the official retirement age and the enhancement of the caregiving system are also under discussion. All these alterations would raise the LFPRs of the older people and women in Beijing. It is therefore expected that the differences in the extent of some common attributes would reduce in the future. Yet, it should also be noted that this predicted 'urban convergence' is not the triumph of globalisation. It is more relevant to general demographic changes, such as a longer life expectancy, and to a movement of Chinese urban development into a further stage. Therefore, special attention needs to be paid when convergence between cities is found, the winner in the globalisation debate cannot simply be announced unless deeper reasons are scrutinised, and an explicit distinguish between the power of globalisation and other factors should be made in the globalisation debate.

Being the first tentative attempt at comparing Beijing and London with respect to the labour force, this study is by no means without limitations yet provides fruitful chances for future research. As stated previously, the comparisons conducted here are based on residents in two cities, which only reflects their demographic characteristics. However,

whether similar conclusions can be reached when workplace population is being analysed and economic attributes are being compared still waits to be answered. Similar question also waits to be answered for other aspects of the labour force such as occupational structure and income distribution. In other words, many facets of the city can be better explored and understood through a comparative approach. It is also regrettably true that this study only provides a snapshot of the labour force. This limitation thus weakens the validity of our results on the influence of globalisation and policy re-orientations, as neither happens instantaneously. Therefore, follow-up studies on the temporal changes in the labour force are needed if any influence of either factors is to be confirmed. More importantly, with some dramatic changes for both countries in very recent years, such as Brexit and One Belt Initiative, it is pertinent to ask what the new relationship between the capitals of these two countries is. Similar questions may also raise to other cities that are highly influenced by the changing international order. Updated comparative research on these cities on all fronts, then, is urgently needed.

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Appendix: Correspondences between the four-level educational scheme used in this paper and the original schemes used by censuses

Four-level scheme*	2010 China Census	2011 UK Census	
		Highest level of qualification	Qualifications
Primary or others (less than 6 years of education or years unknown)	No education	No qualifications	No qualifications
	Primary education	Other qualifications	Other vocational/work-related qualifications
			Foreign qualifications
Junior secondary (6 to 9 years of education)	Junior secondary education	Level 1	1-4 O levels/CSEs/GCSEs (any grades), Entry Level, Foundation Diploma
			NVQ Level 1, Foundation GNVQ, Basic Skills
		Level 2	5+ O levels (passes)/CSEs (grade 1)/ GCSEs (grades A*-C), School Certificate, 1 A level/ 2-3 AS levels/ VCEs, Higher Diploma
			NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma
		Apprenticeship	Apprenticeship
Senior secondary (9 to 12 years of education)	Senior secondary education	Level 3	2+ A levels/VCEs, 4+ AS levels, Higher School Certificate, Progression/Advanced Diploma
			NVQ Level 3, Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma
Higher (more than 12 years of education)	College (vocational)	Level 4/5	Degree (for example, BA, BSc), Higher degree (for example MA, PhD, PGCE)
	Undergraduate		
	Graduate		NVQ level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher Level
			Professional qualifications

*Years of education for each level (in bracket) are only indicative, variations may be applied to different places and individuals.

Chapter 6 Earnings inequality in global cities and varied global/local influences: Comparing Beijing and London[1]

Abstract: This study brings a new voice into the global city debate on inequality. It argues that neither global forces subjugate local ones, nor *vice versa*; but both are autonomous agents affecting earnings inequality in global cities. Thus, instead of asking which exerts (more) influence on earnings inequality, we should be asking how global and local forces work (or not) together and how they vary in influence. To address these questions and hence support the argument, Beijing and London are compared. Results show that between 2002 and 2013, Beijing and London were more similar to each other than to their host countries in the level of earnings inequality, and this is due to a greater role of transnational capital in the capital cities than in their countries. These similarities disguise the fact that their inequality changed in opposite directions, for which their different local actions on distributing earnings were responsible. Moreover, transnational capital rallied enough local support in both cities such that earnings there were mainly distributed on the basis of the meritocratic ideology it advocates. However, the local support rallied in Beijing had never been comparable to that in London, nor grew with Beijing's exposure to transnational capital. Instead, state interventions, to which globalisation objects, remained strong in Beijing but not in London even when the two cities were similarly globalised. Their strength was also sustained as Beijing

[1] This paper has been submitted to *Geoforum*.

became more globally involved. In influencing earnings inequality, the extent to which local aligns with global neither necessarily corresponds to, nor grows with the latter's strength.

Introduction

Economic inequality has always been with us but never worried us so much as it does now (Piketty, 2014; Stiglitz, 2012). Economic globalisation has failed to close the gap between rich and poor places as many had once believed it would (Dollar & Kraay, 2002; Kaplinsky, 2000). It instead has widened this entrenched gap so dramatically that anti-globalisation movements are now ongoing around the world (Ezcurra & Rodríguez-Pose, 2013; Tonkiss, 2006). Nor has inequality worsened only on the existing dimensions (Berube, 2018). The most acute inequality now we can find is perhaps not between distant places, but within prosperous metropolises accommodating both the super-rich and the extreme poor (Beaverstock et al., 2004; Goldsmith & Blakely, 2010; Scott, 2008). These worrying trends are nowhere more evident than in global cities emerging from economic globalisation. These cities are 'a new geography of centrality' for which capital departs and in which social polarisation occurs (Friedmann & Wolff, 1982; Sassen, 1991, 2011). This polarisation *per se* is alarming; and the threat it poses is even globally devastating given the strategic position of these cities in the world economy (Sassen, 2005, 2009). Global cities should occupy a, if not the, central place in research on economic inequality, a field that has long been bounded

within a national framework (Bergesen & Bata, 2002; Glaeser et al., 2009).

Despite not as well-researched as national inequality, the socioeconomic divide within global cities has never stopped being a subject of discussion (Fainstein, 2001; Shatkin, 2007; Shi et al., 2017). The thrust of the discussion centres on whether this divide is contingent more on global or on local processes, a dualism that turns the discussion into an inconclusive 'global city debate' (Hamnett, 1996b; Van der Waal, 2010). This dualism comes not out of thin air. It is built on an idea that 'global' and 'local' are in competition, with one subjugating, if not silencing, the other (Amin & Thrift, 1992, 1995; Smith, 2003, 2014). A stalemate is thus brought into the debate, within which the global and local sides are in great tension.

To break the stalemate, we suggest that neither global subjugate local, nor *vice versa*, but both are autonomous agents affecting earnings distribution in global cities. This suggestion then opens up new avenues in which inequality research can be advanced: First, whether and how the influences of global and local forces on inequality vary across cities and time? Second, within a global city and at a given time, how global and local forces work (or not) together to shape inequality there? Third, whether the way in which they work (or not) together is contingent on a city's global centrality? A tentative exploration of these issues is made in this study. This exploration serves a dual purpose. It substantiates the suggestion that global and local forces both exert influence on global cities. It also reveals the nuances in their influences and relations, which in turn

develops the theory. Thus, this study can be viewed as: 1) a conceptual work that contributes a new perspective to the discussion on inequality in global cities; 2) an empirical work through which the new avenues in this discussion are illuminated; 3) a combination of both that explores and reflects on the variegated influence of global *vis-à-vis* local forces on inequality across global cities.

Beijing and London are the chosen case study cities to address the issues raised above. No one would now deny that Beijing and London are both global cities with comparably high international status (Gu et al., 2015; Taylor & Derudder, 2018). They ranked fourth and first respectively in the world city network (WCN) in 2018, the year in which the latest data are available (GaWC, 2018). Both cities are also the capital of two globally influential countries and are much inscribed with their countries' dominant ideologies. These parallels notwithstanding, Beijing and London have rarely been juxtaposed in urban research, a field upholding a parochial tradition despite the much globalised world (McFarlane, 2010; Robinson, 2003, 2016a). Comparing the two cities thus not only provides answers to the questions raised above; it also brings urban research closer to the world we see today.

The remainder of the paper is organised as follows. The next section reviews the work on earnings inequality in global cities and proposes the argument that this study centres on. The choice of Beijing and London as case study cities is then justified, and the methodology used is then described. This is followed by results on earnings inequality

in the two cities and the interpretation of these results. The paper ends with a conclusion and discussion.

Earnings inequality in global cities

In the current era, production is much less confined by national boundaries and more dispersed around the globe to exploit (and reproduce) spatial differentiations (Harvey, 1989; Swyngedouw, 1989, 2004, 2019). Capital is much less constraint in its global activity and more mobile in search of 'spatial fixity' (Harvey, 2001, 2017, 2018; Perraton, 2019). Ever more parts of the world are being incorporated into a single network of capital accumulation; and at least before a hiatus during the 2020 pandemic, flows connecting them are growing and intensifying (Amin, 1997, 2002; Robinson, 1996). Managing this network and coordinating these flows thus become ever more challenging; and global cities come into being as a response to this escalated challenge. These cities in essence are 'a new geography of centrality' constituted by economic globalisation, and their essential function is to coordinate the ever increasing volume of global flows (Friedmann & Wolff, 1982; Sassen, 1991, 2011). The term 'global city' would not be coined had our economy not been so globalised. Nor would the term be attached to a city unless the flows coordinated there were extremely large and predominantly global.

Given their necessity for and magnitude in global cities, global flows are often argued as the forces shaping earnings inequality there (Brenner & Keil, 2014; Sassen, 1996).

The best known argument is that the intensified flows of economic activities entail a bifurcated labour market structure in global cities (Fainstein, 2001; Sassen, 1991). This is because both more professionals and more cleaners, retailers, and alike who serve the professionals are needed for these cities to coordinate the increased flows (Friedmann & Wolff, 1982; May et al., 2007). The bifurcation is also thought to be reinforced, if not set, by the global flows of people (Hamnett, 1994; Samers, 2002). This involves not just those immigrants willing to take any work available, but also the powerful transnational elites who hop around the globe for ever better remuneration (Beaverstock & Hall, 2012; Price & Benton-Short, 2007; Sassen, 2009). As global capital flows into these cities and exercise its power, so do the ideas it supports (Friedman, 2005; Shatkin, 2007). These ideas, such as meritocracy and free-market, in essence favour capital accumulation which is inherently unequal (Robinson, 1996, 2007, 2012; Smith, 1998). Their influx into global cities thus not only enables the transfer of the bifurcation from the labour market structure to the earnings structure, but also exacerbates the bifurcation in this process (Hu, 2020; Monaghan & Ikeler, 2014). Global forces do not just abound in global cities; they are also active in shaping earnings inequality there (Eade, 1997; Sassen, 2005; Van der Waal & Burgers, 2009).

The global perspective on inequality in global cities has received criticism (Baum, 1997, 1999; Olds & Yeung, 2004; White, 1998). Critics often highlight its failure in explaining inequality differences found across global cities, a conundrum that inclines them to an alternative perspective focusing on forces at more local scales (Albert, 1993;

Hamnett, 1994; Hill & Kim, 2000; Shi et al., 2017). For example, variety between welfare regimes, an analytic lens initially for countries, can be adopted to explain why global cities in continental Europe are less unequal than their Anglo-Saxon counterparts (Burgers, 1996; Esping-Andersen & Regini, 2000; Hamnett, 2019; Musterd & Ostendorf, 2013). Financial regulation, again usually used at the national level, can be taken as a reason for lower inequality in Tokyo than in New York (Fujita, 2003; Hill & Kim, 2000; Philippon & Reshef, 2012). Even between London and New York, inequality is found to be different, and local history, an essential feature of human settlement, is argued as a contributor (Hamnett & Cross, 1998). All these efforts suggest that, despite the strong presence of transnational capital in global cities, earnings inequality there, like that of elsewhere, is much shaped by local (including national) forces (Smith, 1998; Stiglitz, 2012).

The tension between the perspectives on inequality in global cities rests on their conflictual assumptions which have received less attention than the tension *per se*. The global perspective sees transnational capital as having agency, but assumes cities as 'no more than placeless containers' of capital flows (Amin & Thrift, 1992, 1995; Smith, 2003, 2014). This assumption explains why in this perspective, local forces are absent, global ones are the only player, and similarities in earnings inequality across global cities are highlighted (Monaghan & Ikeler, 2014; Sassen, 2005). The local perspective takes the opposite assumption. Local forces are now agents and thus the game-changer in earnings inequality; global forces are the background and thus are static, if not absent,

in the game; and the spotlight is moved accordingly to highlight inter-city differences (Eraydin, 2008; Shatkin, 2007; Van Kempen, 2007). Contradictory as these assumptions are, both perspectives have nevertheless received empirical support as shown above. This paradox thus indicates a possibility, that neither global forces subjugate local ones, nor *vice versa*, but both are autonomous agents affecting earnings distribution in global cities. Both are likely to exercise their influence on earnings inequality for their own objectives, which may or may not be the same; and both have the chance to be the game-changer. Having this possibility means that the type of 'lighting' used to see inequality should be changed. Instead of spotlights which highlight either similarity or difference, floodlights which illuminate both are perhaps more appropriate.

The influence of global and local forces on earnings inequality is expected to show spatiotemporal variation once both are seen as having agency. Not only does transnational capital have an uneven geographical distribution, which entails 'different degrees of world city-ness' (Knox & Taylor, 1995; Lee & Yeoh, 2004; Yeoh, 1999); it also moves quickly such that a city's degree of world city-ness is not fixed (Derudder & Taylor, 2016). Thus, the magnitude of global forces is neither even over space nor constant over time; and their extent of influence on earnings inequality should vary accordingly. The variation on the local side should come less as a surprise. Having different institutional and sociocultural settings and facing different domestic and international environment means that places by no means share the same view on

inequality (Dorling, 2015; Peck, 2015; Peck & Tickell, 2007; Robertson, 1995). This view is also unlikely to be fixed as these settings and environments are constantly changing. 'Social Europe', for example, is less convinced by the trade-off between inequality and efficiency than 'liberal America', within which this idea was much less popular before Reagan's presidency (Kluegel & Smith, 2017; Pierson, 1994; Pontusson, 2006). Hence, the view on how much and which form of inequality is acceptable is both varied and contingent; and the principle applied by local forces to earnings distribution should vary accordingly.

Seeing both global and local forces as autonomous agents raises the issue of how they work (or not) together to shape earnings inequality in global cities. This issue is further complicated by the possible spatiotemporal variation in their influences. Addressing this issue is challenging; but we can start by answering two sets of questions. First, for a global city at a given time, whether, and to what extent, the direction in which global and local forces influence earnings inequality is the same/opposite? Are local forces there more for or against the way in which global forces shape earnings inequality? Do global forces have enough support from local forces such that they together outcompete the local opposition? Second, across global cities and over time, is the extent of local support correlated with the strength of global forces, in terms of how earnings should be distributed? Does the widely-held assumption that the support from local forces grows with the presence of transnational capital and *vice versa* apply to the field of earnings inequality (Harvey, 1989, 2018; Sheppard, 2006; Short, 2017)? Or are they

not necessarily correlated in this specific field such that cities with similar global centrality can support global forces to different extents, and *vice versa*? Collectively, these questions help us understand better how earnings inequality is structured in global cities. They also highlight a broader issue worth reflecting on: the variegated influence of global *vis-à-vis* local forces, not only across global cities but also possibly across different aspects of a global city.

Beijing and London: Why they are chosen

Beijing and London are chosen case study cities. They both satisfy the standard definition of global cities given their pre-eminence in coordinating global flows. Over the decade prior to 2018, London has received the world's largest number of Foreign Direct Investment (FDI) projects at 4,110 with a total value of 106 billion US dollars (Deloitte., 2019). While these figures for Beijing are smaller, they are both nevertheless large enough to place the city within the global top ten in terms of FDI inflows (Deloitte., 2019). Both cities are also top destinations for the headquarters of transnational corporations, a measure that despite much controversy is still widely used to assess the city's ability to coordinate global production (Godfrey & Zhou, 1999). In 2015, of the Forbes top global 2,000 companies, 79 were headquartered in London and 59 in Beijing; and by this measure the two cities ranked third and fourth respectively, globally (Csomós, 2017). Their high rankings are also found in the world city network (WCN), one that builds on intra-firm flows in advanced producer services and has received

unparalleled popularity in global city research (Derudder et al., 2018; Taylor & Derudder, 2016, 2018). All these facts suggest that the two cities are now not only global cities but also in the same upper tier of the urban hierarchy. Their juxtaposition is thus a deliberate choice such that the spatial variation in the influence of local forces on earnings inequality and the dependency of this influence on the city's global centrality can both be examined.

In contrast to London, Beijing has experienced a huge gain in importance and centrality over the past two decades (Atkinson, 2020; Derudder et al., 2018). In 2000, one year before China's accession to the World Trade Organisation, Beijing was placed 36th in the WCN and London was placed first (Taylor et al., 2002). 18 years later, in 2018, a year when the ongoing US-China trade war began, the two cities were no longer apart in the WCN. London still occupied the first place, but it has become less attractive to global capital after the financial crisis and Brexit referendum (Lulle et al., 2018; Roberts, 2018). Beijing has risen to the fourth spot, a rise indicating that at least to transnational producer service firms its attractiveness has increased (GaWC, 2018; Gu, Wei, & Cook, 2015). This rise is unprecedented. Beijing takes advantage of being the capital of a country that is now unmatched in the size of market opportunities, the speed of global integration, and the abundancy of non-standardised regulatory information (Lai, 2012; Meyer, 2018; Zhao, 2013). The unparalleled ascent thus makes Beijing outcompete other cities as an object to investigate the changed influence of global forces on earnings inequality. The contrast presented by the two cities also make them an ideal pair to test

whether the ebb (London) and flow (Beijing) of global capital would entail changes in the alignment of local forces with regard to earnings inequality. It is possible that the pandemic of 2020 would accelerate the trends found here, but that is not the subject of the paper.

Even if only viewed from the lens of global cities, Beijing and London already show striking parallels and contrasts which make the comparison both plausible and meaningful. They also both serve as the capital city of two globally influential countries and as an (if not the) exemplar of today's two major political economic systems (Coates, 1999; Peters, 2017). Thus, insights from their juxtaposition are highly relevant not only to places on the map of global cities but also to those 'off the map' (Robinson, 2002). Despite the feasibility and imperative, this juxtaposition has rarely been practiced. Cities juxtaposed with Beijing are seldom beyond the boundaries of China, and Anglo-Saxon and European cities have long been the ones with which London is compared (Fainstein et al., 2011; Lai, 2012). Urban research is still much shaped by geographical parochialism, a tradition that has increasingly become an academic bottleneck as the world globalises and its centre of gravity shifts (Robinson, 2016a; Walton, 1975). To loosen this bottleneck is another motivation underlying the choice of Beijing and London.

Methodology

Data source

This study uses individual data from the Beijing samples of the 2002 and 2013 Chinese Household Income Project (CHIP02 and CHIP13), and from the London samples of the 2004 and 2015 UK Annual Population Survey (APS04 and APS15).[2] In China, of all the publicly available survey data on earnings information, those from the CHIP cover the longest time period and have the largest sample size. In each of the five waves since 1988, the CHIP has interviewed over 15,000 urban and rural households which were randomly drawn from the national household survey of the National Bureau of Statistics (NBS); and since 2002 an additional rural-urban migrant household sample has been added (Gustafsson et al., 2014; Hauser & Xie, 2005). The APS data are created by combining two waves from four consecutive Labour Force Survey (LFS) quarters with data collected on additional boost samples (Ashton & Kent, 2008).[3] They thus have a larger sample size than the LFS (Lee et al., 2016). The main limitation is the underestimation of the number of high earnings, which, given its prevalence in survey

[2] The CHIP data sets are compiled by Beijing Normal University and can be accessed from http://www.ciidbnu.org/chip/index.asp. Detailed descriptions can be found in Griffin & Zhao (1993), Gustafsson et al. (2008), Li, Sato, & Sicular (2013), and Li et al. (2017). The APS is produced quarterly by the Office for National Statistics (ONS). The data used here cover the period from January to December in 2004 (the first APS data set) and the same period in 2015. They are retrieved from the UK Data Service https://www.ukdataservice.ac.uk/ .

[3] The two waves being selected are wave one and five. They are the only waves in the LFS in which information on earnings is requested.

data, should be less a problem for inter-city comparisons.

The CHIP and APS use different sample designs. In Beijing, the CHIP interviewed three strata (urban, rural, and rural-urban migrant household) separately. Within each stratum, subsample was drawn by multistage cluster sampling which can represent the city's subpopulation. However, the size of the subsample is not proportional to its share in the Beijing's total population, and double-counting has also occurred. Thus, following the steps introduced in Li et al. (2013, 2017), this study drops those being double-counted and weights the strata to represent the city's entire population. The London sample of the APS is produced with the aim to achieve a minimum number of economically active respondents in each borough, regardless of the borough's population size. Sampling weights are thus provided by the Office for National Statistics (ONS) to account for this survey design and are used in this study. Only weighted results are reported in the following analysis.

The target variable for this study is the average hourly earnings on main job for usual residents aged from 16 to 64 who were employed at the time of survey.[4] Earnings are defined as earnings from labour. They include wages, bonuses, subsidies, and other cash earnings (such as commissions). Hourly rather than monthly or annual earnings are used due to the increasing flexibility in work. They are constructed from reported

[4] Usual residents are those who have lived in the city for at least 6 months. Both CHIP and APS have no direct question on this issue. But some relevant variables, such as the period of residence at the current address, are provided. They are used here to infer who can be counted as usual residents.

earnings on main job, usual hours worked in that job, and including overtime;[5] and are then converted into 2004 UK sterling using the national official Consumer Price Index and the exchange rates reported by the International Monetary Fund. Both full-time and part-time employees in non-agricultural sectors are included; but people on government training schemes, self-employed workers, and unpaid family workers are excluded.[6] Cases with missing data are dropped; as are cases at the top and bottom 0.5 per cent of the earnings distribution.[7] The final sample size for Beijing is 1,019 individuals in 2002 and 1,244 in 2013; and that for London is 6,649 individuals in 2004 and 6,535 in 2015.

Methods

Three different ways are used to describe earnings inequality in Beijing and London. First, Lorenz curves of earnings are drawn for the two cities. When one curve dominates another, whether inequality has increased or decreased within a city can be determined.

[5] Both basic and overtime hours are reported in APS but not in CHIP. Instead, CHIP requires respondents to estimate the actual all working hours including overtime. Overtime is hence used to calculate the hourly earnings in both cities to make them as comparable as possible. In addition, only net earnings are reported in CHIP and are used for Beijing. APS reports both net and gross earnings, but both are truncated for confidentiality. Gross hourly pay is the earning variable that is affected by this adaption the least. Only 0.5 per cent of employees were affected in the 2015 London sample, as compared to 14.2 per cent for net earnings variables. Hence, gross hourly earnings are used for London. The difference in the level of inequality between the two cities should consider the influence of their earning definitions.

[6] Labour earnings from self-employment include some returns to entrepreneurship and to capital. Earnings of people on government training schemes are usually understated.

[7] This practice of trimming is an established convention in income research (Brewer & Wren Lewis, 2016; Jenkins, 2011). For one thing, extreme earnings are adjusted in APS data sets before the microdata are made available (see footnote 4). For another thing, this practice can reduce the adverse effects of outlier values.

However, the curves cannot quantify the level of inequality and measure the extent of change. Nor can the direction of change be inferred when the curves intersect. Hence, results from numerical measures are also reported. Measures chosen are Gini coefficient (*Gini*) and Generalised Entropy (E_θ). Both of them are independent of earning scale and decrease with a richer-to-poorer redistribution.[8]. Moreover, *Gini* and E_θ have different sensitivities to inequality in different parts of the distribution, and thus can provide a fuller picture when used together. The formula and properties of *Gini* and E_θ and their relationships with other inequality measures are provided in the Appendix. Lastly, quantiles and shares are used to further examine the inequality changes in different parts of the earnings distribution. Quantiles are expressed as Q_p for the earning level of p-quantile, and shares as S_p for the share of earnings received by the bottom p per cent of the population.

E_0, also known as Mean Logarithmic Deviation (MLD), is used to decompose earnings inequality such that how it is structured in the two cities can be explored. Using this measure, total inequality can be decomposed perfectly into between-group and within-group inequality (Cowell, 2011). The decomposition equations for E_0 are:

$$E_0^T = E_0^W + E_0^B = \sum_{j=1}^{k} f_j E_0^j + E_0^{\mathrm{B}}$$

where: E_0^T is total inequality; E_0^W is within-group inequality; E_0^B is between-group

[8] The two properties are respectively known as scale invariance and transfer principle.

inequality; E_0^j is the inequality within group j; k is the number of groups; and f_j is the population share of group j.

Earnings inequality in Beijing and London

Level and change: Global and local forces as agents

Being the capital cities of two different countries, Beijing and London were not so different in their levels of earnings inequality. This conclusion can be drawn from Figure 6.1, in which the Lorenz curves of the two cities are not significantly different. Additional support can be found in Table 6.1 which shows the results of various inequality measures. For example, the Gini coefficient was 0.35 in Beijing in 2002 and 0.31 in London in 2004, a margin of only 0.04. This coefficient was then 0.42 in China and 0.36 in the UK (World Bank, 2020). In this regard, the two cities were more similar to each other than to their host countries. Their similarity in the earnings distribution was especially high at the upper end. Of the two cities, the earnings share taken by the top 20 percent of the population was equivalently large at around 40 percent. That received by the bottom 20 percent in 2002/2004 differed the most; but even so the gap was as small as 2 percentage points (Table 6.1). Such a striking similarity might be a sign that global forces exert greater influence on the earnings distribution of the two global cities than on that of their host countries.

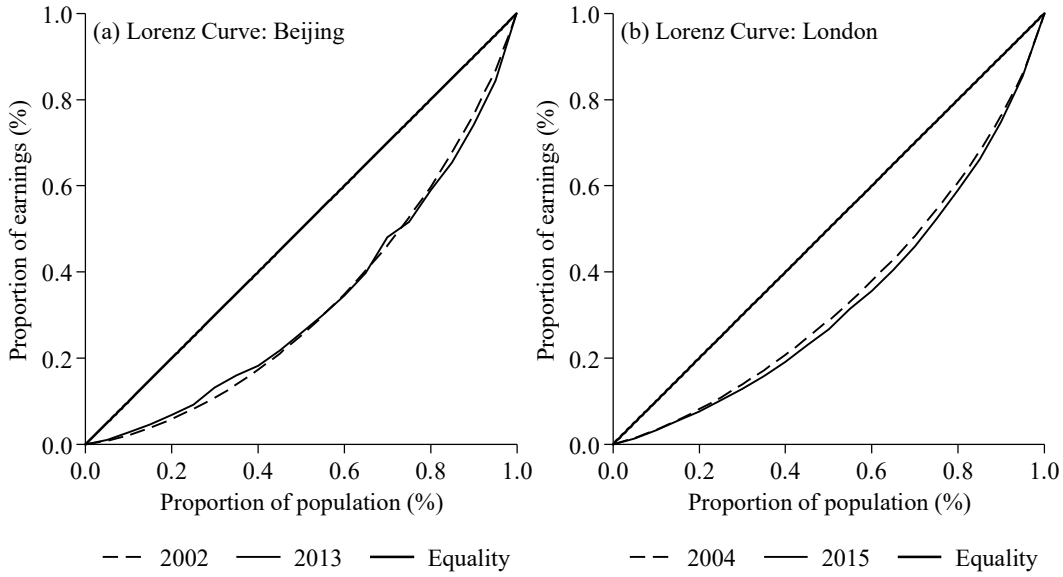


Figure 6.1. Lorenz curves of earnings in Beijing and London

Despite a similar level of earnings inequality, this level grew in London between 2004 and 2015 but remained roughly stable in Beijing between 2002 and 2013. For London, all four measures in Table 6.1 rose in value, and its Lorenz curve in Figure 6.1b became unarguably more bended. For Beijing, earnings inequality declined according to E_0, a measure sensitive to inequality in the bottom of the distribution. It increased to a much lesser extent than did London according to the Gini coefficient and E_1. Moreover, of Beijing's Lorenz curve in Figure 6.1a, the upper half moved away from the equilibrium line, the lower half moved towards it, and the curves before and after this change almost overlapped. Hence, earnings inequality became more exacerbated in London while the city's top position in the global urban hierarchy was sustained. It remained roughly stable in Beijing while Beijing climbed fast upwards in the hierarchy. If these trends continue, London will soon become more unequal than Beijing, by 2023 according to the Gini coefficient, and will sooner or later be overtaken by Beijing in the hierarchy

(Table 6.1). There is no one-to-one correspondence between the extent of global centrality and that of inequality. In shaping earnings inequality in global cities, forces at the global level, albeit with a stronger presence there than elsewhere, are by no means the only player.

Table 6.1. Statistics on the distribution of earnings in Beijing and London

		Beijing				London				Year of converge†
		2002	2013	Change*		2004	2015	Change*		
				#	%			#	%	
Index§	*Gini*	0.35	0.35	0.004	1.24	0.31	0.34	0.03	8.51	2023
	E_0	0.23	0.22	-0.01	-3.37	0.16	0.18	0.03	16.48	2024
	E_1	0.20	0.21	0.01	5.90	0.16	0.18	0.03	16.67	2030
	E_2	0.21	0.24	0.04	18.29	0.18	0.21	0.03	17.39	NA
Share (%)	S_1-$S_{0.8}$	40.21	41.04	0.83	2.07	39.17	40.93	1.76	4.50	2018
	$S_{0.8}$-$S_{0.6}$	24.96	24.39	-0.57	-2.28	22.82	23.50	0.68	2.99	2022
	$S_{0.6}$-$S_{0.4}$	17.51	16.29	-1.23	-7.00	17.26	16.38	-0.88	-5.11	NA
	$S_{0.4}$-$S_{0.2}$	11.46	11.53	0.06	0.56	12.65	11.59	-1.06	-8.36	2016
	$S_{0.2}$	5.86	6.76	0.90	15.34	8.09	7.59	-0.50	-6.24	2020
	(1- $S_{0.8}$)/$S_{0.2}$	6.86	6.07	-0.79	-11.51	4.84	5.39	0.55	11.46	2020
# of observations		1,019	1,244			6,649	6,535			

Notes: * Absolute change is denoted as #, percentage change as %;

† If the change rate remains the same for Beijing and London, the two cities are predicted to converge on the statics listed below (except for NA – Not Applicable);

§ *Gini* is most sensitive to earning differences around the mode of the distribution. The sensitivity of E_θ depends on θ; the higher the θ, the more sensitive is the index to earning differences in the higher end of the distribution.

The difference in inequality trends between the two cities comes primarily from the lower half of the earnings distribution. This conclusion can be seen from Figure 6.2, which shows quantile earnings of the two cities standardised by their respective median. In both cities, those above the median experienced an increase in their earnings as compared to the median, and this increase was the largest for the top decile group. However, among the poorest 40 percent, their earnings as compared to the median grew in Beijing but dropped in London. (Figure 6.2). This contrast confirms the previous

conclusion that earnings inequality of the two cities is not contingent only on their global city status which had become more comparable to each other. At least in the lower half of the distribution, forces specific to the city and/or its host country are still active, and in one of the two cities their influences on this specific part of the distribution had even counteracted those of the global forces, thus entailing the opposite experiences illustrated above.

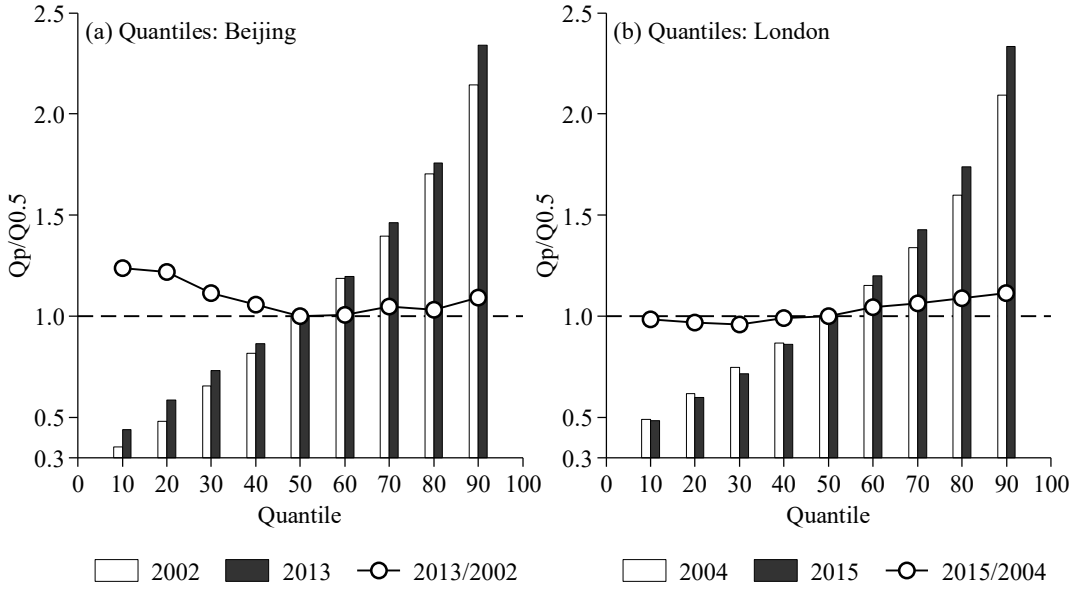


Figure 6.2. Standardised quantiles of earnings in Beijing and London

The comparison above confirms the suggestion that both global and local forces are autonomous agents affecting earnings inequality in global cities and that their influences are geographically varied. On the one hand, the two cities were more similar to each other than to their host countries in inequality level, a result suggesting an active and greater role of global forces in the capital cities than in their countries. On the other hand, their earnings inequality changed differently, and this inter-city variation brings

the agency of local forces to the fore. Moreover, the direction of inequality change was completely opposite between the two cities when zooming in the lower half of the distribution. Hence, local forces were not just involved in distributing earnings; how much they had stood by/against global forces in this involvement also differed markedly between the two cities. In earnings inequality, global forces and their local supporters and opponents all have a role to play, and each varies in strength across the cities.

Dimension and extent: Global and local forces in dynamics

The following analysis investigates how earnings inequality had been structured in Beijing and London. It divides the population by different attributes, and then calculates the inter-group inequality and its contribution to the total inequality. Categories of the attributes in the APS and CHIP have been reconciled and can be found in the Appendix. In so doing, two questions are addressed: Firstly, along which dimensions earnings inequality had been structured and to what extent, and how had they changed over time? Secondly, what are the similarities and differences between the two cities in these dimensions and extents? Answering these questions is more than a matter of furthering the understanding of earnings inequality *per se*. It also unveils the rules by which the labour market of the two cities had been stratified and the extent to which these rules had complied or contradicted with the hegemonic ones upheld by global capital. Ultimately, it can unpack how global and local forces work (or not) together to shape

earnings inequality in the two cities.

In both cities, occupation, industrial sector, and age were the primary dimensions along which earnings inequality was structured. As shown in Figure 6.3, these three factors stand out as having great contributions to overall earnings inequality, regardless of the city and time. Collectively, they contributed to the lion's share of earnings differences, amounting to one third in Beijing and over two thirds in London. What further stands out is occupation, the contribution of which was the largest in both cities, in both years (Figure 6.3). These results highlight that, overall, the main principle of wage determination and inequality construction had been similar between the two cities. In both Beijing and London, pay was determined primarily on the basis of what task one performs (occupation), in what industrial sector, and with how much experience (age); and earnings inequalities were predominantly underpinned by pay disparities on these skill-based, or so-called 'meritocratic', attributes. 'Meritocracy', which has gained global legitimacy in recent decades despite pejorative connotations it initially carried, had become ingrained in the two cities (Arrow et al., 2018; Dorling, 2015; Mijs, 2019; Young, 1994). Earnings inequality there had been shaped more by a coalition between this global ideology and its local supporters than by its local opponents.

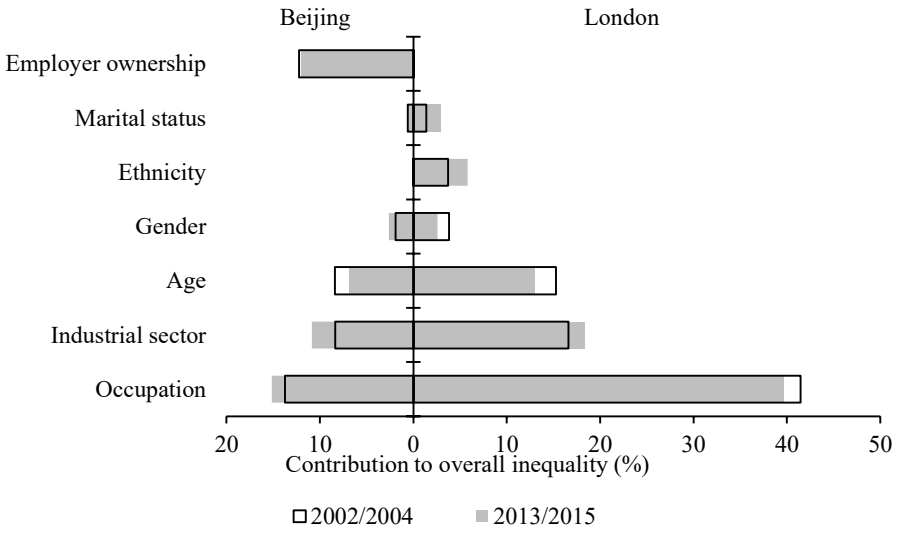


Figure 6.3. The contribution of between-group inequalities to overall earnings inequality

Notes: Overall inequality is decomposed using E_0, and contribution is then calculated as the ratio of between-group inequality to overall inequality

Despite the dominant role of the meritocratic ideology in both cities, the extent of dominance was much weaker in Beijing than in London. Occupation, the largest contributor to the overall earnings inequality in both cities, was far less important in Beijing than in London over the study period. Its pay differentials accounted for 39.7 percent of the overall earnings inequality in London in 2015, but only 15.1 percent of that in Beijing in 2013. This gap was even larger a decade earlier when that figure in Beijing was even lower at 13.7 percent. Industrial sector and age also mattered less to earnings inequality in Beijing than in London. Their collective contribution was around 31 percent in London over the study period. But this figure in Beijing was only 17.7 percent in 2013 and even lower at 16.8 percent in 2002 (Figure 6.3). These results highlight a far smaller influence of the meritocratic ideology on earnings inequality in Beijing than in London, even though its importance had grown in Beijing over time. Rising global centrality is likely associated with an increased global pressure to adopt

this hegemonic idea and/or stronger local support for the adoption (Ancien, 2011; Olds & Yeung, 2004; Tan, 2008). But the extent of local support can still be very different even for cities with comparable global centrality and under similar global pressure. As the results here indicate, even when Beijing had caught up with London in global centrality, its alignment with transnational capital, an advocator for 'meritocratic inequality', had not.

Table 6.2. Average hourly earnings by employer ownership

	Beijing		London	
	2002	**2013**	**2004**	**2015**
Public sector	1.71	4.45	13.43	13.16
Private sector	1.37	3.76	13.47	13.15
Premium for the public sector	0.34	0.70	-0.04	0.01
F statistic	26.49	13.35	0.04	0.00
p value	0.00	0.00	0.84	0.97

Notes: Adjusted Wald test was used here to examine the significance of employer ownership to average hourly earnings. Hourly earnings are in 2004 UK sterling.

Earnings inequality in Beijing was affected greatly by employer ownership which hardly mattered in London. In London, earnings were not significantly different between the public and private sector, across which no inequality was observed throughout the study period. But in Beijing, earnings in the public sector was significantly higher than those in the private sector, and this difference accounted for 12 percent of Beijing's total inequality (Figure 6.3, Table 6.2). This contribution was not small; it was greater than the contribution of both the industrial sector and age and even comparable to that of occupation. Nor had it waned. Instead, in the study period, employer ownership had displayed a constant level of contribution, and the premium received by state employees had doubled. Hence, non-market structures, which

capitalist globalisation sets out to tear down (Robinson, 1996, 2012), had not only survived to a much larger extent in Beijing than in London, but also stayed strong in Beijing despite global capital's growing presence there. This result echoes the above finding that local opposition to the global rules of inequality was stronger in Beijing than in London. It also reveals that, in Beijing, the strength of this opposition was neither overtaken by that of its rival by a large margin, nor eroded with the city's growing global centrality. Not every nook and cranny of a global city has to entirely embrace global norms. At least in terms of earnings inequality, opponents of global norms can survive and thrive and had done so in Beijing.

The above findings taken together paint a picture of how global and local forces work together to shape earnings inequality in Beijing and London. Global capital had not simply exerted greater influence on earnings inequality in the two global cities than on that of their host countries as suggested earlier; it had also rallied enough local support in both cities to defeat the local opposition such that the meritocratic ideology it advocates had remained central in distributing earnings. But relative to London, the support rallied in Beijing was always less, no matter how similar the two cities were in the level of global capital they attract. Moreover, the extent of support in both cities remained roughly stable in the study period. Beijing had not relaxed restrictions on the extent to which global capital can triumph over non-market structures despite greater global integration. Nor had the triumph been less celebrated in London in this period despite the financial crisis. Hence, neither do cities with similar global centrality

necessarily align similarly to global forces; nor is this alignment necessarily attuned to the ebb and flow of global capital. At least in the field of earnings inequality, how powerful global forces are and how supportive local forces are to them can be uncorrelated.

Conclusion and discussion

In recent decades, globalisation has accelerated, cities have resurged, inequality has grown, and all of them are epitomised in global cities (Fainstein, 2001; Piketty, 2014; Sassen, 1991; Scott, 2008). This study suggests that neither global forces nor local ones should be viewed as the background, but both are autonomous agents affecting earnings inequality in global cities. This suggestion in turn indicates a need to adapt the methodology used in research on inequality across these cities, one that stresses on either similarities or differences than on both. It also opens up new avenues of research for this field. The spatiotemporal variation in the influence of global and local forces on inequality can be investigated; the way in which these forces work (or not) together to shape inequality can be explored; and whether this way shows regularities across cities and over time can be tested. Apart from raising this suggestion and the issues it spawns, this study also evaluated them empirically. It compared both similarities and differences between Beijing and London in the magnitude and dimension of earnings inequality. Despite the increasingly comparable global status, the two cities have rarely been juxtaposed, a situation largely underpinned by the persistent parochialism of urban

studies. Thus, whereas the primary contribution of this study is to bring a new voice into the discussion on inequality in global cities and with evidence; it also contributes to weakening the parochial voice entrenched in urban research.

To summarise, our results showed that, between 2002 and 2013, Beijing and London shared a similar level of earnings inequality and were more similar to each other than to their host countries. Meanwhile, inequality remained stable in Beijing but increased in London, a trend that was reversed regarding their global centrality. This divergent path was more pronounced in the lower half of the distribution, the relative earnings of which rose in Beijing but fell in London. Given these results, it seems possible to confirm that both global and local forces are able to affect earnings inequality in global cities with their influences being geographically uneven. On the one hand, the revealed similarity indicates a greater leverage of transnational capital in the two cities than in their host countries in deciding how earnings should be distributed, and this may be linked to its greater penetration in the former than in the latter. On the other hand, the separation of how unequal a city becomes and how central it gets globally means that local forces also participate in this decision; and the two cities' different paths confirm that their influence should also vary geographically.

In both cities, what task one performs, in what industrial sector, and with how much experience are the major lines by which earning inequality was structured. They are, in the eyes of transnational capital, the 'meritocratic attributes' on which earnings should

be rewarded (Arrow, Bowles, & Durlauf, 2018; Esping-Andersen, 1993). In the study period, their importance grew in Beijing and remained stable in London, synchronising the two cities' trend in global centrality. But even at the end of the period, the importance was still far lower in Beijing than in London, despite a comparable global centrality the two cities had achieved. Correspondingly, other factors are more important to Beijing than to London; and employer ownership stood out as the one in which the two cities differed the most. In Beijing, the state-employment earnings premium not only remained as the second largest contributor to overall inequality; it also increased despite Beijing's growing integration with the world. But this non-market factor had no influence in London. Hence, whereas transnational capital rallied enough local support in both cities such that earnings there were mainly distributed on the basis of the meritocratic ideology it advocates; the local support rallied in Beijing had never been comparable to that in London, nor grew with Beijing's exposure to transnational capital. Rather, in earnings distribution, state interventions, to which globalisation objects, remained strong in Beijing but not in London even when the two cities were similarly globalised; their strength was also sustained even as Beijing became more globally involved. Given this finding, it seems reasonable to suggest that in earnings inequality, the extent to which local forces align with global ones neither necessarily corresponds to, nor grows with the strength of transnational capital; they can at some point, if not always, be uncorrelated.

The comparison made in this paper has addressed the issues raised at the beginning of

the study on the one hand and brought out new ones on the other. Both global and local forces have been confirmed to show intercity variation in their influences on earnings inequality. But the more pronounced difference found in the lower than in the upper half of the earnings distribution raises the question of whether this variation also occurs at a more micro scale. The comparison has also succeeded in unfolding how global and local worked together to shape earnings inequality in the two cities. However, the different answers to this question offered by the two cities require an explanation. Moreover, Beijing's experience has attested that the correlation between how global a city becomes and how supportive it is to transnational capital fails to apply to the inequality issue. But as Beijing was also found to be sufficiently supportive, one might ask whether there is a threshold of support only above which the correlation can be removed. Given all these questions, the tale of two cities should by no means end here.

Despite the focus on earnings inequality in Beijing and London, this study touches on a larger issue in urban research, that is, the global-local dynamics. This issue, albeit rarely raised in inequality research, has been discussed widely among urban researchers over the past two decades (Brenner, 1998; Peck, 2002; Swyngedouw, 1997, 2004). They have repeatedly argued that both global and local forces are active and equally important and should be understood in relation to each other. This study not only brings this argument into inequality research and provides evidence; it also advances the argument *per se*. It shows that, in reality, the global-local dynamics are much more diverse than what is conceptually assumed, and what is often assumed may not

necessarily apply to every hook and cranny of a city. The idea that ‘a glocal corporation uses its global capabilities’ to ‘brow-beat localities into offering more favourable conditions for capital’ (Sheppard, 2006) has failed to receive empirical support here in the aspect of inequality; it might gain validity in other aspects, such as urban redevelopment. More empirical research is thus needed to disclose these nuances.

Appendix A: Inequality indices

Index		Name	Formula*	Range	If transfer Δs from i^{th} to j^{th}, resulted change depends on	Relationships with other measures	Properties**
Generalized Entropy class E_θ	$\theta = 0$: E_0	Theil's L Mean Logarithmic Deviation	$\frac{1}{n}\sum\left(\log\frac{1}{n} - \log s_i\right)$	$[0, \infty]$	$\frac{1}{s_i} - \frac{1}{s_j}$	$E_\theta = \frac{(1 - Atkinson's\ \ index_{1-\theta})^\theta - 1}{\theta(\theta-1)} = \frac{(\bar{y}^{-\theta} - 1)Dalton's\ \ index_{1-\theta}}{\theta(\theta-1)}$	Scale invariance Transfer principal Decomposability
	$\theta = 1$: E_1	Theil's T Theil's Index	$\sum s_i\left(\log s_i - \log\frac{1}{n}\right)$	$[0,\ \ln n]$	$\log\frac{s_j}{s_i}$		
	$\theta = 2$: E_2	/	$\frac{1}{2}\left(n\sum s_i^2 - 1\right)$	$[0,\ \frac{n-1}{2}]$	$s_j - s_i$	$E_2 = \frac{Coeffieicent\ \ of\ \ Variation^2}{2} = \frac{n * Herfindahl's\ \ index - 1}{2}$	
Gini		Gini coefficient	$\frac{1}{2n}\sum\sum\lvert s_i - s_j\rvert$	$[0,\ 1 - \frac{1}{n}]$	$j - i$	/	Scale invariance Transfer principal

Notes: * n is the total number of persons in the economy; s_i is the proportion of earnings of i^{th} person among all earnings in the economy; $\bar{y}$ is the average earnings of all persons in the economy.

** Scale invariance means that the inequality index is invariant to equi-proportional changes of the original earnings; Transfer principle means that the index always declines with a richer-to-poorer redistribution; Decomposability means that using the index the total inequality is equal to the sum of various group inequalities.

Appendix B: Categories used in the study and the correspondence with the APS and CHIP

Variable	Categories		
	In this research	CHIP	APS
Occupation	Managers, Directors, and Senior Officials	Corporate directors Owner of small private business Other directors and senior officials Managers	Managers and senior officials
	Professional and Technical Occupations	Professional	Professional Associate professionals & technical occupations
	Administrative and Secretarial Occupations	Administrative & secretarial occupations	Administrative and secretarial occupations
	Skilled Trades, and Process, Plant, and Machine Operatives	Skilled trades Process, plant and machine operatives	Skilled trades Process, plant and machine operatives
	Sales, Customer, and Personal Service Occupations	Sales and customer service occupations	Sales and customer service occupations Elementary occupations Personal service occupations
Industrial sector	Mining and Quarrying	Mining and quarrying	Mining and quarrying
	Manufacturing	Manufacturing	Manufacturing
	Electricity, Gas, and Water Supply	Electricity, gas, and water supply	Electricity, gas, air cond supply Water supply, sewerage, waste
	Construction	Construction	Construction
	Wholesale, Retail, Hotel, and Restaurant	Wholesale, retail, hotel, and restaurant	Wholesale, retail, repair of vehicles Accommodation and food services
	Transport, Storage, Post, and Communication	Transport, storage, post, and communication	Transport and storage Information and communication
	Financial Intermediation	Financial intermediation	Financial and insurance activities
	Real Estate	Real estate	Real estate activities

	Research and Development	Research and development	Prof, scientific, technical activity.
	Public Administration	Public administration	Admin and support services Public admin and defence
	Education, Recreation, and Culture	Education, recreation, and culture	Education Arts, entertainment and recreation
	Health and Social Work	Health and social work	Health and social work
	Other Community, Social and Personal Services	Other community, social and personal services	Other service activities
Age		Continuous variable	
Gender	Female	Female	Female
	Male	Male	Male
Ethnicity	Majority	Han	White
	Minority	Zhuang	Mixed/Multiple-ethnic groups
		Hui	Indian
		Weiuer	Pakistani
		Yi	Bangladeshi
		Miao	Chinese
		Man	Black/African/Caribbean/Black British
		Others	Any other Asian background Other ethnic group
Marital status	Never married	Never married Cohabiting	Single, never married
	Married	First-married	Married, living with spouse
		Remarried	Married separated from spouse
	Divorced	Divorced	Divorced
	Widowed	Widowed	Widowed
Employer ownership	Public	Government and party agencies Public institution Solely state owned/state holding enterprises	Public
	Private	Collective enterprises Sino-foreign joint venture/solely foreign owned enterprises Individual enterprises Private enterprises Others	Private

Chapter 7 Growing socio-spatial inequality in neo-liberal times? Comparing Beijing and London[1]

Abstract: Growing socio-spatial inequality has become the topic that most excites social, economic and urban geographers most recently. Contrary to the general expectation, this paper finds a failure of this growth to be more applicable globally. Although escalated in London, socio-spatial inequality became less acute in Beijing over the same 2000-2010 period. This failure of replicability challenges our traditional understanding of the causes for the problem, as the two commonly accused shifts, one towards service economy and the other towards neoliberalism, are both evident in both cities. What makes the two cities different is the recent speed of change. The fast-developing Beijing has compressed de-agriculturalisation, de-industrialisation and tertiarisation into a just few decades, which were changes seen within London successively over many more decades. Beijing's current explosive urban expansion was seen by London around a century ago. Hence the link between growing socio-spatial inequality and the shifts towards service economy and neoliberalism is not universal but depends on a fully-industrialised, slow-changing urban condition. This is a condition that is not ubiquitous but is largely restricted to now economically slowing down Western societies. These results highlight not only how important is the speed of

[1] This paper has been published in *Applied Geography* (Shi & Dorling, 2020). Full reuse permission has been granted for the purpose of reuse in this thesis.
The authorship declaration and statement of authorship for this paper are provided in the Appendix of the thesis.

change in theorising socio-spatial inequality, but also how great is the potential of a wider set of urban comparisons in advancing a more global research agenda.

Introduction

In 1845, '*The Condition of the Working Class in England*', a book revealing the injustice of rising capitalism, was released. Over 170 years later, the themes of the book not only continue to haunt British society but also seem to resonate around the world. Rumours have been circulating that most cities have followed, or will soon follow, the footsteps of the British capital, or its US counterparts, to record growing socio-spatial inequality. Comparisons between these cities and many well-developed European cities have then ensued, with suggestions of a similar surge in inequality (Cassiers & Kesteloot, 2012; Musterd et al., 2017). However, equivalent efforts to compare these cities and rapidly developing ones are surprisingly limited, even though the latter *per se* has recently attracted enormous scholarly attention (Lin & Zhang, 2017; Liu et al., 2019; Liu & Wong, 2018). The sweeping idea that the socio-spatial inequality in the rising urban stars would grow in a similar way to that in cities like London may thus just come from a bias held by advanced societies, ones that have already seen this fate befall them.

The recent surge in socio-spatial inequality has traditionally been linked with the concurrent changes in the economic and political environment. Since the late 1970s, cities showing a relentless rise in this inequality have been reported to also see a rapid

growth of their service economy (Sassen, 2011; Walks, 2001). Operations of this new economy, as suggested by Sassen (1991), require a larger supply of both high-skilled and low-skilled workers than were required before. An ever more bi-polar social structure should thus emerge, and so should growing socio-spatial inequality. What has also been reported for these re-segregated cities is some form of a neoliberal turn in their political economies (Brenner & Theodore, 2002a; Peck & Tickell, 2002). As argued by many Marxist scholars, this turn is essentially a political project to 'restore or sustain elite power' (Harvey, 2007). Through neoliberal policies like deregulation and privatisation, wealth becomes increasingly concentrated in the hands of a few who become ever wealthier, who are obsessed to express their superiority by living differently from the rest of the society. Hence the socio-spatial inequality should also grow with the ascendency of neoliberalism. But delving deeper into these ideas, one can find that they are actually largely inspired, and then verified, by the experience of only a few urban superstars, ones that had fully industrialised and expanded long before the arrival of the current era. For them, restructuring, rather than growth, was the keyword over the past half century. What remains unknown is whether these ideas are still applicable to cities experiencing both structural changes and urban growth. In other words, is the link between growing socio-spatial inequality and the shifts towards service economy and neoliberalism universal? Or is it actually contingent on a highly-developed urban condition?

The objectives of this paper are twofold. Firstly to compare changes in socio-spatial

inequality between Beijing and London. Albeit different in many ways, both cities were once the biggest in the world. One is the capital of the country that ruled over a quarter of the world's population before the US achieved hegemony; the other is the capital of a country that is on trend to soon be the most influential in the world. A comparison between them is now both significant and fascinating (Shi, 2019). This comparison may also help demystify the socio-spatial changes in rapidly developing cities. These cities are gaining global prominence but are often bypassed by those too enchanted by the past glory of advanced societies. The second objective of this paper is to examine whether an expanding urban condition can spoil the abovementioned link, which was originally built on the experience of cities without that condition. This investigation may not only challenge the hegemonic understandings of growing socio-spatial inequality, but may also reveal the importance of that condition in existing urban theories. More generally, the revelation may advance comparative urbanism by providing a new entry point for comparing cities and revising theories.

The remainder of the paper is organised as follows. The next section presents a review of socio-spatial inequality and identifies the gaps to be filled. The contexts of London and Beijing are then introduced. This is followed by a description of our methodology and then by results, then discussion and conclusion.

Revisiting socio-spatial inequalities: The service economy and neoliberalism

The issue of socio-spatial inequality is at the heart of many contemporary debates on

social space and the city (Cassiers & Kesteloot, 2012; Glasmeier, 2014; Smith, 2005). For the past few decades, most major advanced capitalist cities have seen an intensification of this inequality, and attempts to explain the change have proliferated (Musterd et al., 2017; Panori et al., 2018). The story of how a post-industrial transition increases intra-city income inequality and occupational social distance has been tirelessly and repeatedly told and retold (Chen et al., 2018; Pratschke & Morlicchio, 2012; Sassen, 1991). The suggestion that higher social inequality implies larger intra-urban spatial disparity and additional inter-group separateness has also been frequently made (Jargowsky, 1996; Reardon & Bischoff, 2011). Under these propositions, it appears all too likely that cities now transforming the most quickly into a service economy are also those which should expect to record socio-spatial inequalities to be a relentless rise (Friedmann & Wolff, 1982; Sassen, 2011).

Another frequently mentioned contributor to rising socio-spatial inequalities is some form of the 'emphatic turn towards neoliberalism in political-economic practices' (Ballas et al., 2017; Harvey, 2007; Randolph & Tice, 2017; Van Kempen & Murie, 2009). This turn can make a contribution at least in three main ways. First, although a post-industrial shift towards services might be a major contributor, its realisation is argued to be contingent on a policy trend moving rapidly towards ever greater market deregulation (Brenner & Theodore, 2002a; Derudder, 2018). Second, it is suggested that cuts in welfare provisions, another common neoliberal practice, can effectively force many people who become unemployed, or who have left school or university and

never worked, to accept lower-paid, lower-skilled jobs. What follows then is a rise in the social inequality indices that are measured by occupation (Hamnett, 1996a, 2003; Musterd & Ostendorf, 2013; Shi et al., 2017). Third, and more directly, the erosion of social housing and the privatisation of the housing market are often considered as key factors in producing spatial inequality. These policies provide the affluent with more leverage to move into desirable locations, which then become even more desirable, and to then further distance themselves from the rest of the society (Marcińczak et al., 2015; Paccoud, 2017). It thus follows that there is likely to be an upswing in socio-spatial inequalities when policies are reformed to 'extend market discipline, competition, and commodification throughout all sectors of society' (Brenner & Theodore, 2002a).

What should be noticed about the two inferences is the contexts from which they are established. They were first drawn from the experience of the top world cities when the resurgence of socio-spatial inequalities was observed there in the early 1980s (Dorling, 2018; Nijman, 2015; Sassen, 1991). Later, opportunities emerged for these ideas to be applied, tested, and evaluated in other places, when the observed transformations were no longer limited to cities at the very top of the global urban hierarchy, but were extended into the capitalist world more generally (Alderson & Nielsen, 2002; Musterd & Ostendorf, 2013). Studies in this vein often found that these inferences, albeit usually not as robust as in the places of origin, were still largely valid and reliable, suggesting a possibility for generalisation (Consoli & Sánchez Barrioluengo, 2019; Hochstenbach & Musterd, 2018). Yet with a closer look, one should notice that the contexts in which

these studies were conducted are actually far from diverse. They share a key similarity. In almost all cases what are being compared are highly urbanised, industrialised cities with a modest rate in both their current population growth and their recent spatial expansion. This thus raises the question of whether the contributions of the post-industrial shift towards services and political-economic practices of neoliberalism to growing socio-spatial inequalities are still significant if this similarity is absent. Do other parts of the world experiencing rapid growth also see a similar rise of the newly re-segregated city?

The recent evolution of many fast-developing cities, ones that have only recently obtained a place in the global league table (or re-entered that league table after having been labelled as under-developed) but have so far been largely ignored in these contemporary debates, may provide an opportunity to erase the question mark. Recently, they have followed in the footsteps of established world cities to see a rapid rise of the service sector and a penetration of *laissez-faire* market dogma (Chen et al., 2018; Ma & Timberlake, 2012). But unlike their predecessors, the newly rapidly growing cities were usually not fully industrialised when their economies shifted towards services. Nor have they often yet slowed down in population growth and spatial expansion (Jones, 2002; McGee & Robinson, 2011). A comparison between the two types of cities can thus help answer our two research questions. First, whether socio-spatial inequalities have also increased in cities where a dramatic slowdown has yet to come, and second whether the dominant currently accepted explanations for growing socio-spatial

inequalities are still satisfying in a rapidly expanding urban condition?

Setting the scene: From London to Beijing

London

London may be the first city that comes to mind when thinking of the service economy and neoliberalism. Its specialisation in finance and business services started early and has continued to date. In 2018 and 2019, despite growing Brexit uncertainty, London still retained its crown as both Europe's largest financial centre and world's most connected city in business services (GaWC, 2019). The capital has also taken a strong lead in neoliberal transformations. The 1986 'Big Bang' of the Stock Exchange in London is often cast as a prelude to the worldwide 'competition in laxity' of financial services and an iconic moment of neoliberal deregulation (Dutta, 2018). The cutbacks in social welfare spending initiated during the Thatcher administration and continuing to the present are not only far earlier but also more dramatic than similar practices in many other developed countries (Häusermann, 2010). The 'Right-to-Buy' scheme, which is still in use in Britain, is often marked as 'the first wave of housing privatisation in Europe' and 'the most characteristic example of privatisation' (Aalbers & Holm, 2008).

Meanwhile, London is also a pioneer in the recent worldwide resurgence of socio-spatial inequalities. In explaining this phenomenon, some scholars have stressed the

necessitating role of the service economy in the rise of the 'new middle class', the geography of which has inspired a British sociologist to coin the term 'gentrification' in 1964 (Butler et al., 2008; Reades et al., 2019). Others have unpacked the resurgence within a neoliberal framework of urban governance (Davidson & Wyly, 2012). For example, the 'Right-to-Buy' scheme, an important neoliberal policy, is seen to have made the housing in London being more allocated by market pricing than by rights or needs (Fenton et al., 2013). This then has allowed the space of the city to become more separated by wealth, hence being more unequal. Bringing the views together and considering London's leading role in the service economy and neoliberal practices, the observed growing socio-spatial inequalities seem justifiable.

When the service economy and neoliberalism started to rise in London, the city had already become a highly-industrialised metropolis, with its age of expansion having ended a few decades before. In 1979, the year Thatcher became Prime Minster, agriculture was almost entirely absent in London, occupying less than 0.2 per cent of the workforce. Physical expansion was nearly absent as well. In fact, the built-up area of the present-day London comes mostly from the explosive population growth and rapid suburbanisation that occurred before 1945 (Mogridge & Parr, 1997). In the 1944 Abercrombie Plan, a Green Belt and new towns were outlined to tackle London's problems of uncontrolled urban sprawl and congestion. Seven years later, in 1951, the first drop in London's population since census taking began was documented, followed by a four-decade-long decline. Growth, both in space and population, has since no

longer been the main theme of the London story. In this sense, the service economy and neoliberalism actually emerged, consolidated and strengthened in a fully industrialised London where rapid urban expansion and strong population growth were just fond memories. This context, which is too often shared by cities attracting most scholarly attention, is usually considered too 'normal' and 'widespread' to be considered.

Beijing

Beijing has recently seen rapid growth of a service economy and some form of neoliberal transformations, even though both are grounded on and articulated through its own particular political contexts (Zhang & Ong, 2008). During the past two decades, Beijing has raised the share of people working in service employment by over 30 percentage points, a speed that is the highest not only in its own (very long) history but also in the world over that period. Its speciality in business services has also been highly strengthened, and its ascendency in the global urban hierarchy was rocketing upwards (Derudder et al., 2010). Meanwhile, the socialist capital has experienced continuous market penetration into an ever wider range of domains. For example, the housing sector has undergone widespread commodification since 1998, and the financial sector has been enormously deregulated since 2001 (Lin & Zhang, 2017; Wu, 2015a). Despite firm state controls still in certain key domains, these pro-market policies certainly elicit a growing interweaving between neoliberal logic and socialist sovereignty in the capital city (Ong, 2007). Rather than completely erasing the pre-existing regulatory landscapes,

the market disciplines are increasingly aligned with, or mutually reshaping, them, leading to what (Brenner & Theodore, 2002b) term 'actual existing neoliberalism'. Hence, Beijing, regarding both economic and political changes, can be said to be reminiscent of London, where the service economy and neoliberalism have also been on a rise.

For those being familiar with the London story, it seems logical to conclude that socio-spatial inequalities should have grown in Beijing in a similar way as in London. As will be shown later, professionals have expanded in Beijing, and economic restructuring is a major force. These professionals have been considered equivalent to the 'new middle class' mentioned earlier, a social group contributing to London's growing socio-spatial inequalities (Gu & Shen, 2003; Shi et al., 2017). Parallels between the two cities have also been drawn in many policies (Wu, 2010). For example, the housing reform in China has been acknowledged as promoting homeownership, as has been the case for the 'Right-to-Buy' scheme in the UK. The spread of homeownership, as stated earlier, has increased the socio-spatial inequalities in London, which makes it tempting to predict a similar increase for Beijing under the recent reforms. Hence if only considering the economic and political factors that are conventionally considered, one may easily assume a similarity between the two cities in socio-spatial changes. This presumption, we argue, requires close evaluation.

Beijing was not fully industrialised and was still in the process of rapid expansion when

the service economy and neoliberal practices began to take hold. In 2001, the year Beijing was about to accelerate the growth of service sector under globalisation, the city still had 11per cent of its workforce engaging in agriculture. Then in the following decade, not only has industrial sector shrunk to make room for service sector, as was the case in London, but the agricultural sector has also shrunk. For Beijing, the successive processes of de-agriculturalisation, de-industrialisation and tertiarisation that had shaped London over centuries, are actually compressed into a few decades (Nijman, 2019). Along with this rapid restructuring, population growth and urban expansion have also speeded up in Beijing. Between 2000 and 2010, the population increased by 6 million, or 44 per cent; the build-up area expanded by 401 km^2, or 48 per cent. All these rates were about twice those in the 1990s. What could most easily be seen was the successive completion of the fourth (in 2001), fifth (in 2003) and the 187-kilometor-long sixth ring road (in 2009), facilitating the city to sprawl ever outwards. Therefore, Beijing in this period was the scene of a conjunction of rapid structural change and accelerated urban expansion. This conjunction, which is generally shared by the poorer world but not by the richer one, may provide the ground for rethinking, re-evaluating, and even revising urban theories generated in the richer world.

Methodology

Data sources

We use data from the population census in 2000 and 2010 for Beijing and 2001 and

2011 for London. They are chosen mainly for two reasons. First, income and occupation are the typical variables used to indicate a person's position in the social structure (Galobardes et al., 2006). Although the spatial data on both variables can be found in several surveys in London, in Beijing those on income are not yet available and those on occupation are only provided by the census. Second, the census is, to date, the only endeavour in both cities to collect data for the entire population. It is not only the most complete source of information about the population, but also the least likely to suffer from sampling error[2]. For this reason, the census is usually favoured over other sources if they provide similar information, which is also the case for this study (Dorling & Rees, 2003; Hamnett, 2015).

Socioeconomic groups

Positioning people into different socioeconomic strata is necessary for most socio-spatial analyses and is not always easy. This work becomes more complicated when cities using different occupational classifications are compared. Arguably, the occupational data should be processed by using income, as income is perhaps the best single indicator of material living standards and is the key determinant of residential locations (Galobardes et al., 2006). But the data on income of different occupations are

[2] Admittedly, only 10 per cent of the population in Beijing were asked about their occupation by the census. The sampling error is nevertheless very small because the sampling frame is based on the information collected for the total population. Furthermore, some people are always worried about how complete is the census of London. Who is missed? But again the error is small as 'capture-recapture' methodology is applied to input the missing.

regrettably unavailable in Beijing. Hence we first aggregate the occupations in London into three broad groups based on their gross hourly pay in London and then fit the occupations in Beijing into the same three groups. The first step is shown in Table 7.1, in which nine major occupations are collapsed into the 'better-off', 'middle' and 'worse-off' groups. The 'better off' are those with hourly pay above the city median/average, and the boundary between the 'middle' and 'worse off' is drawn where the drop in pay is the largest[3]. The way in which the sub-major occupations in Beijing fit into the three groups is shown in Appendix A.

Table 7.1. Three broad groups and their occupational groups in London

Broad group	Occupational group	Gross hourly pay in London		Ratio to that of all employees	
		Median	Mean	Median	Mean
/	All employees	17.15	22.49	1.00	1.00
Better off	Managers, directors and senior officials	30.68	37.70	1.79	1.68
	Professional occupations	23.35	26.46	1.36	1.18
	Associate professional and technical occupations	18.50	22.66	1.08	1.01
Middle	Administrative and secretarial occupations	14.08	16.32	0.82	0.73
	Skilled trades occupations	12.56	14.62	0.73	0.65
	Process, plant and machine operatives	13.30	14.65	0.78	0.65
Worse off	Caring, leisure and other service occupations	10.21	11.09	0.60	0.49
	Sales and customer service occupations	9.84	11.98	0.57	0.53
	Elementary occupations	8.86	10.22	0.52	0.45

Source: ASHE Table 3: Earnings and hours worked, region by occupation by two-digit SOC (2018 provisional), Office for National Statistics.

Described by the three groups, the social structures of the two cities were in a similar process of 'polarisation' over the study period, even though after the process they were

[3] It should be noted that there are three major reclassifications of occupations at the minor and unit levels in the UK between 2001 and 2011 (Elias & Birch, 2010). However, these changes are mainly occurred between and within three major groups (managers, professionals and associate professionals), which are aggregated together into the 'better off' category. Hence the reclassifications should have little influence on our following analyses.

still very different (Table 7.2). In both cities, the shares of the better-off and worse-off groups both grew, and the growth mainly came from the rising proportions of professionals and those serving them. This reflects an expansion of the service economy and the effects of that expansion on social polarisation. But occupations showing dropped shares were different between the two cities. The share of skilled trades and machine operatives in the middle group fell dramatically in Beijing but not in London. Elementary occupations, to which agricultural workers belong, reduced their share in the worse-off group much more in Beijing than in London. These differences lend support to our earlier suggestion: the growth of the service economy was in tandem with de-industrialisation and de-agriculturalisation in Beijing but not in London. Such characteristics also affect other compositions, as some occupations are associated with certain types of people. For example, the worse-off group in both cities had an ever higher share of migrants, which may relate to the low-skilled jobs in the service economy (migrants in Beijing are almost all from elsewhere in China). Beijing had a far larger share of men in the middle group than did London, which reflects Beijing's stronger manufacturing industry due to its unfinished de-industrialisation. These compositions tell us once again that the two cities share a similar expansion of the service economy but differ in how the expansion is achieved.

Table 7.2. Shares and compositions of the three socioeconomic groups in Beijing and London

Socioeconomic groups: their shares and compositions		Beijing		London	
		2000	2010	2001	2011
Better-off group		26.02	26.19	50.35	50.35
(of which)	Managers, directors and senior officials	21.85	11.36	34.91	23.06
working in	Professional, associate professional	78.15	88.64	65.09	76.94

	and technical occupations				
(of which) migrants		8.79	26.96	27.98	38.11
(of which) male		49.44	54.24	57.49	55.93
Middle group		33.66	32.27	28.09	24.71
(of which) working in	Administrative and secretarial occupations	21.49	37.98	55.05	47.20
	Skilled trades, process, plant and machine operatives occupations	78.51	62.02	44.95	52.80
(of which) migrants		24.94	49.80	27.03	41.30
(of which) male		72.01	70.35	54.23	59.67
Worse-off group		40.32	41.54	21.56	24.94
(of which) working in	Sales and customer service occupations	32.77	45.94	31.09	30.00
	Caring, leisure and other service occupations	11.50	19.05	27.34	31.49
	Elementary occupations	55.73	35.01	41.57	38.51
(of which) migrants		22.79	54.74	42.18	51.69
(of which) male		58.57	50.83	43.13	33.71

Notes: in Beijing census, migrants are defined as those without the local household registration. Although in London census several variables can be adopted to define migrants, we follow the most widely used definition: migrants are those not born in the UK.

Areal units

Of great importance in socio-spatial analyses is the areal division (the outer boundary of the area in analysis) and the unit of observation within that area. In line with previous studies, Greater London, which is divided into 32 boroughs and the City of London, is used here (Butler, Hamnett, & Ramsden, 2008; Reades, De Souza, & Hubbard, 2019). This area forms the administrative boundaries of London, the area for which most statistics are reported and strategic plans are made. Accordingly, the administrative area of Beijing is chosen for comparison, which used to have 18 districts before four of them were merged into two. Within these areas, districts (boroughs) are chosen as the basic areal unit, which are delineated administratively. They are the principle local authorities being responsible for local services, policies, and projects. They are also the finest resolution in the occupational data provided by the Beijing census. Hence the choice here comes not only from the data limitation but also from the hope that the results can

be valuable for policy making.

The areal units in Beijing are generally larger in size than those in London. In 2010, their median area was 928 km^2 and their median population was 0.65 million. These numbers for London were 38 km^2 and 0.25 million respectively (Figure 7.1). The huge difference here is understandable, as the land area is over ten times, the population is over twice, and the number of areal units is only about half in Beijing as in London. But it is undeniable that the difference may bring the scale problem: the sensitivity of socio-spatial indices to the size of units (Simpson, 2007; Wong, 2009). This is a fundamental methodological problem that is endemic to areal data and there is no perfect solution to it (Kwan, 2012; Openshaw, 1984). Rather than being deterred by the problem, geographers keep it in mind for research design and interpretation (Musterd, 2006; Musterd & Ostendorf, 2013). This is also the case for our study. Instead of comparing the *level* of socio-spatial inequality between the two cities which is very troubled by the size of units, we compare the *trend* which is much less effected by scale issue. Then for each city, we use the same geographical scale over time to ensure the rigor of the results. In addition, we are much more interested in comparing the *direction* than the *magnitude* of the trend, the latter of which may be felt differently by the two cities, as people are more geographically proximate and more likely to meet in more densely populated London (Figure 7.1). Hence under this interest, the inter-city scale difference should have negligible, if not no, effects on the results of this specific comparison.

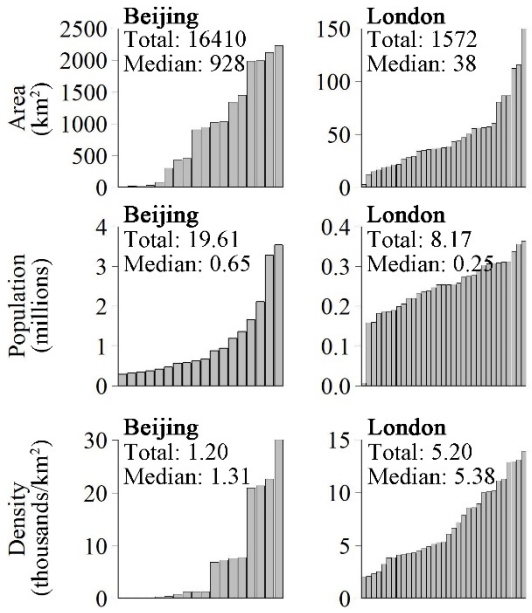


Figure 7.1. Basic information on the spatial units in Beijing (2010) and London (2011)

Both cities show great variations in the size and density of their districts (Figure 7.1). Hence for an observed change in their overall socio-spatial inequalities, the actual social impacts can be very different depending on which districts contribute the most. A movement of people into a district does not necessarily have huge impact on the residents there, which is the case for sparsely populated areas. Nor does it necessarily mean more socio-spatial mix *within* the district. It is fully possible for different social groups to adjust their proportions to match the city's average, and simultaneously, to become more spatially away from each other, especially when the district is sizable. Hence a reported change at the city level neither means the same thing for different areal units, nor can predict the spatial changes *within* them.

Having clarified the above point, it is worth stressing that this paper compares the dynamics of inequality between Beijing and London, not their districts. But the

contributions of the latter to the city-level changes are important, and caution is taken when issues *within* districts are discussed. This concern motivates us to use tile maps to present districts. As stated earlier, for a similar contribution, the actual social impacts can vary across areal units, and hence population should be used to rescale them. But the extent of geographical distortion should be limited, as locations of the contributors are equally important. Hence the areas can neither be completely rescaled by the size of land, as in a conventional map, nor by that of population, as in a cartogram. Instead a compromise should be made, which leads to what (Harris et al., 2017) describe as a 'balanced cartogram': each basic unit is represented by a tile of the same shape and size, on which complex data can be shown in a consistent manner (Figure 7.2).

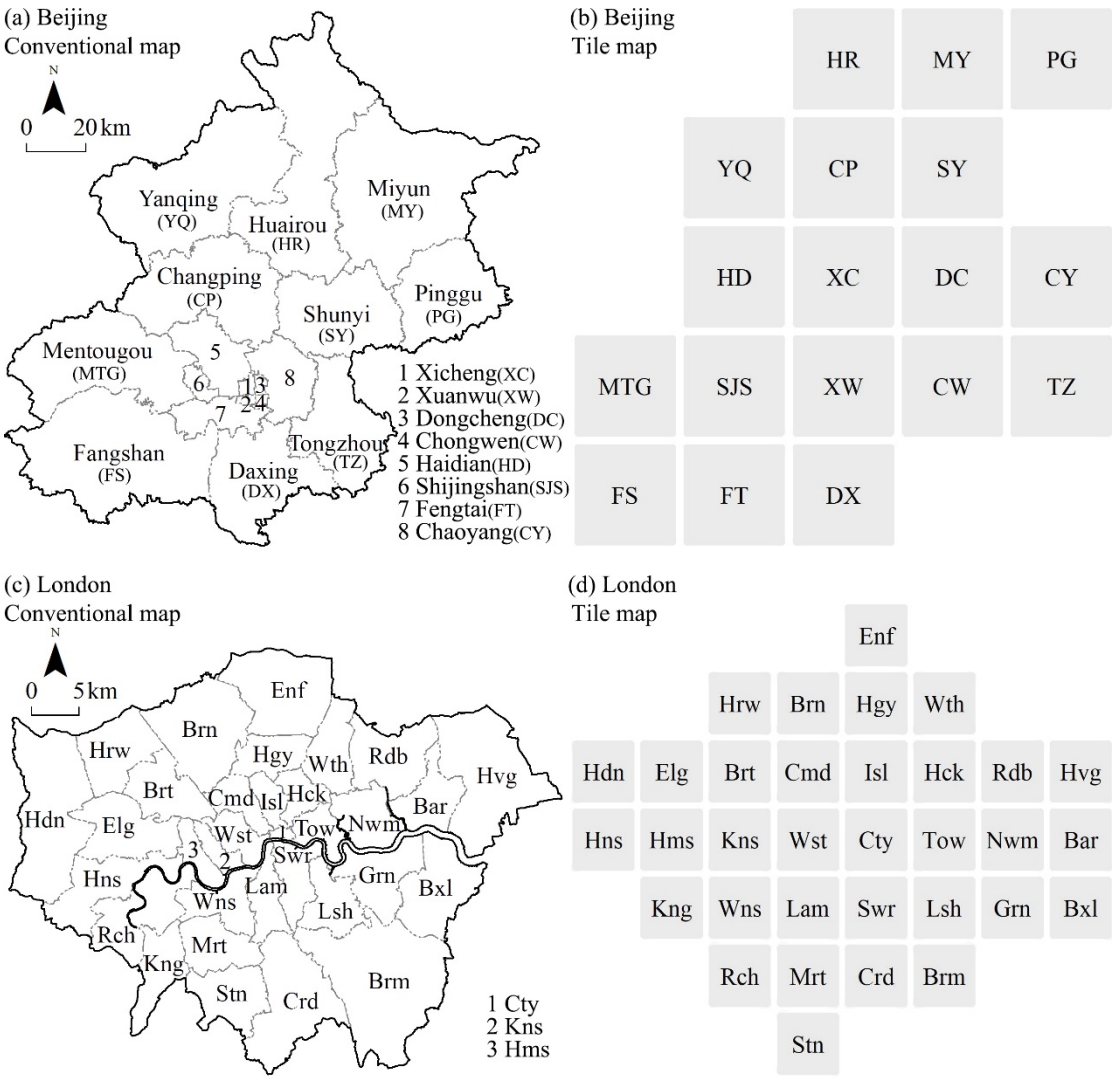


Figure 7.2. Maps of Beijing and London

Notes: (a) abbreviations are in bracket; for full names of London boroughs, see Appendix B.

Methods

Socio-spatial inequalities can be expressed in many ways, and they can be conceptually classified into three dimensions (Massey & Denton, 1988; Morrill, 1991; Simpson, 2007). The first one is the variations between spatial units in terms of socioeconomic profiles and is often called 'spatial disparity' (Chakravorty, 1996; Walks, 2001). The second dimension compares the residential patterns between different socioeconomic

groups and is widely known as ‘residential segregation’ (Duncan & Duncan, 1955; Simpson, 2007). The third dimension, with the name of ‘spatial clustering’, is the spatial distribution of parcels – the extent to which similar units adjoin one another (Echenique & Fryer Jr, 2005). Each dimension corresponds to a different aspect of socio-spatial inequalities and is somewhat independent (Morrill, 1991; White, 1983). Hence the investigation of all three aspects instead of only one, as is common in most previous work, is necessary if a complete picture of socio-spatial inequalities is to be accurately depicted.

Changes in spatial disparity between Beijing and London are compared by using ternary plot. An illustration is given by Figure 7.3. In this plot, every point represents an areal unit, and the position shows its ratios of the three socioeconomic groups. Moreover, in dividing the plot into three zones, the group taking the largest share in each unit can be discerned. The total distance from a hypothetical average point to each unit is also computed, and hence the overall spatial disparity in a city, at a given time, can be more precisely measured, and then the change over time and across cities can be more effectively compared.

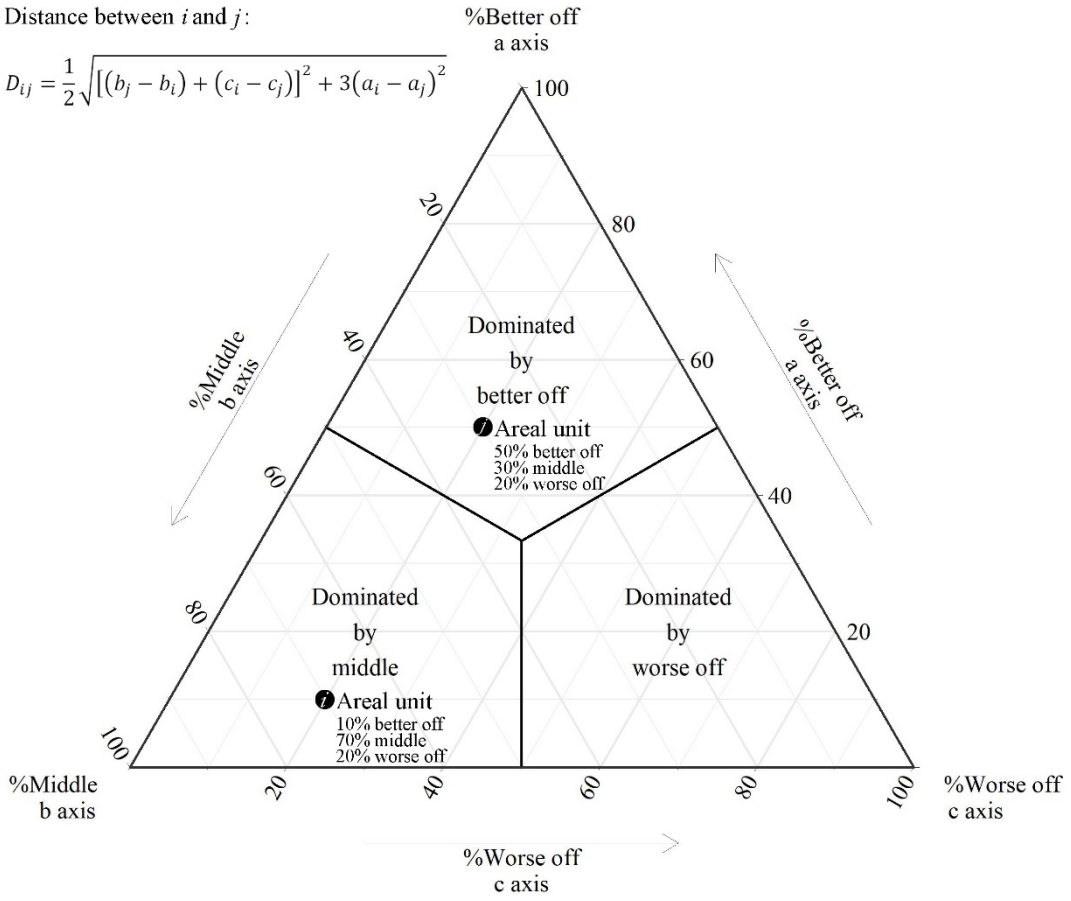


Figure 7.3. An illustration of the ternary plot

The level of residential segregation is measured in this study by the most commonly used indicator, the index of segregation (IS):

$$IS_j = \frac{1}{2}\sum_{i=1}^{n}\left|\frac{x_{ij}}{X_j} - \frac{t_i - x_{ij}}{T - X_j}\right|$$

where x_{ij} = the number of individuals from group j in the i^{th} areal unit; t_i = the total number of individuals in the i^{th} areal unit; n = the total number of areal units; X_j = $\sum_{i=1}^{n} x_{ij}$; T = $\sum_{i=1}^{n} t_i$. This index represents the proportion of one socioeconomic group that would need to be redistributed in order to make their distribution identical with that of the rest of the population. Hence the higher the number, the more segregated is the

group.

Clustering patterns and their changes are mapped by using the location quotient (LQ):

$$LQ_{ij} = (x_{ij}/t_i)/(X_j/T)$$

where x_{ij} and t_i are the same as those in *IS*; X_j and *T* are the population of group *j* and the total population in the study area. This index advantages others such as simple proportions in mapping as it removes the effect of unequal population of socioeconomic groups and shows the pure concentration of a group in a particular place (Liu, Silva, & Long, 2019). It ranges from 0 to infinity, with a value above 1 indicating the existence of the concentration.

Results

Spatial disparity

In the first decade of this century, the overall spatial disparity significantly decreased in Beijing and slightly increased in London. This can be seen in Figure 7.4a, in which districts for both cities in both years are plotted with contours representing the 90% confidence interval. It is obvious that the contours for Beijing became smaller over the study period, indicating less variation between the districts than before, whereas the opposite was the case for London in this same recent time period. Table 7.3 shows this contrast more clearly, in which the total distance from each point to a hypothetical

average one declined for Beijing but grew for London. Hence the positive correlation between the rise of the service economy and neoliberal practices and that of socio-spatial inequality measured by spatial disparity seems to be present in London but absent in Beijing.

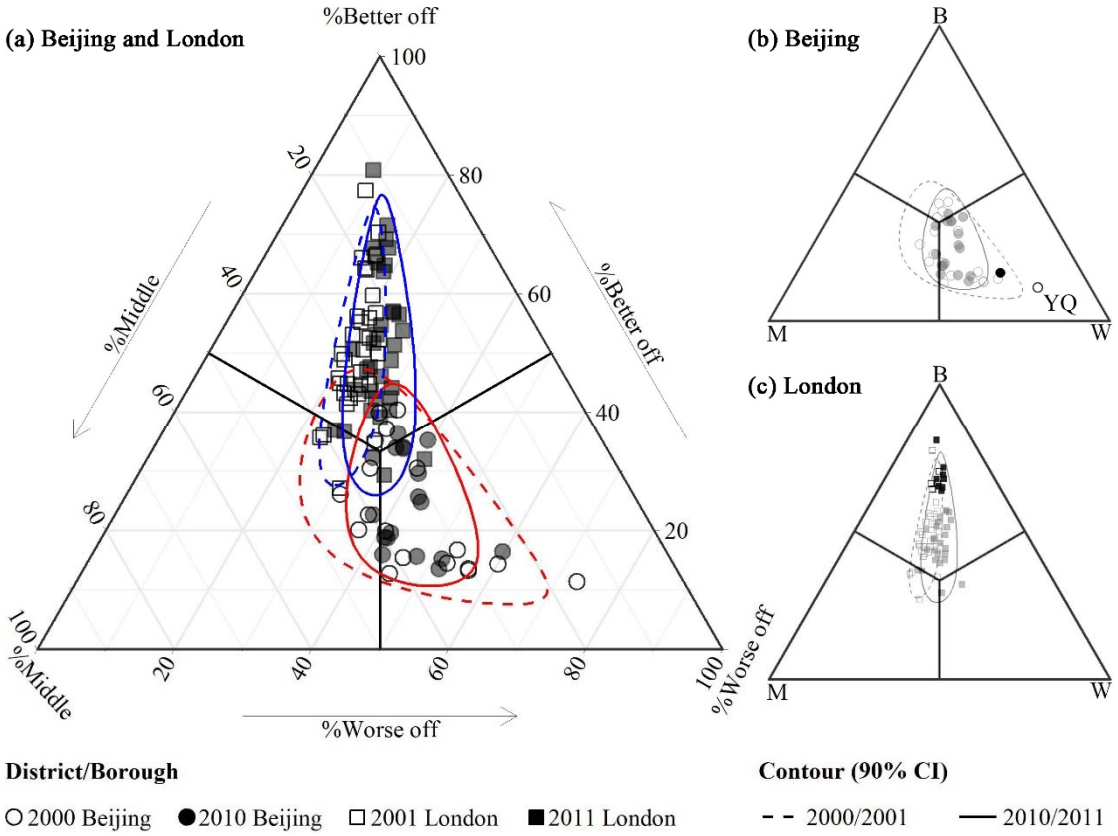


Figure 7.4. Changes in spatial disparity in Beijing and London

A closer look at the changes in the distribution of the points in Beijing reveals an extraordinary contribution made by one specific district in reducing the spatial disparity. This district is Yanqing, which is located in the northwest edge of the city and is highlighted in Figure 7.4b. It used to distinguish itself by having a share of the worse-off group that was far greater than that of others. But in the study period, it reduced this share remarkably, moved much closer to its peers, and contributed to 16 per cent of the

total cut in the distance to the average position (Table 7.3). By contrast, a handful of very prosperous boroughs were more responsible for the change in London. As highlighted in Figure 7.4c, these boroughs had already stood apart from others in 2001 with a very high occupancy (above 60 per cent) of the better-off group. They then enjoyed ever greater prosperity and became even more detached from the majority in the following decade. The increase in their distance to the average position accounted for 42 per cent of the total growth in London (Table 7.3). These results are echoed in the depiction of London made by Cunningham and Savage (2017), who labelled it as 'intensifying and elite'.

Table 7.3. Changes in the distance to the hypothetical average position

Categories of districts	Beijing			London		
	Distance changed	Contribution (%)	# of districts	Distance changed	Contribution (%)	# of boroughs
Total	-0.64	100	18	0.27	100	33
Better-off	-0.19	30.12	4	0.30	109.44	30
(of which) ≥60%	0	0	0	0.12	42.43	8
Middle	-0.16	24.70	4	-0.03	-9.44	3
Worse-off	-0.29	45.18	10	0	0	0
(of which) ≥70%	-0.10	16.03	1	0	0	0

Notes: Districts/boroughs are categorised according to which group took the largest share in 2000/2001

A fast-paced economic revolution in Yanqing has got the district out of being an outlier in the socioeconomic profile. A detailed investigation into the occupational composition shows that in 2000 two thirds of people there still worked in crop farming. But this share dropped enormously by 31 percentage points in the next decade. Meanwhile, off-farm jobs, either created by or creating the drop, were proliferated. Most of the new jobs were not in manufacturing but in public and personal services, partly due to the de-industrialisation across the city. Hence Yanqing, a mountainous district planning to

be Beijing's 'back garden', attempted to leapfrog from an agricultural economy to a service one in a mere decade. This huge jump, which is extremely rare in developed cities like London, allows districts lagging much behind to catch up quickly with their peers, to become more similar to them in socioeconomic profiles[4], and thus to contribute considerably to lowering the overall spatial disparity.

Residential segregation

For all three socioeconomic groups, the tendency of 'like to live nearby like' has decreased in Beijing but increased in London during the decade (Figure 7.5)[5]. Two contrasting city images emerge here. The one for Beijing is rather optimistic. It shows that, between 2000 and 2010, more people from the worse-off group chose to live closely with the better-off group than with the other two groups, *and vice versa*. Their spatial distribution then became much more identical to that of the remainder of the population, and the degree of segregation at the city level was then decreased. The image for London, however, is more pessimistic. Figure 7.5 implies an ever greater

[4] A more mixed social composition for Yanqing does not necessarily mean a more mixed spatial distribution of different groups within it. Given a huge size of nearly 2,000 km^2, it is very likely that the worse-off group live on one side and the better-off group live on the other side of the district. Also given a very low population density at 160 persons per km^2 in 2010, the likelihood of meeting those living in the same district might also be very low. Hence the effects of social mixing at the district level on individuals within it might be rather limited, and this is another story that can be told in a future paper.

[5] Although it is the trend not the level of segregation that we compare, it is worth noting that the levels reported here for both cities are much lower than those found in other studies using smaller-scale units (Liu, Silva, & Long, 2019; Tammaru et al., 2015). This observation confirms the existence of the scale problem in studies of segregation level, a problem that can largely be avoided if only the direction of change is studied (see the methodology section of this paper for details).

tendency for Londoners at both extremes of the socioeconomic spectrum to live with their peers and to wall (or be walled) against the rest of the society. The huge contrast here may indicate that not all places with a rise of the service economy and neoliberal practices would see a rising extent of residential segregation at the city level.

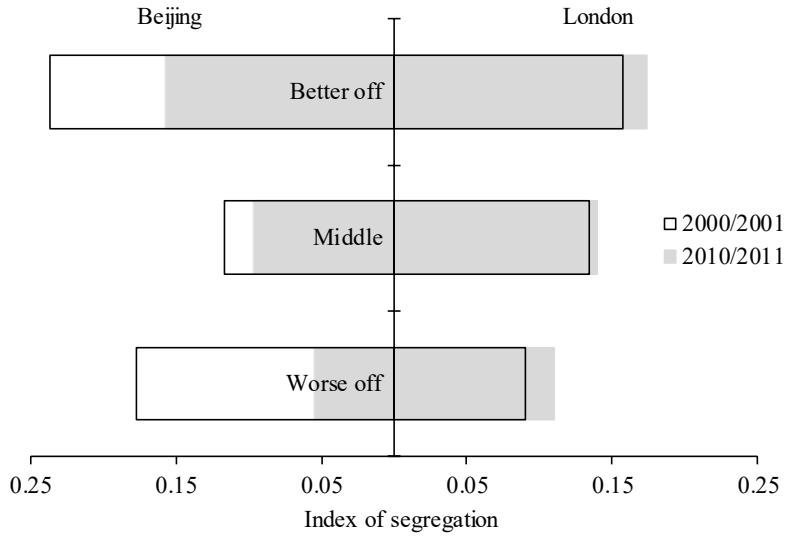


Figure 7.5. Changes in residential segregation in Beijing and London

An ever more segregated city image is very familiar to anyone studying the contemporary urban geography of London (Cunningham & Savage, 2017; Manley et al., 2016; Perera, 2019). On the one hand, the new century has seen a rapid growth of 'wealthy elite', 'super-gentrifiers' and 'global super-rich' (Butler & Lees, 2006; Fernandez et al., 2016). Many of them came to London for the lucrative jobs in financial services, the growth of which had only just begun to slow down within the year after the 2008 financial crash, and did not really slow down until the 2016 Brexit vote (after which London housing prices began to fall). With wealth in hand and exclusion in mind, they bought overpriced properties and built up their enclaves in already gentrified

places (Atkinson & Bridge, 2004; Burrows et al., 2017; Butler & Lees, 2006). On the other hand, due both to a more flexible economy and to the New Labour's welfare-to-work policies, the size of the working poor is now larger than a decade ago (Tinson et al., 2017). Many of them used to live in council estates, which were politicised in the New Labour's era of urban renaissance as a potential source of poverty that should be demolished (Lees, 2014). Large-scale regeneration was then carried out there, with a eulogistic name of 'positive gentrification' and a blunt one of 'social cleansing' (Perera, 2019). Council housing residents were then removed out of these areas and became even more concentrated in the dilapidated ones. Taken both sides together, it seems reasonable to view the growing segregation in London over the study period as a symphony of the deepening financialisation and advancing neoliberalisation.

A de-segregated city image might be inconsistent with the dominant understanding of Beijing (Feng et al., 2008; Gu & Shen, 2003). People always talk about the dismantling of the socially mixed work-unit compounds, the rise of so-called affluent 'gated communities', and the emergence of the migrant-filled 'urban villages'. Growing segregation, which was once annihilated in the socialist capital, is now claimed to be brought back by the newly emerged residential forms (Liu & Wong, 2018; Wu & Webber, 2004). This deduction may need a second thought. Commodity housing in gated communities are actually more socially mixed than planned. By analysing the microdata of the 2010 Beijing census, it is found that 35 per cent of the residents who owned a property were from the middle group. A recent study also shows that many

renters, especially those in the basements, are actually low-income migrant workers (Huang & Yi, 2015). Admittedly, as argued by Valentine (2008), these different groups may hardly have any valuable interactions and still live in parallel lives despite sharing the same space (the English, with their famous class system, are very good at not interacting with people they may share the same physical space with). Their physical proximity nevertheless highlights a possible overestimation of Beijing's recent residential segregation by those only seeing the different residential forms. Moreover, these forms are not spatially separated along districts. Urban villages are mostly located in the suburban districts, as are gated communities (Wang & Li, 2004; Zheng et al., 2009). The same goes for the inner city, where both dilapidated quarters and gentrified estates can be found (Yu, 2017). Hence even if the space might become more socially homogenous within residential units, as argued by others; it actually becomes more heterogeneous when we zoom out and see a district as a single areal unit, as is the case here. Segregation can happen at different scales, and in Beijing different groups at least become more likely to live in the same district, if not in the same residential unit.

Spatial clustering

The grey-shaded tile maps in Figure 7.6 show the changes in clustering patterns of the two cities. Each tile is divided into lower and upper halves, each half stands for one of the two time points, and the shading is determined by which socioeconomic group has the highest location quotient at that time. In both cities, the better-off districts were

packed together, occupying the central areas for both years; adjacent to it were districts/boroughs that were most subject to changes over the study period. Thus it seems that the two cities share a similar spatial dynamic in which the competition for space between different groups is most evident around the central cluster. The extent and result of this competition, however, were different between the two cities. Whereas in Beijing nearly one third of districts changed their dominant group, this proportion in London was only 12 per cent. Of these districts in Beijing, two ended up with the worse-off group, another two with the middle, and only one with the better-off group. Yet half of these boroughs in London upgraded from the worse-off ones straight-away into the better-off ones. Hence although both cities had a central better-off cluster whose outskirt was most subject to socioeconomic changes, the changes in Beijing were more widespread over space and more mixed in results than those in London.

For districts whose dominant group remained unchanged, circles in Figure 7.6 show whether or not that group has become more concentrated over that period. The answer is no for Beijing but yes for London. In the prosperous central cluster, the better-off concentration was reduced in five out of the six districts in Beijing, but increased in nine out of the 13 boroughs in London. The same goes for the less successful peripheries. The worse-off concentration in most districts there dropped in Beijing but rose in London. Hence in the study period, London continued reinforcing its clustering patterns; Beijing took the opposite road; even though both became more service-dominated and market-oriented.

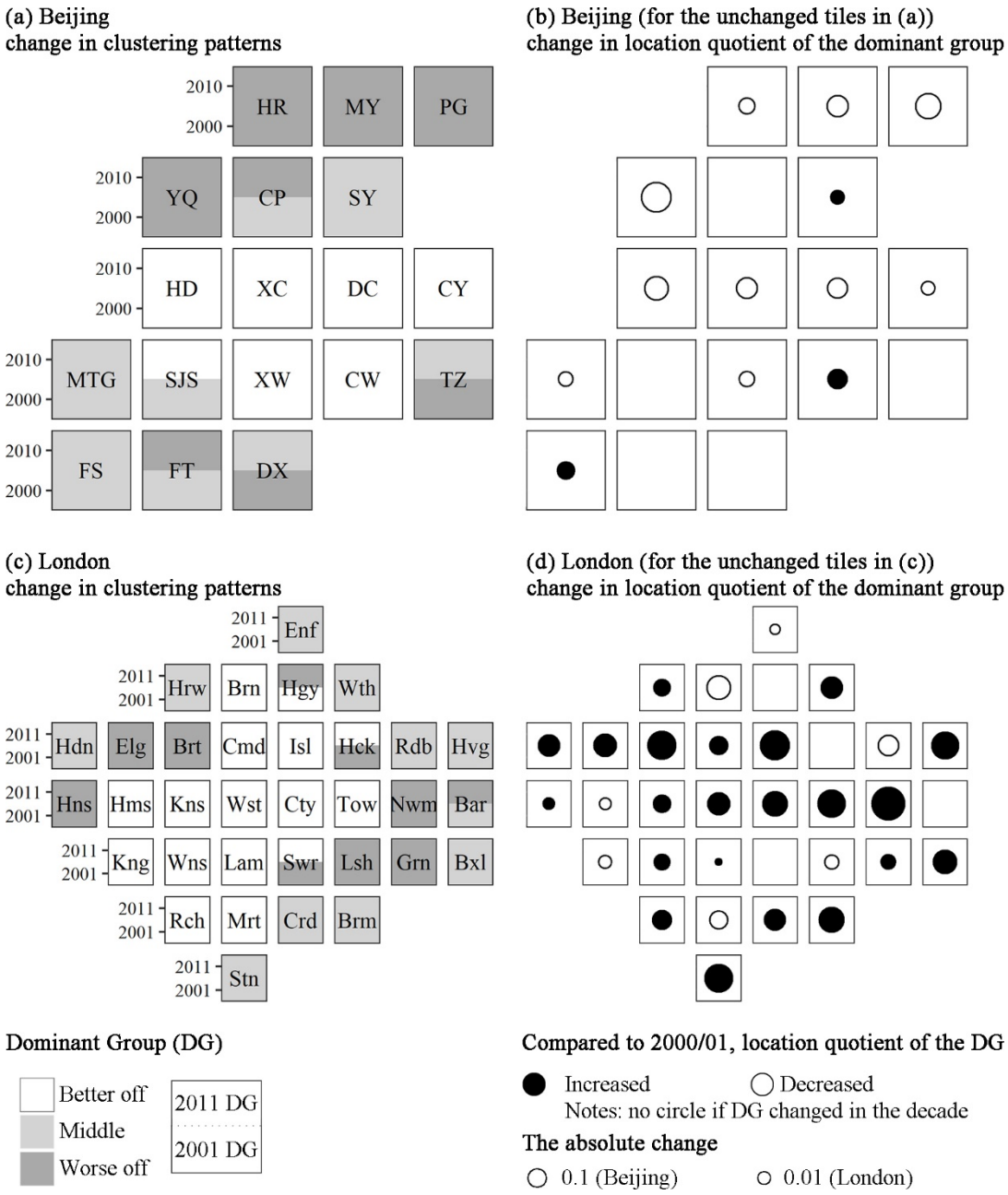


Figure 7.6. Changes in spatial clustering in Beijing and London

The speed of urban development should be the main factor contributing to the observed opposite trend. With limited growth in both population and space, London's spatial change is very similar to what the 'Chicago School' describes as 'ecological succession': one group re/displaces the other in an already fully-occupied area. But the explosive population growth in Beijing means that groups there cannot just re/displace each other

but have to go elsewhere, and the fast spatial expansion favours the latter than the former. In the study period, suburban areas in Beijing, once very rural, have become a hotspot for new, and often high quality, residential construction. This helped deconcentrate the better-off from the inner city, where congestion was too extreme to accommodate both the current and upcoming better-off residents. Also unlike London, Beijing's tertiarisation went along with de-agriculturalisation, with many farmers becoming low-skilled service workers. Once living near farmland in the peripheries, these workers now need to live closer to those being serviced. This change of residence, together with the arrival of low-skilled service workers, thus made the worse-off concentration fall in the peripheries but rise in and around the centre. With the fast speed in both urban growth and restructuring, the suburbs in Beijing actually become a socially mixed area to which both better-off and worse-off groups have moved. Their movements then helped other areas become less homogenous and then led Beijing to take the opposite road from London to see weakening spatial clustering.

Conclusion and discussion

Over the past half century, socio-spatial inequalities have grown dramatically in many urban settings and become a key issue in many academic debates. To date, much of the blame has been put on the economic evolution towards services and the political movement towards neoliberalism. This accusation is usually thought to be universal but actually evidenced by just a few highly-developed cities with limited recent urban

expansion. For fast-developing cities seeing remarkable changes in both structure and scale, evidence collection is still missing. Hence the universality of that accusation should be doubted, and this motivated us to compare the socio-spatial dynamics between London and Beijing. Indeed, both cities have experienced the two hypothesised shifts over the first decade of the current century. But over this period, a fast expansion in both population and urban space was seen by Beijing but not by London. Thus a comparison between the two cities should help us to see whether the accusation holds true in different urban settings. Unfortunately, our answer is no. Even though in that decade both cities strengthened their service economy and neoliberal practices, Beijing weakened its socio-spatial inequality whereas London worsened it. In the fast-developing Beijing, districts became more similar in socioeconomic profiles, economically separating social groups lived closer to each other, and concentrations declined within spatial clusters. In the highly-developed London, however, all these trends were in the opposite direction.

How could Beijing have the two hypothesised shifts but not the problem of growing socio-spatial inequality that London had in the same period? The speed of development, an often bypassed factor in theorising urban change, might play out here. Beijing, a fast-developing city (that may well slowdown in future as we turn to shortly below), underwent rapid de-agriculturalisation and explosive urban expansion; features that were seen by London not now but around a century ago. Between 2000 and 2010, Beijing's ambition to leapfrog into a service economy pushed numerous farmers

towards taking service jobs. Once living near farmland located mostly in the peripheries, many of these new workers moved towards the centre to serve their new customers. The employment shift and residential change therefore deconcentrated the worse-off in the peripheries and increased their visibility in and around the better-off centre. Also, a booming population in Beijing needs to be accommodated, and this turned much of the once-rural suburbs into new, spacious and 'idyllic' residential areas. These areas, in contrast to the old, congested and unkempt inner city, then became popular among the expanding new rich. Hence thanks to the complex structural change and rapid urban expansion, re/displacement, a major process for raising socio-spatial inequalities under the two accused shifts, was far less prevalent in Beijing than in London. Instead, different social groups in Beijing co-occupied the newly expanded areas, making the space less unequal.

The history of London shows that a city cannot grow forever. Beijing is no exception. Very recently, Beijing has slowed down its growth in nearly all aspects. It not only saw population fall in 2017 but also planned to reduce the construction land over the next two decades. Hence the speed in Beijing seems to be getting closer to that in London, and re/displacement that has long troubled London becomes ever more likely to set in. This prospect makes follow-up studies to this paper very necessary. It also urges us to think how Beijing, as growth fades away, can lessen the risk of re/displacement in neo-liberal times. Should the city re-orient its industrial policy to support the growth of the middle social strata? Or should it restore the power of the egalitarian ideology? We may

not know what the future holds. But we know that plenty of countermeasures against growing socio-spatial inequality are available; the question is whether the socialist capital has the will.

Our comparison directly contributes to the revelation of both strengths and limitations in some of the existing theories surrounding socio-spatial inequalities. The London story confirms their success in linking economic, political, and spatial changes together. But the Beijing story highlights their failure in seeing the contingency of that link on the speed of development. This is a failure that comes primarily from previous working having a limited geographical scope. Overcoming it thus needs a comparison like the one made here which brings together both cities in and those out of that scope. Further, neither are these theories of inequality the only ones being limited by the scope, nor is Beijing the only city being out of the scope. Many fast-developing cities are also outsiders in terms of consideration when it comes to urban theorising, and many theories can be further advanced if researchers step out of their comfort zones. In this globalised world, knowledge decolonisation through comparative urbanism is especially critical and urgent. The speed of development highlighted in our study can be a possible entry point. This speed is both omnipresent and not categorical. In using it, not only urban fields for comparison can be broadened, but also the divides defining which places are ‘suitable’ to be compared can be redefined.

A number of research directions can be opened up by our inter-city comparison. The

first would be to compare the *levels* of socio-spatial inequalities at the city level. To do this, different cities should ideally have comparable areal units, which unfortunately is not the case for Beijing and London, but might be the case for other cities; and nevertheless we have shown what is possible here to come to some unexpected conclusions even when the units being compared are quite different. Second, below the city level, it can be enlightening to compare the socio-spatial inequalities between districts and across scales. In doing this, one needs to distinguish between inequalities at different scales. For example, if a certain group moves into a district but in a specific part of it, then segregation will rise within that district but might decrease for the whole city. Also, caution should be taken when interpreting the results. For example, the same level of segregation can be felt differently by residents in different districts, as the smaller the district, the more likely for people to meet, and the less segregation to be felt. This point is highly related to the third avenue on which future research can be advanced. This avenue cares more about 'feelings' (or people) than about 'numbers' (or areas), both of which describe some part of inequalities but not all of them. People living in the same building but never talking to each other are socially segregated but spatially not. All these untouched fields, together with what our study in this paper shows, reveal how little we actually know about socio-spatial inequalities and the city, despite our long-standing concern in geography with measuring and talking about inequality and the city.

Appendix A

UK Census (Using SOC 2010)			Beijing Census (Using CSOC2009)	
Major		**Sub-major**		**Approximate sub-majors**
1	Managers, directors and senior officials			
	11, 12	Corporate managers and directors; Other managers and proprietors	01	Senior officials in the Chinese Communist Party
			02	Senior officials in national and local governments
			03	Directors, chief executives, and senior officials of democratic party and major organisations
			04	Managers and administrators of public institutions
			05	Managers and administrators of enterprises
2,3	Professional,			
	21, 31	Science research, engineering and technology professionals, and associated professionals	11,12	Scientific researchers
			17	Agricultural professionals
			13,14, 15,16	Engineers and technicians
	22	Health professionals	19	Health professionals
	23	Teaching and educational professionals	24	Teaching and educational professionals
	24	Business, media and public service professionals	21	Business professionals
			23	Legal professionals
			27	Journalists and culture occupations
			28	Clergy
	32	Health and social care associate professionals	46	Health associate professionals
	33	Protective service occupations	32	Protective service occupations
			X0	Armed forces
	34	Culture, media and sports occupations	25	Artistic and literary occupations
			26	Sports occupations
			84	Photographers, audio-visual and broadcasting equipment operators
	35	Business and public service associate professionals	18	Aircraft, ship, and hovercraft technicians
			22	Finance professionals
			92	Inspectors of environment wasted material

	associate professional and technical occupations			
	41	Administrative occupations	31	Administrative and secretarial occupations
	42	Secretarial and related occupations	39	Office workers n.e.c.
4	Administrative and secretarial occupations			
	61,	Caring personal service occupations;	47,48	Social and personal services occupations
	62	Leisure, travel and related personal service occupations	45	Transportation services
6	Caring, leisure and other service occupations			
	71	Sales occupations	41	Sales occupation
	72	Customer service occupations	33	Postal and telecommunication occupations
7	Sales and customer service occupations			
	52	Skilled metal, electrical and electronic trades	66	Metal forming, machining and related trades
			71	Machine maintenance fitters
			72	Electricians and electrical fitters
			73	Electronics and electronic fitters
	53, 81	Skilled construction and building trades; Process, plant and machine operatives	61	Coal mine and quarry operatives
			62,63	Metal making and treating process operatives
			64,65	Chemical and related process operatives
			67,68,69	Assemblers
			74	Rubber and plastic process operatives
			75	Textile process operatives and sewing machinists
			77	Food and drink process operatives
			78	Tobacco process operatives
			79	Pharmaceutical production operatives
			81	Paper and wood machine operatives
			82	Construction material process operatives
			83	Glass and ceramics process operatives
			88,89	Construction and building trades and operatives
			87	Culture, education and sports products making operatives
			93	Routine inspectors, testers, weighers, graders and sorters
	54	Textiles, printing and other skilled trades	76	Weavers, knitters, and footwear and leather working trades
			85	Printing trades
			86	Arts and crafts making trades
	82	Transport and mobile machine drivers and operatives	59	Agricultural workers n.e.c.
			91	Transportation and mobile machine drivers and operatives

5,8	Skilled trades occupations; Process, plant and machine operatives		
91	Elementary trades and related occupations	51	Crop cultivation workers
		52	Forestry workers
		53	Animal husbandry workers
		54	Fishery workers
		55	Agricultural water facilities management and maintenance occupations
		99	Process, plant and machine skilled trades and operatives n.e.c.
92	Elementary administration and service occupations	42	Storage occupations
		43	Catering occupations
		44	Hotel, leisure, travel and fitness services
9	Elementary occupations		

Notes: Some sub-majors, such as 29 Professional and technical workers n.e.c., 49 Sales and service workers n.e.c., and Y0 inconvenient to classify are unable to be reclassified into the UK SOC 2010 because of the limited information provided by their descriptions. These sub-majors in total only constitute 0.13% of the whole employment in Beijing in 2010.

Appendix B

Borough name	Abbreviation	Borough name	Abbreviation	Borough name	Abbreviation
City of London	Cty	Hackney	Hck	Lewisham	Lsh
Barking and Dagenham	Bar	Hammersmith and Fulham	Hms	Merton	Mrt
Barnet	Brn	Haringey	Hgy	Newham	Nwm
Bexley	Bxl	Harrow	Hrw	Redbridge	Rdb
Brent	Brt	Havering	Hvg	Richmond upon Thames	Rch
Bromley	Brm	Hillingdon	Hdn	Southwark	Swr
Camden	Cmd	Hounslow	Hns	Sutton	Stn
Croydon	Crd	Islington	Isl	Tower Hamlets	Tow
Ealing	Elg	Kensington and Chelsea	Kns	Waltham Forest	Wth
Enfield	Enf	Kingston upon Thames	Kng	Wandsworth	Wns
Greenwich	Grn	Lambeth	Lam	Westminster	Wst

Chapter 8 Conclusions

This chapter provides a synthesis of the conceptual argument and empirical findings of this thesis, and discusses their implications for the wider context of urban studies. It closes with an evaluation of this body of research followed by some suggestions for further work.

Summary

This thesis has sought to reconfigure the landscape of urban theories closer to that of the real urban world, and it has done so both conceptually and empirically. Conceptually, this thesis has criticised the Western-centred production of urban knowledge, suggested a new step to decentre this production, and highlighted the comparative gesture that can be used to support this step. Empirically, it has put this new step into practice: it has compared Beijing and London in terms of the demographic compositions of the labour force, earnings inequality, and socio-spatial inequality. Each comparison has confronted a conventional idea in urban research and has sought to broaden this idea; and in doing so, it offered the empirical evidence to the thesis's conceptual argument. This thesis is thus a combination of conceptual and empirical work; it has contributed to promoting a more equal, cosmopolitan landscape for future urban theorisations.

The empirical work of this thesis has called into question three conventional ideas. 1) Are cities kept apart by the imagined geographic divides so different from each other

that they should be viewed as incommensurable? 2) Do cities facing similar competitive pressure in economic globalisation have to choose a similar path to deal with inequalities? 3) Do the effects of the service economy and neoliberal policies on socio-spatial inequalities hold across different urban contexts?

The questions were answered in a comparative, quantitative framework via the analysis of secondary data: a combination of aggregated Census data, Census microdata, and household survey data from the China Household Income Project and the UK Annual Population Survey. A reformatted most different systems design (MDSD) was used: comparisons were purposively made between two cities that are very different in geo-historical contexts; and the ground of comparability is not having the same instance of the investigated urban phenomenon, as the conventional MDSD requires, but is being interconnected and embedded in a multiplicity of global circuits, as the work of comparative urbanism suggests (Robinson, 2016a, 2016b). In practicing this new way of composing comparisons, this thesis has contributed to challenging the conventional assumption of formal comparative methods. Moreover, the thesis employed frequency statistics, descriptive statistics, inequality indices, decomposition methods, and advanced visualisations to study inequalities; and this employment has made two methodological contributions: using ternary plots to visualise the socioeconomic composition of spatial units, and constructing an index to summarise the total difference across spatial units in this composition (Chapter 7).

Conceptually, this thesis has argued that the field of urban studies is occupied by a 'Euro-centred epistemology', and that this occupation has to be interrupted, especially as the centre of urbanisation has been shifting away from Euro-America. To achieve this interruption, existing efforts to promote an equal appreciation of each place's potential in theory-making was suggested as necessary but not sufficient. A new effort was proposed in this thesis. Specifically, imagined geographical divisions (such as North/South) should be unlearned. Places kept apart by these divides should be drawn into conversation. The resulted conversation should be used to help urban theories achieve 'pluralistic universalism': the long-standing commitment to universal theories is appreciated, but these theories are (re)produced via thinking across a much wider range (a more plural range) of urban experiences. The underpinning ideas are that urban research should not turn into cultural relativism but preserve a sense of worldly curiosity, that urban theories should not be set in stone but be subject to constant remaking, and that a world of cities should not be analytically divided but be brought together into 'conversation' with one another. It is only with these ideas, I conclude, that the landscape of urban theories can be reconfigured to become more equal, cosmopolitan, and closer to that of the real urban world.

This thesis has suggested that comparative methods could be deployed to help launch the initiative proposed above. It also proposed an argument that agrees with comparative urbanism that these methods need to be reformatted prior to deployment. Firstly, comparisons should not be assumed as a quasi-scientific approach to universal

causality; for this assumption counters the fact that the causality most strongly associated with cities is not universal but contextual. Thus, if comparative methods are to be relevant to urban research, they should be reimagined more broadly as a way of thinking. Secondly, comparisons should be made across cities kept apart by existing geopolitics and other geographic divides. Such comparisons are possible because these divides are largely a result of colonial imaginations, and because the global circuits connecting cities to one another should have made cities across the divides have many aspects in common. Such comparisons are also imperative to reducing the ethnocentricity of urban theorising and uncovering the relevance of specific urban conditions to certain theorisations. Thirdly, for existing concepts, comparative results would be better used to reconstruct and renew them, than to create alternative ones to replace them. These reformulations are what this thesis called for. They have been suggested here as essential to developing comparative methods into the ones useful for building a more equal and cosmopolitan landscape of urban theories.

The empirical work of this thesis has supported the argument that cities across the imagined geographic divides are comparable. As shown in Chapter 4, Beijing and London, two cities kept apart so often today by these divides, are now both popular destinations for FDI and MNC headquarters, are both specialised in producer services, and are both highly connected to cities worldwide, and to each other, by advanced producer service firms. They are both global cities orchestrating globalising networks; and their positions in these networks have been closing apace. Their much alike position

in the global economy and their current very comparable levels of economic power have then entailed a very similar description of the labour force. Results presented in Chapter 5 showed that, thanks to the vibrant urban economy, both Beijing and London have attracted a large number of migrants and have enjoyed great leverage to decide which type of migrants is preferred. Migrants were found to constitute nearly half of the total population in both cities, and be constituted mostly by the young and highly-educated. Consequently, the demography of the labour force of the two cities showed a similar profile: the largest share went to the 25-to-29-year-old group, at nearly 20%, and to those with a higher education, at around 40%. These results countered the conventional (colonial) idea that cities kept apart by the imagined geographic divides are very different from each other. They confirmed this thesis's argument that these cities have many aspects of urban life in common, that they are interrelated in and tied to globalising networks, and that they should be thought of together without an imagined line in between.

This thesis acknowledged the influence of globalisation on cities and its enabling effect in drawing a diversity of cities into conversation, and rejected the idea that globalisation erases the significance of local conditions to urban processes. As shown in Chapter 4, even though Beijing and London are now both global cities with much comparable economic power, their particular geo-historical contexts have made them differ in the processes of global city formation and in the ways of coordinating the world economy. Likewise, Chapter 5 revealed that the demography of the labour force of the two cities

still differed slightly despite broad similarities, for which their institutional contexts, such as the official retirement age, were suggested as responsible. These results showed that what is happening in global cities cannot be explained simply with reference to a worldwide process. Rather, both global city formation and urban life in these cities should be understood as a result of the dialectics of global-local dynamics: they are subject to factors that operate and influence at multiple spatial scales and to their interactions with one another. Thus, urban outcomes across different contexts should both resonate with, and differ from, each other; thinking across them should be both feasible and conceptually rewarding.

In this thesis, earnings inequality is another issue that was found to be subject to the dialectics of global-local dynamics. The comparative analysis also revealed that cities facing similar competitive pressure in economic globalisation can take different paths to deal with inequalities. As shown in Chapter 6, even in 2013 when the two cities held a much comparable position in the global economy, whether or not one is employed by the state was significant to earnings in Beijing but not in London. This significance was also found to have remained stable in Beijing between 2002 and 2013, a time when the city was globalising rapidly. Consequently, although the two cities were getting closer to each other in the global urban system, their earnings inequality changed differently. These results challenged the idea that local authorities of global cities have no choice but to be browbeaten into offering more favourable conditions for capital. They showed that, at least in setting the rules of earnings distribution, local authorities do not have to

conform to the demands of global capital; the policies towards inequalities can diverge among cities converging on the global economic position.

Beijing and London were found to be even more different in terms of the changes in socio-spatial inequalities. This finding challenged the idea that the effects of the service economy and neoliberal policies hold across different urban contexts. As shown in Chapter 7, between 2000 and 2010, while in Beijing districts became more similar to one another in socioeconomic profiles, and different socioeconomic groups became less segregated to each other; both trends were in the opposite direction in London. Neither the functionalist nor conflict theory could explain this contrast, as both cities shifted towards a service economy and neoliberalism in this period. The speed of urban development was revealed to play a part instead. Whereas re/displacement was prevalent in London given its limited growth in both population and space; the settlement of an explosive population, including both the rich and poor, in the newly urbanised suburbs was the case in Beijing. These results highlighted the contextual contingency of the dominant inequality narrative and the relevance of the speed of development to reconstructing it. They confirmed the thesis's conceptual argument that many so-called universal theories are parochial in nature, the reconstruction of which could benefit greatly from a wider set of urban comparisons.

Implications

This thesis found that urban life in Beijing and London is subject to the dialectics of

global-local dynamics, and that their urban experiences both resonate to, and differ from, each other. This finding challenged the idea that cities across the geographic divides are too different to be compared. It instead justified the idea underlying this thesis that these divides are largely colonial imaginations that could, and should, be unlearned. In addition, the comparisons made in this thesis revealed that, contrary to what is conventionally believed, neither do cities facing similar competitive pressure in economic globalisation necessarily follow a similar path to deal with inequalities, nor do the effects of the service economy and neoliberal policies on socio-spatial inequalities hold across different urban contexts. The revelation justified the step advocated in this thesis for promoting a more equal and cosmopolitan landscape for future urban theorisations, a step that focuses on thinking across cities with an aim of helping existing theories achieve pluralistic universalism. The significance of these results is summarised below.

The comparative results of this thesis can inform some alternative ways of envisaging the future development of Beijing and London. For London, the increasing global importance of Beijing poses a question: in the absence of a strong national economy, could London continue being globally competitive in the future? The results of Chapter 4 imply that, in terms of attracting investments, what is competing with London is not Beijing *per se*, but the emerging market of China to which Beijing is an entrepôt. Unlike its enduring competitors such as New York, Beijing represents a new type of global city that London now needs to compete with. The traditional tactics, such as deregulations,

might no longer be enough for London to win over these new competitors. For Beijing, the rising socio-spatial inequalities in London shown in Chapter 7 sets an alarm: Beijing might see a similar rise once its rapid urban expansion comes to an end. In fact, the city has already slowed down its growth in nearly all aspects; and the local authority there is even planning to reduce both the population and availability of construction land. To avoid the dystopia that London has seen (the homelessness on the streets being one recent very visible example), Beijing might need to reorient its policies against neoliberalism. This reorientation, I believe, would not be as difficult as many would have expected. After all, for the Chinese state, the market is an instrument for achieving its own objectives (Wu, 2018).

The global-local dynamics shown from Chapter 4 to 6 offer some advice on how global cities could be analysed, how urban changes there could be understood, and how comparisons across them could be performed. Results of this thesis imply that global cities can be analysed from two seemingly contradictory, but actually complementary, perspectives. They can be analysed as a rigorous concept, the core of which is that they adhere to strictly-delineated attributes that are relevant to the global economy. They can also be analysed as a result of urban processes, the focus of which is on the differentiated, and context-contingent, paths to having the defining attributes. Both being (attributes) and becoming (paths) a global city should be thought of when these cities are concerned. Their urban changes could thus be understood with reference to their similar economic positions in the world on the one hand, and to the particular

contexts in which they achieve these positions on the other. Comparisons across these cities could shift away from focusing on either similarities or differences to stressing on both.

The impact of the urban economy on the social and spatial spheres shown from Chapters 5 to 7 sheds some light on the relationship between economy, institution, and urban life. In both cities, the *status quo* and dynamics of economic structure were found to have an impact on all three aspects investigated in this thesis. But the level of the impact was found to decrease from the demography of the labour force, to earnings inequality, and to socio-spatial inequality. These results imply that not all societal arrangements are determined by economic relationships, and that the susceptibility to the economic base varies across different aspects of urban life. Moreover, institutional arrangements were also found to have an influence on all three aspects being investigated. Some of these arrangements were even found to be unaffected by the changes in urban economy. These results suggest that, no matter how global a city is, at least some aspects of urban life, such as inequalities, are subject to the arrangements made by central and local authorities, and that the authorities have alternatives to cope with the impacts of globalisation. It is misleading to think uncritically of the changes we see in cities and the policies we make on them as necessary for economic prosperity.

The comparisons of Beijing and London offer some insight into how categorisations of cities could be better thought of in future. Firstly, cities are divided into different

categories largely because they are thought to be different on a specific dimension that is subjectively defined. Thus, as shown by the results in this thesis, cities across these divides in fact have more aspects in common than they are thought to have. These divides could be unlearned. Secondly, it might be true that categorisations are still needed to better understand cities; and this thesis also adopted the category of global city. But in using them, what should be born in mind is that these categorisations are not a fact of nature, but a fact of human production. They should not limit our imaginations of comparisons and urban futures. Thirdly, in this much globalised world, almost all large cities are embedded in globalising networks, an embeddedness that can be seen from the results of this thesis, or from the spread of COVID-19. Thus, even if categorising cities might still be needed for analytical purpose, the way in which they are categorised might need to be adapted to the world we are living in today. The territorial-based imaginations (such as North/South) are likely to become increasingly outdated.

This thesis underlines the imperative of combining conceptual and empirical work in postcolonial urban research. It showed that conceptual work could help evoke an awareness of the geographical inequality in knowledge production, and could help envisage the directions in which this inequality can be addressed. It also showed that these directions could be practiced by conducting empirical investigations. Moreover, results of this thesis highlight the fact that it is through empirical research that existing Western-centred ideas are reconstructed, and that this reconstruction can in turn support

the conceptual arguments. In decolonising urban knowledge, conceptual and empirical work are both needed and mutually complementary; they should not be practiced separately.

Evaluation

This thesis has contributed to the literature of comparative urbanism, global city, and urban inequalities. It has responded to one important agenda for comparative urbanism, which is to 'test the hypothesis that is silently assumed in most comparative research', that 'few aspects of urban life are common across the different contexts' (Robinson, 2011). It has tried to broaden the understanding of global cities by discussing both the characteristics of being, and the pathways of becoming, a global city, and by revealing how urban life there is shaped by the dialectics of global-local dynamics. It has attempted to reconstruct the knowledge of urban inequalities: it revealed that cities can take different paths to deal with inequalities even if they face similar competitive pressure in economic globalisation; and it uncovered the contextual contingency of the dominant inequality narrative. Collectively, these contributions have helped reveal how limited some of the existing urban knowledge is, and how great is the potential of a wider set of urban comparisons in renewing them. They have contributed empirical evidence to the field of postcolonial urban research, a field in which matters of research practice have not received the attention that they deserve.

This thesis has contributed not just empirical evidence, but also methodological and

conceptual advances to postcolonial urban research. It has highlighted the relevance of the comparative methodology to decolonising urban knowledge, and, at the same time, has countered the conventional view of this methodology as a quasi-scientific approach. It has advocated and practiced a new way of comparing: cities across the geographic divides are drawn into comparison, neither their contexts nor their urban instances have to be similar, instead it is that being embedded in globalising networks is the common ground that allows them to be comparable and compared. Conceptually, this thesis has contributed to a re-imagination of a more equal, cosmopolitan landscape of urban theories, to a re-imagination of urban theories as being dynamic and 'alive', and to setting out a new step towards both re-imaginations. In this step, the geographic divides are unlearned, the reconstruction of urban theories is advocated; and the aim of this step is to help these theories achieve pluralistic universalism. Taken together, this thesis has made conceptual, methodological, and empirical contributions to the agenda of decolonising urban research. It is an intervention in the production of urban knowledge.

The decision to focus the research here quantitatively has brought this thesis several limitations. The most obvious one is that the subjective dimensions of inequality, such as the feeling and experience of being segregated, are left unexplored. Investigations of these dimensions can complement the quantitative results presented in this thesis, but would require a qualitative and humanistic approach. Moreover, studying cities quantitatively is inevitably confined by the information available in the data sources. This thesis is no exception. In Chapter 5, the labour force was compared on the basis

of residence; it would be helpful to take the workplace population into consideration if relevant data are available. In Chapter 6, the level of earnings inequality in both cities were underestimated given that the variable of earnings was top-coded prior to release. In Chapter 7, although I was aware that socio-spatial inequalities are usually analysed at the neighbourhood level, I had no choice but to use districts/boroughs as the areal unit, as they are the level at which the data sources are provided. These limitations point to the imperative of improving the quality of data sources that we now have (especially the data about cities). They also remind us that quantitative results are not as objective as they may appear to be; they are at least subject to the information provided in the datasets which is produced by subjective human beings.

In hindsight, there was a silenced assumption underlying chapters 5-7, that economic structure in both cities are mostly, if not entirely, influenced by their global status. This assumption might not be true. As with the social and spatial spheres being analysed in this thesis, the economy of global cities might also be subject to the dialectics of global-local dynamics. For example, the advantage of Beijing in the hi-tech industries might not simply be related to its global city status, but also to the state's ambition to construct Beijing as a hi-tech and innovative city. Thus, the economic structure of the two cities is likely to be shaped by multi- and inter-scaler forces, which then has an impact on both the social and spatial spheres. The story told in this thesis is a simplified one. More efforts need to be made in the future to unfold the complex ways in which the economic, institutional, social and spatial arrangements are affected by the dialectics of global-

local dynamics, and are interwoven with one another.

Future agenda

The empirical results of this thesis show opportunities for future research on global cities. As shown in Chapter 4, even though Beijing and London have achieved now a similar and comparable global city status, their pathways to global city formation and their ways of coordinating larger parts of the world economy are different. From these results, one might expect a new typology of global cities; and one might go on to investigate how this new typology is related to the geo-historical contexts of these cities. Moreover, results from chapters 5-7 revealed that the influence of the economy varies across the three aspects of urban life being investigated. This finding points to a new avenue of global city research, which is to compare the susceptibility of different social and spatial phenomena to the so-called global city function. More empirical research is needed to disclose the nuances of the influence of economic globalisation on urban life.

The comparative results presented in this thesis open up three directions for research in which the understanding of urban inequalities can be advanced. Firstly, as shown in Chapter 6, between Beijing and London, a more pronounced difference was found in the lower than in the upper half of the earnings distribution. This finding suggests that more investigations might be needed to explain the inequality variation not just at the city level, but also across different parts of the earnings distribution. Secondly, in Chapter 7, I have made several attempts to distinguish inequalities at different scales;

and these attempts elicit a possible field that might worth investigations, which is to compare the socio-spatial inequalities across scales. Thirdly, as suggested above, research on inequalities can be advanced for following more closely an avenue that cares more about 'feelings' than about 'numbers'. These two aspects could even be combined in a single piece of new research. This combination may have significant implications for policy makings: it may show that policies made based on numbers may or may not work for reducing the feeling of how unequal the society is.

This thesis, in showing the feasibility and theoretical potential of comparing cities across the imagined geographic divides, sends the message that a wider set of inter-city comparisons is needed in urban studies. Not only can relatively new concepts, such as the global city, be used to draw once separated cities into conversations; a multiplicity of global circuits can also serve as a basis on which different cities can be compared. Moreover, one way in which future research of comparing cities could be conducted is to have a clear theoretical sense prior to comparison, an equal attention to both commonalities and differences during comparison, and a reflection on that particular theoretical sense after comparison. In doing so, comparative results could contribute to revealing the parochial nature of many so-called universal concepts and to helping these concepts achieve pluralistic universalism. As suggested by Sen (1992), there is a distinct and interesting possibility of developing broader or trans-positional set of views by building on a range of positional views.

This thesis has proposed and practiced a new step to decolonising urban knowledge, the results of which, I hope, could encourage more urban researchers to take this step. It is hoped that efforts could be made to critically reflect our existing urban knowledge via a wider set of urban comparisons. It is also hoped that theorisations could be made on urban phenomena that either have yet to be conceptualised or are yet to appear, in a way that attends to the experiences of a wider diversity of cities. The practice of these theorisations would require an attentiveness to unnoticed (or taken-for-granted) urban phenomena, to diverse contexts in which these phenomena take place, and to never-ending journeys between empirical investigations and theoretical conceptualisations. And, as pertains the contemporary relevance of the Geographical field of urban studies, this practice, could, perhaps should, maybe almost certainly would, become increasingly inevitable.

Supplementary material A: A reassessment of the difference in the composition of the labour force between Beijing and London

In Chapter 5, the composition of the labour force between Beijing and London has been claimed to be similar. This claim was made primarily on the basis of observation and personal judgement. For example, the suggestion that the age structure of the two cities was similar was made due to the similar shape of their age pyramids and the same mode (25-29) in their age profiles. This practice might seem to be not very objective, or even a bit arbitrary; but it is actually widely practiced in interpreting data, especially in the field of Human Geography.

Having said that, the rigorousness of the research could be enhanced by providing some objective criteria (or benchmark) by which the extent of similarity/difference could be assessed. One common technique of assessing the distributional difference is the Chi-square test. Thus, even though Chapter 5 has been published as a paper, it might be helpful to supplement the paper with a statistical test. The results are shown in Table A.1.

According to the Chi-square test, the two cities are statistically different in educational structure of the labour force, but not in age and gender structures. These results are generally in line with the conclusions reached in Chapter 5, which were derived more subjectively.

Table A.1. Results of the Chi-square test

	All population			Labour force		
	Chi-squared statistic	Degree of freedom	P-value	Chi-squared statistic	Degree of freedom	P-value
Age	3.864	10	0.953	8.480	10	0.582
Gender	0.130	1	0.719	0.785	1	0.375
Educational level	27.088	3	<0.001	26.389	3	<0.001

Notes: null-hypothesis: the distribution of age/gender/educational level of all population/labour force is not significantly different between Beijing and London.

The Chi-square test is widely applied in examining the distributional difference between two groups; but it alone might not be enough for this specific research. For example, the gender structure of the labour force is likely to be statistically indifferent across all cities in the world; for the labour force of most contemporary cities should have a sex ratio between 100 and 150. Thus, the widely used significance level of 0.05, or 0.1, is probably not a very good benchmark for the evaluation here. A new benchmark, which is based on the difference from other cities, might serve the evaluation in this specific research better.

The difference between the case study cities and the rest of their respective country (China and England) is chosen as the new benchmark. This choice is made for two reasons. First, in the global city thesis, there is an enduring debate on the importance of nation-states. Accordingly, nation-states have almost always been implicitly set as a benchmark for assessing whether or not global cities are becoming increasingly similar to each other. Second, a global-local nexus was proposed in Chapter 5 to understand the composition of the labour force, in which factors at the national level (education development, caregiving system etc.) were found to counteract the global force. Thus,

using nation-states as the benchmark can well capture this tension specific to the research.

The way in which the level of similarity is evaluated against the new benchmark is the same as that in the hypothesis testing. Specifically, the Chi-square test is applied to examine how different a structure is between two places. If the level of difference between the two cities is smaller than that between them and the rest of their respective country (the *p*-value of the former is larger than that of the latter), then it should be reasonable to claim that the two cities are more similar to each other than to their respective country in this specific structure. In other words, the two cities are 'similar enough' to be regarded as very similar.

Results are summarised in Table A.2. They show that: 1) the age structure of the two cities is more similar to each other than to the rest of their respective country; 2) the gender structure of the two cities is less similar to each other than to the rest of their respective country; 3) Beijing shares more similarity with London in educational structure than it does with the rest of China; but London is less similar to Beijing in this structure than to the rest of England. Viewing these and above results together, it could be concluded that: the age structure of the labour force is unquestionably very similar between Beijing and London, whereas there is no clear-cut answer to the question of whether or not the gender and educational structures are similar between the two cities. The answer to this question depends on which criterion is subjectively chosen; this

subjectivity in turn justifies the practice in Chapter 5.

Table A.2. Are Beijing and London more similar to each other than to their respective country?

***p*-values from the Chi-square test**	**Age**	**Gender**	**Education**
Beijing-London	0.582	0.376	0.004
Beijing-China	0.197	0.572	<0.001
London-England	0.494	0.959	0.010
Whether the two cities are statistically different in	No	No	Yes
Whether the difference is larger than Beijing vs. the rest of China	No	Yes	No
Whether the difference is larger than London vs. the rest of England	No	Yes	Yes

Supplementary material B: Authorship declaration and statement of authorship

Authorship declaration

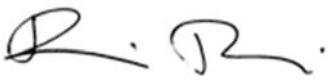
SECTION 1 – to be completed by the Student.

Name	Qiujie Shi
Thesis Title	Comparing the Social Structure in Beijing and London: Towards a more equal, cosmopolitan landscape of urban theories
Title of co-authored chapter(s)	Chapter 7 Growing socio-spatial inequality in neo-liberal times? Comparing Beijing and London

SECTION 2 – to be completed by the co-author for each chapter.

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Chapter(s) co-authored with	Chapter 7 Growing socio-spatial inequality in neo-liberal times? Comparing Beijing and London
Please describe the candidate's contribution to the chapter(s).	Qiujie Shi is responsible for most of the work of this chapter. Her contribution includes: conceptualization, methodology, software, formal analysis, investigation, resources, data curation, writing – original draft, and visualization.

SECTION 3 – to be completed by the supervisor.

Name	Danny Dorling		
Signature		Date	19/01/2021

Statement of authorship

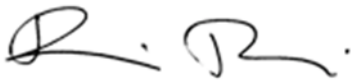
SECTION 1 – thesis information

Name	Qiujie Shi
Thesis Title	Comparing the Social Structure in Beijing and London: Towards a more equal, cosmopolitan landscape of urban theories
Title of co-authored chapter(s)	Chapter 7 Growing socio-spatial inequality in neo-liberal times? Comparing Beijing and London

SECTION 2 – authorship contributions

Title of co-authored chapter	Chapter 7 Growing socio-spatial inequality in neo-liberal times? Comparing Beijing and London
Authorship contributions	Qiujie Shi: conceptualization, methodology, software, formal analysis, investigation, resources, data curation, writing – original draft, and visualization Danny Dorling: conceptualization, methodology, writing – review &editing, supervision

SECTION 3 – signatures of all authors

Author's name	Author's signature	Date
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