

**Universities and the Knowledge Economy: creating a vehicle for  
effective urban regeneration?**

Thesis submitted in accordance with the requirements of the University of  
Liverpool for the degree of Doctor in Philosophy

By Jessica Lucy Barker

June 2010

**BEST COPY**

**AVAILABLE**

## ACKNOWLEDGEMENTS

Many thanks to my supervisor, Professor Peter Batey, for all of his guidance, support, enthusiasm and patience; he was a constant source of motivation and inspiration. I would like to thank my second supervisor, Dr Simon Pemberton, for his support and encouragement. Thanks also to my friends and colleagues in the Department of Civic Design for their help and encouragement. I would also like to express thanks to the Economic and Social Research Council (ESRC) who sponsored this research.

I am very grateful to all of the interviewees, who made this research possible. Thanks to the city of Lowell and the town of Bolton for welcoming me and my research endeavours. Particular thanks go to Professor Robert Farrant in Lowell for his assistance and support.

A very special thank you to my parents, Richard and Sue, for their endless encouragement, assistance and support. Many thanks also to my big brother, Danny, for always helping me, supporting me and believing in me; and to his partner, Lucy, for her encouragement and enthusiasm. My family have inspired me all of my life, and for that I am always grateful. Thanks to my friends (especially 'The Girls' and Gareth) for always being there for me when I needed them and always being able to make me laugh.

Last, but by no means least, a special thank you to my husband, Nik, for his support, encouragement, patience and tolerance. For looking after me, listening to me and believing in me.

Without the support of my husband and my family, this would not have been possible.

# **Universities and the Knowledge Economy: creating a vehicle for effective urban regeneration?**

By Jessica Barker

This research uses a case study approach, looking at two smaller cities (Bolton, in North West England and Lowell in Massachusetts, USA) and their main universities, to assess the path cities can take in seeking to become knowledge cities, how we can judge where a particular city is on that path, and the role a university can play in contributing to local economic and social development.

Globalisation and the knowledge economy are having a profound effect on the way in which higher education operates in society and the role it is perceived as playing in relation to local and regional economies. The policy arena in particular has embraced the concept of the knowledge economy and with it the concepts of the learning region and the knowledge city as means of regeneration, in turn placing much more emphasis on the relationship between universities and their localities. At the same time, we see greater prominence given to the role of partnerships, within processes of governance, in contributing to urban regeneration.

The processes a city can take to become a knowledge city, and the role of higher education therein, is an underdeveloped area of research, especially in relation to smaller cities. This research is aimed at exploring this area, by addressing the extent to which the knowledge economy can be used as a vehicle for the urban regeneration of smaller cities, and the role higher education can play within. Looking at smaller, post-industrial cities which are in close proximity to large metropolitan cities, this research takes into account the impact that being a 'satellite' city can have on these processes.

The research builds on an existing typology of knowledge cities before moving on to analyse processes of governance and the role of higher education within these processes. The research then focuses on what implications these changes have for higher education, in terms of both the internal and external functioning of universities. The research concludes by addressing implications for theory and making policy recommendations.

## **TABLE OF CONTENTS**

<i>Acknowledgements</i>	<i>i</i>
<i>Abstract</i>	<i>ii</i>
<i>Table of Contents</i>	<i>iii-ix</i>
<i>List of Tables</i>	<i>X</i>
<i>List of Figures</i>	<i>x</i>
<hr/>	
<b><i>CHAPTER ONE INTRODUCTION</i></b>	<b><i>1 – 10</i></b>
<i>1.1 Research Context</i>	<i>1 – 7</i>
<i>1.2 Aim and Objectives</i>	<i>8</i>
<i>1.2 Thesis Structure</i>	<i>9 - 10</i>
<hr/>	
<b><i>CHAPTER TWO LITERATURE REVIEW: THEORY</i></b>	<b><i>11 – 55</i></b>
<i>2.1 Introduction</i>	<i>11 – 12</i>
<hr/>	
<i>2.2 Globalisation</i>	<i>12 – 20</i>
<i>2.2.1 The Development of Globalisation</i>	<i>12 – 14</i>
<i>2.2.2 The Manifestation of Globalisation</i>	<i>14 – 18</i>
<i>2.2.3 Globalisation and Higher Education</i>	<i>18 – 19</i>
<i>2.2.4 Globalisation and Social Exclusion</i>	<i>19 - 20</i>
<hr/>	
<i>2.3 The Knowledge Economy</i>	<i>20 – 30</i>
<i>2.3.1 Learning Regions</i>	<i>22 – 23</i>
<i>2.3.2 Knowledge Cities</i>	<i>24 - 26</i>
<i>2.3.3 From Urban Government to Urban Governance</i>	<i>26 - 30</i>
<hr/>	
<i>2.4 Cities</i>	<i>30 - 33</i>

<i>2.4.1 Urban Scale: smaller cities</i>	32 - 33
<i>2.5 Higher Education</i>	33 - 49
<i>2.5.1 Historical Context</i>	34 - 38
<i>2.5.2 Regional Development</i>	39 - 43
<i>2.5.3 The Knowledge Economy</i>	43 - 47
<i>2.5.4 Triple Helix Partnerships</i>	47 - 49
<i>2.6 Social Inclusion</i>	50 - 55
<i>2.6.1 Social Inclusion and the Knowledge Economy</i>	52 - 55
<i>2.7 Conclusion</i>	55
<b>CHAPTER THREE LITERATURE REVIEW: POLICY</b>	<b>56 - 70</b>
<i>3.1 Introduction</i>	56
<i>3.2 Historical Context</i>	56 - 57
<i>3.3 Current Approaches</i>	57 - 58
<i>3.3.1 The United Kingdom</i>	58 - 63
<i>The Knowledge Economy</i>	59 - 60
<i>Some Devolution of Power</i>	60 - 63
<i>Other Sectors and Agencies</i>	63
<i>3.3.2 The United States</i>	64 - 65

<i>3.4 Policy Implications for Higher Education</i>	<i>65 - 69</i>
<i>3.5 Change in Government: May 2010</i>	<i>69</i>
<i>3.6 Conclusion</i>	<i>70</i>
<b><i>CHAPTER FOUR METHODOLOGY</i></b>	<b><i>71 - 101</i></b>
<i>4.1 Introduction</i>	<i>71</i>
<i>4.2 Why a Case Study Approach?</i>	<i>71 - 73</i>
<i>4.3 Interviews</i>	<i>73 - 74</i>
<i>4.4 Data Analysis</i>	<i>74 - 76</i>
<i>4.5 The Case Study Locations</i>	<i>76 - 84</i>
<i>4.5.1 Bolton</i>	<i>77 - 80</i>
<i>4.5.2 Lowell</i>	<i>81 - 84</i>
<i>4.6 Fulfilling the Methodology</i>	<i>84 - 89</i>
<i>4.6.1 Lowell</i>	<i>85 - 87</i>
<i>4.6.2 Bolton</i>	<i>87 - 89</i>
<i>4.7 The Interviewees</i>	<i>89 - 94</i>

<i>4.7.1 Lowell</i>	89 - 92
<i>4.7.2 Bolton</i>	92 - 94
<i>4.8 Conceptual Framework</i>	94 - 99
<i>4.9 Research Questions</i>	99 - 100
<i>4.10 Conclusion</i>	101
<b><i>CHAPTER FIVE A TYPOLOGY OF SMALLER KNOWLEDGE CITIES</i></b>	<b>102 - 144</b>
<i>5.1 Introduction</i>	102 - 104
<i>5.2 Foundations of a Knowledge City</i>	105 - 135
<i>5.2.1 Knowledge Base</i>	105 - 111
<i>5.2.2 Industrial Structure</i>	111 - 116
<i>5.2.3 Urban Amenities and Quality of Life</i>	116 - 119
<i>5.2.4 Accessibility</i>	119 - 126
<i>Boston</i>	121 - 122
<i>Manchester</i>	123 - 124
<i>5.2.5 Urban Diversity</i>	126 - 129
<i>5.2.6 Scale</i>	129 - 132
<i>5.2.7 Social Equity</i>	132 - 135
<i>5.3 Progress Indicators: Towards a Knowledge City</i>	136 - 142



<i>5.3.1 Development of Human Capital</i>	<i>136 - 139</i>
<i>5.3.2 Development of (new) Knowledge Industries</i>	<i>139 - 142</i>
<i>5.4 Conclusion</i>	<i>142 - 144</i>
<b>CHAPTER SIX UNIVERSITIES AND THEIR PARTNERS: ISSUES OF URBAN GOVERNANCE</b>	<b><i>145 - 175</i></b>
<i>6.1 Introduction</i>	<i>145 - 147</i>
<i>6.2 What is a Partnership?</i>	<i>148 - 151</i>
<i>6.3 Examples of Partnerships from the Case Studies</i>	<i>151 - 154</i>
<i>6.3.1 Lowell Affordable Housing Subcommittee</i>	<i>151</i>
<i>6.3.2 Artbotics (Lowell)</i>	<i>152</i>
<i>6.3.3 Bolton Vision</i>	<i>153</i>
<i>6.3.4 Bolton WIDE</i>	<i>153 - 154</i>
<i>6.4 Issues of Engagement</i>	<i>154 - 159</i>
<i>6.4.1 Identifying and Engaging all Partners</i>	<i>154 - 155</i>
<i>6.4.2 Motivations and Incentives</i>	<i>155 - 156</i>
<i>6.4.3 Culture and Expectations</i>	<i>156 - 159</i>
<i>6.5 Operation of Partnerships</i>	<i>160 - 173</i>
<i>6.5.1 Leadership</i>	<i>160 - 162</i>

<i>6.5.2 Talking-shops</i>	<i>162 - 163</i>
<i>6.5.3 Partnership Fatigue</i>	<i>164 - 165</i>
<i>6.5.4 Power Relations: University as Resource, not Partner</i>	<i>165 - 166</i>
<i>6.5.5 Spatial Mismatch</i>	<i>166 - 168</i>
<i>6.5.6 Institutions or Individuals: Partnerships or Networks?</i>	<i>168 - 173</i>
<i>Individual Profile Bolton: Mollie Temple</i>	<i>171 - 172</i>
<i>Individual Profile: Lowell William Hogan</i>	<i>172 - 173</i>
<i>Lowell: Robert Farrant</i>	<i>173</i>
<i>6.6 Conclusion</i>	<i>174 - 175</i>
<b><i>CHAPTER SEVEN UNIVERSITIES AND INTERNAL INTEGRATION</i></b>	<b><i>176 - 191</i></b>
<i>7.1 Introduction</i>	<i>176 - 178</i>
<i>7.2 Students</i>	<i>178 - 179</i>
<i>7.3 Staff Reward and Punishment: Processes of Career Advancement</i>	<i>179 - 181</i>
<i>7.4 'Battles'</i>	<i>181 - 184</i>
<i>7.5 Missions</i>	<i>184 - 186</i>
<i>7.6 The Core Meaning of A University</i>	<i>186 - 189</i>
<i>7.7 Conclusion</i>	<i>190 - 191</i>

<b>CHAPTER EIGHT CONCLUSIONS</b>	<b>192 - 215</b>
<i>8.1 Summary</i>	<i>192 – 195</i>
<i>8.2 Research Findings and Evaluation of Research</i>	<i>195 - 210</i>
<i>8.2.1 Objective One</i>	<i>197 – 198</i>
<i>8.2.2 Objective Two</i>	<i>199 – 202</i>
<i>8.2.3 Objective Three</i>	<i>203 – 208</i>
<i>Power</i>	<i>203 – 204</i>
<i>Difference</i>	<i>205 - 208</i>
<i>8.2.4 Objective Four</i>	<i>209 - 210</i>
<i>8.3 Final Conclusions</i>	<i>211 - 215</i>
<i>8.3.1 Contributions to Knowledge</i>	<i>211 - 212</i>
<i>8.3.2 Weaknesses</i>	<i>212 - 213</i>
<i>8.3.3 Future Research</i>	<i>213 - 214</i>
<i>8.3.4 Final Thoughts</i>	<i>214 - 215</i>
<b>BIBLIOGRAPHY</b>	<b>216 - 232</b>
<b>APPENDICES</b>	<b>233 - 252</b>
<i>Appendix One Case Study Selection</i>	<i>233 - 240</i>
<i>Appendix Two Lowell Interview Structures</i>	<i>241 - 247</i>
<i>Appendix Three Bolton Interview Structures</i>	<i>247 - 252</i>

## LIST OF TABLES

<i>Table 1: Mutual Reciprocity between Higher Education and its Locality</i>	67
<i>Table 2: Details of Lowell Interviewees</i>	89 - 92
<i>Table 3: Details of Bolton Interviewees</i>	92 - 95
<i>Table 4: Research Questions</i>	100
<i>Table 5: University-Region Table</i>	108 - 109
<i>Table 6: Conclusions Table</i>	196

## LIST OF FIGURES

<i>Figure 1: Map of Bolton and Wider Region</i>	77
<i>Figure 2: Map of Lowell and Wider Region</i>	81
<i>Figure 3: The Global Knowledge Economy</i>	96
<i>Figure 4: A Knowledge City and its Aspiring Neighbour</i>	97
<i>Figure 5: An Aspiring Knowledge City</i>	98
<i>Figure 6: A Model of Network-Partnership Interdependency</i>	170

# **CHAPTER ONE**

## **INTRODUCTION**

This introductory chapter will outline the context of the research, with a brief description of the policy context and the definition and development of the main concepts of the knowledge economy, knowledge cities and globalization. The introduction will end with a brief discussion of higher education and the changes the sector has undergone, in light of processes of globalization and the knowledge economy and specifically focused on the current emphasis on partnership working. The introduction then outlines the overall aim of the research, broken down into four main objectives+, before drawing to a close by summarizing the thesis structure.

### **1.1 RESEARCH CONTEXT**

Over the next 20 years, the United Kingdom must create a society committed to learning throughout life. That commitment will be required from individuals, the state, employers and providers of education and training. Education is life enriching and desirable in its own right. It is fundamental to the achievement of an improved quality of life in the UK (Dearing, 1997, Introduction)

In May 1996 a National Committee of Inquiry into Higher Education was appointed to advise in what ways the British university sector should develop to meet the needs of the United Kingdom at the beginning of the twenty-first century. The subsequent report, published in 1997 and titled 'Higher Education in the Learning Society' (but more commonly known as the 'Dearing Report', after its primary author, Lord Dearing) puts itself firmly in the context of the learning, or knowledge-based, society. The authors regard a worldwide shift in the organisation of capitalism as having had a profound effect on the way in which higher education operates in society and the role it plays in regards to the economy:

The new economic order will place an increasing premium on knowledge which, in turn, makes national economies more dependent on higher education's development of people with high skills, knowledge and understanding, and on its contribution to research (Dearing, 1997, Introduction).

Dearing illustrates here that, as capitalism becomes more deeply entrenched in the 'new economic order', workers will need to become more knowledgeable and more skilled to develop and maintain the success of local, regional and national economies. Higher education is therefore central to providing the infrastructure necessary to fulfil the needs of this new economy, given its most primary function of providing access to knowledge and skills for the citizenry. As Dearing articulates, globalisation and economic changes have brought about new challenges to higher education and so the roles and responsibilities of universities have shifted.

Since the late 1980s, academics have discussed the rise of what has been labelled the 'knowledge economy', one in which knowledge is becoming the most prevalent component of the economy. As recent theorists have argued:

...the role of knowledge (its generation, dissemination and use, tacit and codified) as a driver of growth has increased so significantly in the past few decades that it makes sense to speak of a knowledge-based economy and to study its spatial dimensions in more depth (van Winden *et al.*, 2007, p.528).

The development of science and technology, and the narrowing relationship between technology and the economy, has led to greater interconnectedness within and between countries. Information Technology, the networks it engenders and role it plays in the economy, has enabled the growth of the knowledge economy and facilitated a process of globalisation:

Collectively... [new] technologies and their interactions are producing a knowledge-based economy that is systematically changing how all people conduct their economic and social lives. Often, globalisation is seen as the cause of these changes, when it is in fact only one of many effects (Thurow, 2000, p.20).

Globalisation, based on the knowledge economy, has far-reaching implications for nations around the world. In recent decades, the role and powers of nations have shifted away from proactive sovereignty and dominance over corporations, towards reacting to global forces and courting corporations:

Instead of being a controller of economic events within its borders, the nation-state is increasingly having to become a platform builder to attract global economic activity to locate within its borders (Thurow, 2000, p.21).

For the nation state to attract global economic industry and activity it must demonstrate that its regions and cities, and its labour market, are equipped to engage with the knowledge economy. The spatial dimensions of the knowledge economy have become increasingly important in academic and policy terms, with an emphasis on the concepts of a 'learning region' and a 'knowledge city'. Learning regions and knowledge cities are concepts describing places which encourage the development of local innovation and entrepreneurship as a means of engaging with the global economy:

What characterises economically successful regions today is a high level of mutual learning between regional actors and the vast amount of knowledge that is exchanged between them. In other words, these regions are a breeding ground for innovation (Rutten in Boekema, 2000, p.246).

The focus on learning regions and knowledge cities coincides with a greater focus on urban regeneration and the role of partnerships, the processes of governance, in contributing to urban regeneration. Urban regeneration is both a process and an aim: it is the process cities undertake to improve their social and economic fabric, with the aim of becoming prosperous, cohesive places without pockets of social exclusion, deprivation and unemployment. Partnerships are increasingly perceived to be of importance in urban regeneration processes as they are seen as a way to have the 'best of both worlds' - bringing resources and knowledge from both the public and private sector to the complex and demanding process of urban regeneration (Bevir, 2009, p.14).

In general, literature and policy addressing the knowledge economy and knowledge city concept focus on large, metropolitan cities. More attention needs to be given to smaller cities in both academic and policy circles to ascertain their ability to house partnerships, become knowledge cities, evoke urban regeneration and contribute to the wider learning region (Van Winden *et al.*, 2007).

Within a learning region, it is now widely recognised that the driving force for innovation and success is the urban centre that can include:

...not necessarily only cities with a strong 'formal' knowledge base but also those specialised in advanced services, creative industries or innovative manufacturing centres that may emerge as successful 'knowledge cities' (Van Winden *et al.*, 2007, p.528).

Having a strong knowledge base, with a highly skilled and educated population, has never been more economically important. In the context of the knowledge economy, the Dearing Report argues that Britain must engender a culture that encourages learning and education in all aspects of the life of all citizens (Dearing, 1997, Introduction). Dearing and his team recognise a paradigmatic shift in Higher Education and call for policy to respond with an objective of learning at all levels, arguing that:

...in higher education, this aspiration should be realised by a new compact involving institutions and their staff, students, government, employers and society in general. We see the historic boundaries between vocational and academic education breaking down, with increasingly active partnership between higher education institutions and the worlds of industry, commerce and public service (Dearing, 1997, Introduction).

The Dearing Report argues that, to engender a culture of learning at all levels, higher education must move away from its traditional, elite role towards a mass model, taking a more active role in society by engaging with the public sector, industry and the community. Given higher education's function as a knowledge source and provider, the sector becomes increasingly important, in economic terms, in a knowledge-based society. Being more economically and socially significant, higher education faces a new set of challenges and demands in a global, knowledge economy.

The challenges globalisation poses to Higher Education, the pressures the sector is enduring, have been widely discussed:

...today the university is having to adjust to global forces; it is no longer an institution of the national state, and the contradictions it is currently experiencing



are in many ways expressions of the deeper contradictions of globalization and nation state (Delanty, 2001, p.77).

The Dearing Report presents the knowledge economy as inevitable: economies cannot choose whether to engage in the knowledge economy, but are being swept along by the new economic order and if areas do not engage with the knowledge economy they will be left behind. Mindful of this, Dearing and his team express a need for higher education to become more socially inclusive:

...despite the welcome increase in overall participation, there remain groups in the population who are under-represented in higher education, notably those from socio-economic groups III to V, people with disabilities and specific ethnic minority groups (Dearing, 1997, Introduction).

This call for greater emphasis on social inclusion does not just stem from a social conscience, but is presented as a necessary ingredient of the knowledge economy: as people are the resources, economic success will hinge on the level of education and skills of the people, including those groups traditionally excluded from participation in higher education.

Dearing and his team are not alone in foreseeing that globalisation and the knowledge economy will engender a rise in problems of social exclusion. Much of the literature dedicated to these global shifts argues that inequality is greater, and will continue to grow, in a knowledge-based economy. Globalisation and the knowledge economy have encouraged a greater emphasis to be placed on knowledge and skills in society. It seems processes of globalisation and the subsequent knowledge economy have caused a greater schism between the 'haves' and the 'have-nots' in society:

...While there has been a fundamental change in the relationship between education, economy and society it is far removed from the policy rhetoric of the knowledge economy. Trends in education, employment and income distribution do not support the dominant view that the historical conflict between justice and efficiency has been resolved, but points to an intensification of the struggle for credentials (Brown and Lauder, 2003, p.4).

Inequality, it seems, is a worldwide, growing feature of globalisation. Inequalities between and within social classes, regions and countries are sharply felt and, increasingly (as with other forces of globalisation), national governments are limited in their ability to act. Thurow discusses these two impacts of globalisation in an article that unpicks the causes and consequences of shifting global forces. Thurow argues that:

The pressures fracturing the nation-state are also fracturing beliefs in, pressures for, and attainment of economic equality between individuals, companies, and countries. The economic gaps that have over the course of the last half-century shrunk are now widening (Thurow, 2000, p.24)

National and local governments are aware of the need for citizens to be equipped with skills and knowledge in order to engage with, and reap the rewards of, the knowledge economy. There is increased awareness, in political and academic arenas, of the need for greater emphasis to be placed on social inclusion to enable all citizens to access education and engage with the knowledge economy. Universities are expected to play a greater role in regards to inclusion, and recent decades have seen a growing widening participation agenda in Higher Education.

However, to enable knowledge to flourish in an economically viable manner, universities are also expected to engage more fully with business. In 2003, the Lambert Review of Business-University Collaboration was published and, like the Dearing Report, addresses the ways in which the social, economic and political context within which universities operate has radically shifted over recent decades. Lambert discusses how universities have responded to this changing context and focuses on analysing the ways in which universities can and should work with private business. Lambert and his team argue that universities are playing an increasingly important role in regional economic development: having cast off their ivory tower image, research-intensive universities are now central to the most dynamic regions of the UK (Lambert, 2003, p.9).

It is therefore evident that in the modern, globalised knowledge economy higher education is no longer seen as separate to society, akin to monasteries in scholarly seclusion, but is rather regarded as a key player in the urban and economic landscape.

Universities are expected to fulfill a number of spatial and social functions, contributing to, engaging with, and improving their locality. Strong 'town and gown' relations are seen as the responsibility of a university, which are regarded as having obligations to their home city and wider region. Higher education is expected to be aware of wider society and work with local government and private business in enhancing the economic and social regeneration of the city which houses it. To engender a successful 'learning region' and 'knowledge city' the role of a university is crucial (Van Winden *et al.*, 2007). For the universities, engaging in urban regeneration and economic development is a means of safeguarding their position and demonstrating their worth, especially important to newer universities (which, in the UK, were created post-1992 as part of a government attempt to increase the size and status of the higher education sector). Charles' work on universities and regional development found that economic development was a higher priority among newer (post-1992) universities as opposed to older and more established institutions (Charles, 2003, p.16).

The increasing importance of higher education and private business in urban regeneration has been encouraged by a move away from the traditional forms of government towards an increasing reliance on processes of governance. Central government is no longer regarded as the key player in attempts at social and economic regeneration, local government has more responsibility for its own localities and is increasingly expected to be entrepreneurial with a focus on partnerships. Higher education and private business are seen as the two key sectors to work with local government in directing and managing urban regeneration. Therefore to further regeneration and build a successful knowledge city it is commonly perceived that local government, higher education and private business need to form and sustain strong, progressive and effective partnerships tasked with urban regeneration. Related to this, Lambert points to the importance of university governance, highlighting its increasing complexity, partly due to the wide variety of stakeholders. The partnership role alters what is expected of universities and their academic and managerial staff, which we will examine in chapters 6 and 7.

## **1.2 AIM AND OBJECTIVES**

### **AIM**

To analyse how, and to what extent, universities can support smaller cities to exploit the knowledge economy as a means of achieving urban regeneration

### **OBJECTIVES**

1. To explore the evolving role of higher education in governance and processes of urban regeneration, within a globalised knowledge economy
2. To examine, using a case study approach, the spatial dimensions of the knowledge economy in relation to smaller cities, to further our understanding of what it means to be a knowledge city and the path cities take in becoming knowledge cities
3. To explore the evolving role of higher education in processes of urban governance and urban regeneration, to analyse how and to what extent a university can promote urban regeneration through partnership working aimed at the exploitation of opportunities in the knowledge economy
4. To consider implications for the scale and nature of regeneration policies, and the role of universities therein

### **1.3 THESIS STRUCTURE**

To comprehensively explore the issues briefly introduced above, the thesis will begin with an in-depth literature review, which has been split into two chapters to focus on theory and practice. The first literature review chapter (Chapter 2) will turn its attention to theoretical and conceptual issues, examining globalisation, the knowledge economy and higher education in terms of how we understand the concepts, how they have evolved and what they mean in the society and economy we have today. The second literature review chapter (Chapter 3) will take a more practice-based, policy-orientated approach. This chapter will narrow-in on higher education and the role that universities are now expected to play in terms of urban regeneration and the creation and continued development of a knowledge city. Chapter 3 will demonstrate how the expectations and responsibilities of universities have changed, and will outline what is currently expected of higher education by government policy.

Moving on from the literature review, the methodology of the research, based on case studies, shall be examined. The criteria for selecting case studies, the locations considered and the final selected case study locations shall be discussed. Coming out of the methodology, the conceptual framework of the thesis will be explored to seek to achieve a more detailed understanding of the inter-play of factors that relate to this research. The conceptual framework ends with an outline of the research questions to which the thesis responds, and how these research questions relate to the specific objectives of the research.

Following on from the conceptual framework and research questions, there will be the first of three discussion chapters. Chapter 5 will address an existing Knowledge City Typology in relation to the focus of this research, in particular how the typology can be made relevant to smaller cities. This chapter will facilitate the discussion, comparison and contrasting of the case study locations whilst expanding on an existing knowledge city typology. The objective of Chapter 5 is to unpick the concept of a knowledge city. The concept will be explored in a way which draws out the process a city goes through to

become a knowledge city and how we can identify where different cities belong on the spectrum towards becoming knowledge cities. Focusing on smaller cities, this chapter will expand on an existing attempt to draw up a knowledge city typology in relation to larger, metropolitan cities. This chapter will discuss the case study locations in terms of the strength of their knowledge city foundations and the extent to which they have made progress towards becoming a knowledge city, thereby furthering our understanding of what makes a knowledge city and how we might judge the extent to which different cities, especially smaller cities, are well-placed to engage with the knowledge economy.

Chapter 6 will home-in on the issue of governance, addressing the role of universities, in partnership with local government and private business, in driving and managing processes of urban regeneration. Chapter 7 will then narrow-in further, to analyse the internal aspects of a university's engagement with partnerships, the knowledge economy and urban regeneration. The extent to which higher education's role in processes of governance has altered the internal operation of universities will be examined. The case study locations will again be used as a means of exploring these issues in-depth and analysing the individual and institutional implications of higher education's role in the creation and sustenance of a knowledge city. The objective of these chapters is to analyse the role a university can play within partnerships to create a knowledge city and, in doing so, contribute to urban regeneration. Within this, chapters 6 and 7 will explore the implications of the urban regeneration role of universities, in terms of the internal and external nature of higher education.

The thesis will end with a conclusions chapter which will return to the original aim and objectives and will, with reference to the conceptual framework and research questions, outline in what ways these have been addressed. Chapter 8 provides a summary of the research, reflecting on theoretical findings and the thesis' contributions to knowledge. The chapter also provides policy recommendations for central government, local government and universities in terms of the role of higher education in the regeneration of cities within the context of a global knowledge economy.

## **CHAPTER TWO**

### **LITERATURE REVIEW: THEORY**

#### **2.1 INTRODUCTION**

With the shift in Western economics, away from production and manufacturing and towards a 'knowledge economy', a greater focus on the role of knowledge in regeneration has emerged, as well as an awareness of processes of regional development and the power of the region in a globalised world. Beginning with a discussion of globalisation, this review will detail the development of globalisation and the way this impacts upon the societies we live and work in, before focussing on the themes of this research in particular, with an examination of the impact of globalisation on, firstly, higher education and then, on problems of social exclusion.

Following the discussion of globalisation, this review will move on to an assessment of the literature concerned with a concept that has emerged out of an increasingly globalised economic order: the 'knowledge economy'. Within this discussion, linked concepts of the 'learning region' and 'knowledge cities' will be addressed, before we move on to look at the way in which the knowledge economy has impacted upon the management of cities and urban regeneration with the debates surrounding the move from government to governance. There will then be a section dedicated to addressing cities in general, what it means to be urban and with a discussion on different types of cities, before moving on to a sub-section on urban scale and smaller cities.

Charting the evolution of higher education, this literature review will discuss how the institution of higher education has evolved over the centuries and the changing demands it is expected to respond to in a modern capitalist society. In this regard, higher education's role in regional development and in the knowledge economy will be addressed. The literature review will highlight tensions between the expectations of universities to meet neo-liberal, 'third way' commercial and economic aims as well as responding to increasing calls to widen participation and contribute to social inclusion. Finally, this section will detail the 'triple helix' relationship that universities are

increasingly expected to engage in, working with the private and public sector to further the urban regeneration of its host city.

The literature review will then move on to a discussion of the concept of social inclusion, charting the origin and development of the concept and what it means within a knowledge economy. Within the context of the discussions of globalisation, the knowledge economy and higher education, this section will address current challenges to social inclusion and to what extent, and how, they are being addressed.

## **2.2 GLOBALISATION**

Times have changed. Globalization, the rise of instant communications and the Internet, the movement of immigrant groups into new countries, and increasing levels of education are but a few of the changes that are transforming societies around the world (Innes and Booher, 2010, p.3)

This research sits within the broad context of globalisation, whereby faster and easier communication is facilitated and the world is 'smaller' and more competitive. This section of the literature review will discuss what is meant by globalisation, charting the development of global processes, before discussing how globalisation manifests itself and what implications come with it, for cities, regions, nations and the world as a whole. The section will draw to a close by analysing the impact of globalisation on higher education and on issues of social exclusion.

### **2.2.1 THE DEVELOPMENT OF GLOBALISATION**

The development of science and technology, and the narrowing relationship between technology and the economy, has brought the world closer together. Information Technology, the networks it engenders and role it plays in the economy, has facilitated a process of globalisation:

Collectively, these [new] technologies and their interactions are producing a knowledge-based economy that is systematically changing how all people conduct their economic and social lives. Often, globalisation is seen as the cause of these changes, when it is in fact only one of many effects (Thurow, 2000, p.20).



Thurrow charts the development of globalisation, arguing that there have been two separate waves. Regarding the first wave as voluntary, in which countries could 'opt out', the second wave is presented as an unavoidable fate for all nations pursuing economic development:

It [second wave of globalisation] is a tsunami wave created by a seismic shift in technology. Governments did not decide to start global sourcing and marketing. Governments did not encourage cross-border corporate merges. Governments did not start electronic commerce. All can be traced to shifts in technology (Thurrow, 2000, p.30).

Thurrow argues here that current forces of globalisation are distinct from the original processes of globalisation in that they have a momentum of their own, outside the remit of control of an individual state. For economic prosperity and development, engaging in the current globalised knowledge economy is a prerequisite (*ibid.*). The role of governments and nations in the development, growth and maintenance of globalisation has been fiercely debated.

Audretsch and Thurik (2000) chart the development of this 'second wave' of globalisation, pointing to political processes as pivotal in the process. Post World War Two, the lingering cold war and political uncertainty made investments in Eastern Europe and the developing world fraught with risk and instability. Europe, North America and some parts of Asia benefited from this global political uncertainty, with a monopoly over the majority of trade. These countries were trusted to be politically stable and with large-scale, low cost production they were able to maintain their competitive advantage. As Audretsch and Thurik outline, three inter-related forces have displaced this competitive advantage away from Europe and North America: increased political stability (in Eastern Europe and some developing countries); the ever-increasing growth in Information Communication Technology, and; processes of globalisation. Greater political stability and a globalised world (and, most importantly, market) have resulted in Multi-National Companies (MNCs) relocating to the country that can offer the most competitive (i.e. the cheapest) production costs. The relocation of companies to low-cost countries is commonly regarded as one cause of globalisation, with such companies chasing the

highest profit. In fact, such relocation is often not a matter of maximising profit, but ensuring survival in a globally competitive climate. In this way, the global relocation of companies is in fact a consequence, rather than a cause, of globalisation:

Confronted with lower cost competition in foreign locations, producers in the high-cost countries have three options apart from doing nothing and losing global market share: (1) reduce wages and other production costs sufficiently to compete with the low-cost foreign producers, (2) substitute equipment and technology for labor to increase productivity, and (3) shift production out of the high-cost location and into the low-cost location... Many of the European and American firms that have successfully restructured resorted to the last two alternatives (Audretsch and Thurik, 2000, p.21).

### **2.2.2 THE MANIFESTATION OF GLOBALISATION**

Globalisation has far-reaching implications for nations around the world. In recent decades, nations have moved away from a proactive, sovereign and dominant role over corporations, towards a role in which they court global industry in an attempt to react to global forces:

Instead of being a controller of economic events within its borders, the nation-state is increasingly having to become a platform builder to attract global economic activity to locate within its borders (Thurow, 2000, p.21).

It is important to recognise that “globalisation is not, however, simply economic” (Brine, 2001, p.121). As Brine highlights, the causes and consequences of globalisation, at every level, move beyond mere economics to impact upon social and cultural spheres of life.

Inequality is a worldwide feature of globalisation, which, some argue, is inevitably rising. Inequalities between and within social classes, regions and countries are sharply felt and, increasingly (as with other forces of globalisation), national governments are limited in their ability to act. Thurow discusses these two impacts of globalisation in an article that unpicks the causes and consequences of shifting global forces. Thurow argues that:

The pressures fracturing the nation-state are also fracturing beliefs in, pressures for, and attainment of economic equality between individuals, companies, and

countries. The economic gaps that have over the course of the last half-century shrunk are now widening (Thurow, 2000, p.24).

Thurow continues to demonstrate the new challenges faced by nation states with regards to inequality. With corporation dominance over nations, maintaining a generous welfare state becomes less and less possible: “the high payroll taxes necessary to finance a generous social welfare state are not globally viable” (Thurow, 2000, p.25). Faced with high payroll taxes, companies can simply relocate to countries where taxes are lower. It is important to note the far-reaching impact this threat to the welfare state will have in Europe. Over the course of the post-war period, a comprehensive welfare state in Western Europe has been the pride of many countries, not just (in theory, at least) protecting the most vulnerable members of society, but also defining the socio-political context. The potential unravelling of the welfare state in Western Europe would further and deepen social inequalities and would redefine the political landscape:

The problems are political. Democracy (one person, one vote) implicitly assumes some degree of economic equality.... As market forces produce ever more unequal distributions of economic wealth and as democratic governments lose their power to alter the market’s distribution of earnings and wealth, political deliverables become harder to find (Thurow, 2000, p.26).

To resist the negative impacts of globalisation, it seems that the Western world must embrace the knowledge economy; therefore forging a new economic role (now the production role has been outsourced to countries such as China). Audretsch and Thurik (2000), together with Thurow (2000), argue that, regardless of the causes of globalisation, engaging with the knowledge economy is the only way to protect against the negative consequences. As Europe and North America have lost their competitive advantage in traditional industries, being priced out of production and manufacturing, they must move into new industries which offer high wages for ‘knowledge workers’ (Audretsch and Thurik, 2000, p.22).

Audretsch and Thurik outline the potential for nations to embrace the knowledge economy and reap rewards for their citizenry:

The global demand for products in emerging knowledge-based industries is high and growing rapidly; yet the number of workers who can contribute to producing and commercializing new knowledge is limited to just a few areas around the world. ... economic activity based on new knowledge will generate higher wages and greater employment opportunities reflecting the exploding demand for new and improved products and services (Audretsch and Thurik, 2000, p.23)

It seems that if a nation, region or city can engage in the knowledge economy then rewards, for the majority at least, are high. However, the knowledge economy moves rapidly and for a locality to be left behind, the consequences for that area and its residents are dire. Providing an atmosphere in which new knowledge and new companies flourish enables countries to regain some control over their place in the international market. Facilitating the development of a society in which learning and knowledge creation is nurtured and accessible to all sections of society is not simply a matter of social responsibility to limit inequality, but also a prerequisite for economic development. For a country to embrace the knowledge economy requires a carefully planned and executed strategy. Moving away from traditional industries and towards a knowledge-based economy requires a transformation in the industrial structure of a locality, away from rigid industrial base and towards accommodating a flexible, network-orientated economy (Audretsch and Thurik, 2000, pp. 24-5).

As has been discussed, the relationship and power balance between nations and corporations has shifted, with governments increasingly concerned with attempting to attract and retain, rather than control, companies. Both nations and corporations are responding to forces of globalisation, with corporations vying to survive and nations attempting to retain some civil power and economic stability:

In the knowledge-based entrepreneurial economy the relevant policy question shifts away from "How can governments constrain firms from abusing their market power?" to "How can governments create an environment fostering the success and viability of firms?" (Audretsch and Thurik, 2000, pp.31-2).

The power balance between companies and corporations has undoubtedly shifted, with authors such as Brine regarding this shift as favouring corporations, wholeheartedly, at the expense of nations. Although acknowledging that responsibility for such global

forces is not clear-cut, Brine's analysis of the relationship between companies and countries is overly simplistic. Brine highlights the negative tensions placed on countries as a result of interactions with corporations on a global scale, but seems to regard this as a largely one-way process, neglecting the tensions faced by corporations. Brine argues that the state supports TNCs (Trans-National Corporations) by providing a supply of educated, compliant and healthy workers, whilst also responding to the social and economic by-products of "TNC global power" such as unemployment, poverty and social exclusion. Although recognising that states are not completely passive to forces of globalisation, Brine clearly paints TNC's as the dominant force and national and supranational states largely struggling to meet the needs of the global knowledge economy at the same time as attempting to ward off any negative side-effects (Brine, 2001, pp. 121-2).

In the argument outlined above, Brine recognises the ways in which nations serve and support corporations, as well as attempting to deal with any negative social consequences. Brine defines the benefits for nations as being economic: the state provides a pool of labour for the needs of global corporations and in return accrues economic growth (Brine, 2001, p.12). What Brine fails to do is reflect the complexities, the shifting power relationships, involved in global interaction between countries and corporations. There is, however, some validity in the claim that corporations have more power than nations:

Because countries need corporations more than corporations need countries, the relative bargaining power of governments and multinational corporations is shifting in favour of corporations (Thurow, 2000, p.22).

However, this should not imply that corporations and their actions are the cause of globalisation or that they have the power to resist its development. The causes of globalisation are multi-faceted and intertwined, and perhaps this is one reason why forces of globalisation seem to have taken on a life, and power, of their own:

Although the motivating force for these supranational groupings were partly economic, it was also geo-political and defensive. For instance, within the EEC there was, from the beginning, a concern that no one member state should gain

unfair economic advantage over another, hence the emphasis on social cohesion – a need to maintain peace and stability between the member states (Brine, 2001, p.123).

### **2.2.3 GLOBALISATION AND HIGHER EDUCATION**

Globalisation has changed the climate within which nations operate, and these changes have been felt in all institutions and at all levels of governance. At a national, regional and local level, pressure is on governments to ensure that their industrial infrastructure, as well as their labour force, is equipped to embrace the knowledge economy. Providing a supportive environment for the knowledge economy will attract corporations to their locality, bringing economic benefits as well as supporting the economic requirements of a comprehensive welfare state. Responding to this need is now regarded as one of the most central responsibilities of a nation state: “the policy challenge will be how to provide access to knowledge and skills for all workers, and an environment enabling them to fully utilize those abilities” (Audretsch and Thurik, 2000, p.27).

Higher education is central to providing the infrastructure necessary for embracing the knowledge economy, and providing access to knowledge and skills for the citizenry. Within the context of a globalised knowledge economy, the roles and responsibilities of universities have shifted as they face new challenges. Gerard Delanty’s ‘Ideologies of the Knowledge Society and the Cultural Contradictions of Higher Education’ analyses the role and position of higher education in the knowledge economy. Delanty charts the socio-economic changes that have shaped the current knowledge economy, with a discussion of the industrial revolution, postmodernism<sup>1</sup>, neo-liberalism (and the ‘McUniversity’) and Third Wayism. With an emphasis on the role of globalisation, the discussions conducted in this article are highly relevant to this thesis. Delanty’s core argument is that universities are no longer national institutions, but are rather exposed to global forces and as such are forced to respond to circumstances which stem from contradictions inherent in globalisation, and the role of nation states therein (Delanty, 2003). It is interesting to consider the extent to which global demands and pressures

---

<sup>1</sup> Delanty claims that postmodernism “..captures many of the core features of the knowledge society... it amounts to the blurring of the difference between knowledge and opinion” (Delanty, 2003, p.74)

could deter universities from playing from focusing on their local context and playing an active role in local development.

Delanty analyses of the conception and role of knowledge and higher education in society with his text 'Challenging Knowledge: the university in the knowledge society'. Here, the relationship between globalisation and knowledge is explored: "of all the social resources, it is knowledge, because of its depersonalised and universalistic nature, that lends itself most easily to globalisation" (Delanty, 2001, p.4). Rejecting the traditional, elitist conception of a university, Delanty argues that if higher education is to become more than a corporate and commercial machine it needs to embrace a new role in which it democratises knowledge and is closely aligned with civic society. Arguing that the mass university emerged in the second half of the twentieth century around the idea of citizenship, Delanty expresses an awareness of the potential role of higher education in social inclusion, arguing that "access to higher education can now be said to be a central dimension to social inclusion in the western world" (Delanty, 2001).

#### **2.2.4 GLOBALISATION AND SOCIAL EXCLUSION**

Globalisation and the knowledge economy have encouraged a greater emphasis to be placed on knowledge and skills in society. National and local governments are aware of the need for citizens to be equipped with skills and knowledge in order to engage with, and reap the rewards of, the knowledge economy. Logic would imply the increased need for a knowledgeable and skilled workforce would encourage a greater emphasis on promoting social inclusion and ensuring all citizens have access to education. However, it seems processes of globalisation and the subsequent knowledge economy have, in many cases, caused a greater schism between the 'haves' and the 'have-nots' in society:

Trends in education, employment and income distribution do not support the dominant view that the historical conflict between justice and efficiency has been resolved, but points to an intensification of the struggle for credentials (Brown and Lauder, 2003, p.4).

In discussing the first, second and third industrial revolutions, Thurow outlines the way in which shifting historical industrial patterns have influenced levels of inequality. In the first and second industrial revolutions, the re-organisation of industry enhanced workers security with a move out of agriculture (working, for a low wage, on land owned by others) and into manufacturing and mining (higher skills, higher wages and union protection). The third industrial revolution, as Thurow terms the emergence of the knowledge economy, has taken these sources of power and stability away from workers. Men and women who would have secured employment in traditional industries such as manufacturing and mining are now forced to seek employment in the service industries, where wages are lower than much traditional employment and it seems evident that there is less consistency and security (Thurow, 2000, pp. 24-5). This raises pertinent questions not only regarding the place of traditionally-skilled workers in the new knowledge economy, but also the role of cities which were founded to meet the needs of traditional industry and have slowly witnessed its decline.

This perception that globalisation has intensified problems of social exclusion and inequality is supported by the work of Audretsch and Thurik, who argue that developed countries, in the context of globalisation, have sacrificed mass employment in favour of higher wages for a minority. Audretsch and Thurik argue that to tackle social exclusion in the Western World, countries must move further towards engaging with the knowledge economy, in an inclusive manner:

The key to breaking out of the perceived tradeoff between wages and jobs is to understand how the twin forces of globalisation combined with the communications revolution has fundamentally shifted the comparative advantage of the leading European countries (Audretsch and Thurik, 2000, p.20).

## **2.3 THE KNOWLEDGE ECONOMY**

The growing importance of learning in economic life can be attributed to the process of globalisation of markets. Globalisation not only leads to an intensification of competition but also to the establishment of new rules of the 'competition game' (Schienstock, 1999, pp. 1-2)



The last section illustrated the extent to which modern capitalism is formed on a global platform. With globalisation, advances in Information and Communication Technology and a growing knowledge economy the world is becoming closer and networks easier to construct and maintain. The global knowledge economy has had a profound impact at the regional and city level, but before discussing that it is important to unpick what is meant by the knowledge economy (some other authors use the term 'learning economy' and whilst this research will generally refer to the same phenomena as the 'knowledge economy', the terms will be used interchangeably).

The learning economy indicates an economy where the success or failure of individuals, firms, regions and national economies reflect their capacity to learn... The learning economy is an economy where change is rapid and where the rate at which old skills get obsolete and new ones become in demand is high (Lundvall, 1996, p.2)

The knowledge economy can be understood in two ways. In one sense, the knowledge economy can refer to a separate section of the economy, the section which is focussed on working with and producing new technological knowledge:

In essence, the knowledge economy is seen as the 'top section' of the economy... the top section of the economy is assumed to produce positive effects for the economy at large (van Winden *et al.*, 2007, p.527).

This definition is, therefore, very hierarchical and exclusive: within this understanding of the knowledge economy there will always be certain regions, cities and people which thrive and others which are left behind, relying on the 'trickle down' of benefits. The second definition of the knowledge economy is less exclusive, focussing on the development of historical trends which have culminated in an economy whereby knowledge is more important throughout (Lundvall, 1996; van Winden *et al.*, 2007). This research aligns itself most closely with the second definition, although it seems that the two are not wholly incomparable. It could be argued that there has emerged an economy whereby knowledge has become an increasingly important factor in all levels,

but that within such an economy the ‘top’ level is based on cutting-edge, rapidly developing technology.

There are commentators who reject the idea of the knowledge economy, but this research aligns itself with van Winden *et al.* when they argue:

...the role of knowledge (its generation, dissemination and use, tacit and codified) as a driver of growth has increased so significantly in the past few decades that it makes sense to speak of a knowledge-based economy and to study its spatial dimensions in more depth (van Winden *et al.*, 2007, p.528).

Different countries, regions, cities, agencies and individuals are willing and able to interact with the knowledge economy in markedly different ways and to greater and lesser degrees, however:

... the knowledge-based era is pervasive. It does not apply only to individual sectors or developed countries. Although there is a massive difference in the readiness and ability of different actors to take advantage of the new opportunities and counter the difficulties, change has arrived across the board (Andersson *et al.*, 2010, p.109).

This section of the literature review will explore the concept of the knowledge economy further, beginning with a discussion of the related spatial concepts of learning regions and knowledge cities. The discussion will move on to an analysis of the move from urban government to urban governance, as influenced by developments in the global knowledge economy.

### **2.3.1 LEARNING REGIONS**

The sovereign power of the nation state is generally regarded as having declined within the global economy. Alongside this, regions have superseded nations as representing the best platform for engaging with global knowledge and economic networks. It is argued that nations no longer represent a unified body of shared economic interests or activities in a global context, and the smaller organisation of a region is a “natural economic zone”

(Ohmae, 1993, p.78). Providing the framework for the term 'learning region', Ohmae argues that the region state is the focus of development and investment in a global knowledge economy. To illustrate the arguments, Ohmae focuses on examples from Japan, China and America:

...in economic terms the United States has never been a single nation. It is a collection of region states: northern and southern California, the "power corridor" along the East Coast between Boston and Washington, the Northeast, the Midwest, the Sun Belt, and so on (Ohmae, 1993, p.80).

Ohmae illustrates with this example, that it is not that United States that represents a great economic power in our globalised world, but rather that it is certain regions within the United States which are hugely engaged in the global knowledge economy, and reap the rewards of such engagement. This focus on the power of the region, above the nation state, is supported by the work of Morgan (1997) and Florida (1995) in their discussions of the learning region:

...regions are themselves becoming the focal points for knowledge-creation and learning in the new age of capitalism, as they take on the characteristics of learning regions (Florida, 1995, p.528).

The concept of the learning region is based firmly within the rhetoric of the knowledge economy, based on the assumption that "...contemporary capitalism has arrived at the point 'where knowledge is the most strategic resource and learning the most important process'" (Morgan, 1997, p.493). As the economic importance of, and pace of development in innovation continues to accelerate, knowledge and learning become increasingly important to firms. To some extent knowledge and learning can be bought and sold but the concept of the learning region is based on the notion that a certain amount of knowledge and learning are 'tacit' and remain tied to their social, and therefore, spatial, context (Morgan, 1997).

### 2.3.2 KNOWLEDGE CITIES

With the emphasis on regions and city-regions, has come a growing awareness of the role of cities and urban centres in driving development and regeneration in a global knowledge economy. It is increasingly recognised that the urban core of a region is central to that region's development and ability to engage with the knowledge economy, as Cooke *et al.* demonstrate:

... recent evidence from the US and UK shows that not only is the geography of the knowledge economy highly skewed regionally, it is also highly urban in focus (Cooke *et al.*, 2002, p.233).

Cooke addresses the question of why cities are often major centres of innovation in his article with Davies and Wilson 'Innovation Advantage of Cities: from knowledge to equity in five basic steps'. Incorporated in this discussion of a city's prosperity, Cooke *et al.* assess innovation advantages, networking and spillovers. Looking at the three countries which experienced the most rapid growth in software production in the 1990s (India (Bangalore), Ireland (Dublin) and Israel (Tel Aviv)) the article highlights five steps to innovation advantage: knowledge (human capital or research based); incubation (start-up and knowledge exploitation); investment (application of finance and management); market (sub-contract or final markets), and, investor exit (IPO, stock exchange listing, merger/acquisition). In relation to the topic of this thesis, it is interesting to note Cooke *et al.*'s analysis of the gap between European and American innovation:

Europe suffers a major innovation deficiency when compared to the US, and the relative inexperience and lack of expertise of public officials in moving an idea from science to research exploitation and successful commercialization is a major contributory factor... a dearth of venture capital, entrepreneurship and enterprise-enhancing regulatory and fiscal regimes in Europe have also to be taken into account (Cooke *et al.*, 2002, p.239).

Indeed, the ability of cities to engage in the knowledge economy varies widely and depends on a number of interplaying factors. Van Winden *et al.* define these factors as 'foundations' (knowledge base, industrial structure, quality of life, diversity,

accessibility, social equity) and 'progress' (development of human capital, development of knowledge-based industries). The authors argue that a strong relationship between foundations and progress, together with high quality processes of governance, determines successful engagement with the knowledge economy (van Winden *et al.*, 2007).

Cities are, therefore, increasingly recognised as a key spatial form on a global level, and can play a determining role in terms of their wider region's economic and social development. It is interesting to note Charles' work on 'core cities' (1999) and the finding that "success breeds polarization". Splitting Britain into seven city-regions, Charles found that all core cities were more deprived than the national average and that all but one (Sheffield) were more deprived than their regional average. This work illustrates that although cities play a key economic role in the knowledge economy, they can also be home to large populations of socially and economically deprived people.

Cities, however, should not be homogenized. Cities, and of course their wider regions, differ massively in terms of their size, history, demography, infrastructure, institutions and processes of governance and their geography (for example their distance from other cities). Returning to the work of van Winden *et al.*, there are a number of factors which interplay to influence the extent to which a city can engage successfully with the knowledge economy. These factors and the way they interact will differ in every city across the world. It is important to understand the differences between cities in the knowledge economy, especially when considering policy to protect against a 'one size fits all' approach. Debates around the knowledge economy often focus on national and regional policies and responses, with cities increasingly under discussion; but with large differences within and between regions, this debate needs to be precise.

Van Winden *et al.* use their framework of urban engagement with the knowledge economy (based on foundations, progress and governance categories) to begin the establishment of a typology of knowledge cities. The authors categorised a number of large metropolitan European cities by their foundation mix (see above), deeming 'knowledge base' and 'industry structure' as most important in the knowledge economy,

combined with 'progress indicators', measuring the development of human capital and new knowledge industries, and finally analysed the quality of governance:

The ability of those responsible for solving a problem to convene all concerned partners (public and private, internal and external), in order to generate jointly new ideas and formulate and implement a policy that responds to fundamental developments and creates conditions for sustainable economic growth (van Winden *et al.*, 2007, p.533).

Van Winden *et al.* conclude that there is a massive variation between city types and their current, and potential, level of engagement with the knowledge economy. Given such diversity, the authors conclude that local urban governance is the most appropriate level for regeneration, as local and regional actors have more understanding of the specific context of their locality and where opportunities and pitfalls lie (van Winden *et al.*, 2007, p.544). The authors also provide support for research such as that being conducted for this thesis, arguing that their typology of knowledge cities needs expansion to become more comprehensive, and that the inclusion of smaller cities is especially important (van Winden *et al.*, 2007, p.544).

Outside of Van Winden's work, the academic discussion regarding knowledge cities is vague and abstract, with the idea of a 'knowledge city' referred to but inadequately defined. The literature regarding knowledge cities has failed to illustrate what it means, in practical terms, to be a knowledge city, how different cities might go about becoming a knowledge city, what structures and capacity they need and how to judge to what extent a city is a knowledge city and when it can justifiably be referred to as one. It is this gap in the literature which this thesis is responding to.

### **2.3.3 FROM URBAN GOVERNMENT TO URBAN GOVERNANCE**

The change to urban governance is perhaps the most striking result of the past 25 years (Booth, 2005, p.268)

It is widely acknowledged in the literature that one massive impact of the global knowledge economy has been a move from government towards a process of governance (Booth, 2005; Carley, 2000; Kearns and Paddison, 2000). As the power and influence of

nation states has diminished, whilst the importance of the region has grown (Ohmae, 1993) centralised processes of government have weakened. Competition between regions and cities has intensified and culture has increasingly been harnessed as another commodity by which a locality can 'sell itself' and attract investment. Likewise social changes have loosened the grip of traditional governing mechanisms, as social life has become more fluid, more diverse and more disparate (Kearns and Paddison, 2000). In the face of such complexity, and increased challenges in terms of problems of social exclusion and inequality, processes of governance have become dominant in attempts to manage urban regeneration and balance differences between individuals, cities and regions:

Governance is about the capacity to get things done in the face of complexity, conflict and social change: organisations, notably but not only urban governments, *empower themselves* by blending their resources, skills and purposes with others (Kearns and Paddison, 2000, p.847).

Power over a place and its people is no longer the remit of local urban governments: as Kearns and Paddison highlight, urban governments are now joining forces with other local institutions in an attempt to empower themselves and be in a position to have an impact on their locality. The power of the state is undermined by the perception that, next to business, it is an ineffective and slow-moving machine, giving rise to private sector notions entering the public domain, for example an increasing emphasis on competition, indicators and results in the public sector (Peters and Pierre, 1998). In a time of difference, conflict and inequality on a global scale, heightened expectations of urban governments have led to them increasingly working in partnership with other local stakeholders to make their locality attractive to investment, workers and the global market whilst at the same time attempting to manage growing social inequality. The organisation of collective action moves between and across political, social and economic spheres (Coaffee and Healey, 2003). For a place to have effective local governance, it needs to generate strong institutional thickness, which is dependent on having: a plethora of civic associations; a high level of interaction between social groups; coalitions which cross individual interests, and; a strong sense of common purpose (Amin and Thrift, 1995). Some commentators have criticized this collaborative approach as reflecting a

neo-liberal ideology, arguing that the drive to promote partnerships is underpinned by the idea of minimizing the role of the public sector and instead “contracting out” public services to other providers (Diamond, 2010, p.24). Yet others argue that the rise of processes of governance is due to failures of both the state and the market:

The adoption of a discourse of governance reflects an acceptance of the failures of both the state-directed and market-led development paradigms, and the need for a more nuanced approach that recognizes the potential positive synergies between states, markets and the wide range of actors that fall into the equally broad category of ‘civil society’ (Beall and Fox, 2009, p.210).

Government is not equipped with the capacity to meet the needs of cities or regions within the context of globalisation in two ways. Globalisation has brought a new set of evolving problems, which pose a threat to traditional and rigid forms of government, addressing these problems becomes especially problematic when we consider that governments were not set up to respond to the complex and interweaving problems of cities and regions as a whole (Innes and Booher, 2010, p.3). Moving from a ‘command and control’ towards an ‘enabling’ model of the state, whereby the state sets objectives and draws on resources from elsewhere rather than proactively governing, we are seeing multi-level, as well as multi-institutional, governance. Peters and Pierre discuss processes of vertical as well as horizontal governance, in which institutional relationships are formed, for example, at the regional or city level and bypass the national state (Peters and Pierre, 2001). Horizontal governance represents a way to address the complex demands brought by globalisation to the local and regional level (and discussed by Innes and Booher, *ibid.*), enabling different institutional actors to merge the knowledge, skills and expertise of their sector or remit for the greater good of the city or region as a whole.

Urban Regime Theory (URT) was developed as a means of explaining and understanding these relationships of governance, especially focussed on public-private partnerships in North American cities. Based on the notion that power is increasingly fragmented, caused by the division of labour between the market and the state, URT argues that the resources of local government and private business need to be amalgamated to achieve the capacity to govern: local government has the legitimacy; business has the capital



(Mossberger and Stoker, 2001). URT emerged and is most often applied to the US, and its application in the British context is contentious. Drawing up a comparison framework based on regime characteristics, Davies concludes that URT is not useful for explaining partnership working in Britain: the state is not merely 'hollowing out' in the UK, it is restructuring whilst maintaining political power, even expanding its level of power in terms of regeneration (Davies, 2003). When comparing US and UK approaches to urban regeneration, Davies concludes:

The politics of urban regeneration in the UK are the politics of governance by partnership. In the USA, the balance between hierarchy, market and network is different, favouring governance by network (Davies, 2003, p.319).

Davies makes clear that he is not disputing that the UK has moved towards processes of governance to manage urban regeneration, but is arguing that the UK approach differs from the US mode of governance in that partnerships prevail in the UK whereas networks dominate in the US context. The work of Lawless supports this finding to some extent, arguing that conceptualising of partnerships in Britain requires an understanding of, and response to, the relatively strong position of local government compared to private business (Lawless, 1994).

Peters and Pierre draw very different conclusions to those of Davies and Lawless, arguing that the US is behind the UK in terms of governance working and that, with its weak model of the state, it is unlikely that the US will move further towards a model of governance:

The general denigration of government, especially the bureaucracy, makes it less likely that the bureaucracy will be given the latitude to negotiate so freely with the private sector (Peters and Pierre, 1998, p.238).

Peters and Pierre argue that the US government offloads so much to the private sector, above federal government, that the power structure is not in place to support a model of governance: the private sector has the capital and is given the legitimacy (by central government) to influence without the need for a partnership with federal government. It

is interesting to note, however, that this is no longer the case at the local level in the US, where it seems public-private partnerships have been operating for some time (Peters and Pierre, 1998, p.239). As the present research will be looking at urban regeneration processes at the local level in Britain and the US, it will be interesting to reflect back upon the findings of Davies and Peters and Pierre when analysing the case study data and drawing conclusions and recommendations.

Regardless of these differences, the literature addressing partnerships acknowledges that bringing together different actors to form a partnership approach tasked with responding to the complex issues at the heart of urban regeneration poses challenges: “the co-ordination of the actors involved in urban regeneration has been a central but problematic element” (Tallon, 2010, p.7). This research will explore these problems in greater depth and propose the most effective way to proceed in consideration of them, in Chapter 6 and 7.

## **2.4 CITIES**

For centuries, the world economy has shaped the life of cities (Sassen, 1991, p.3)

As discussed above, processes of globalization have resulted in a decline in power of nations and a rise in the power of regions and, in turn, cities. Cities are home to the ideal circumstances for capitalizing on the knowledge economy. Circumstances within a city can encourage an iterative process whereby agglomeration encourages the circulation of goods, human capital, knowledge and innovation which generates external economies of scale, which in turn encourages efficiency and innovation:

Individual firms do not control the size, density and diversity of a city, and yet these factors improve individual firm performance by generating external economies of scale (Beall and Fox, 2009, pp.76-6).

Although processes of globalization, as discussed above, have ‘brought the world closer together’, there is evidence to suggest that face-to-face contact is still crucial in the functioning of the economy (Storper and Venables, 2004, p.352). The development of knowledge and innovation, driving economic development, is encouraged by the

proximity of actors, institutions and firms to one another. However, proximity alone will not drive the knowledge economy, it is dependent on actors within a city not merely being close to one another but crucially working closely and cooperatively together:

This recognition of the economic importance of face-to-face interactions between individuals in an urban context is mirrored by a growing recognition of the importance of relationships between various institutional actors in cities that influence economic productivity. The benefits of agglomeration are not merely derived from the concentration of factors of production in a central place, but also by the cooperative and competitive relationships that emerge between various actors (Beall and Fox, 2009, p.80).

In light of the increasing importance of cities in the global economy and economic development, there have been attempts to categorise the highest performing cities according to their size and influence as 'world cities' or 'global cities' (Friedmann and Wolff, 1982; Sassen, 1991 and 2006, and; Knox and Taylor, 1995):

This body of research has largely been focused on the ways in which certain major urban centres... are increasingly becoming command and control centres in the world economy (Beall and Fox, 2009, 86).

The work on global and world cities has sought to map an international hierarchy of the most successful cities based on quantifiable measures such as the concentration of global service firms in cities, interconnectedness (of transport and communications) of cities and concentration of financial capital (Beall and Fax, 2009). Global and world cities are organised into a hierarchy according to their enormity and importance, then split into Alpha, Beta and Gamma cities, and it has been argued that their interaction and importance in the global economy represents a new metageography (Beaverstock *et al.*, 2000, p.126).

This new metageography dominates the globe and overshadows the cities which cannot compete on a global platform, the smaller cities which are the focus of this thesis. As global cities are increasingly regarded as crucial in a nation's economy, smaller cities and peripheral regions which relied heavily on traditional industries are overlooked in the policy arena and decline as a consequence of the global cities' prosperity:

The conditions promoting growth in global cities contain as significant components the decline of other areas of the United States, the United Kingdom, and Japan (Sassen, 1991, p.13).

It is these cities, the vast majority of cities in the world, which are generally disregarded in the academic literature, neglected in terms of the discussion of urban agglomeration and its implications: "... the large number of cities around the world... do not register on intellectual maps that chart the rise and fall of global and world cities" (Robinson, 2002, p.531). Smaller, more peripheral cities which are not as economically significant on national and international levels have been neglected in academic and policy circles, perpetuating the cycle of decline and deprivation in these cities. It is this gap in the literature and debate which this research aims to meet, by analysing processes of urban regeneration in smaller, post-industrial cities. By analysing these cities we will better understand the most appropriate means to pursue urban regeneration in such cities across the world:

There is no question that economic growth spurs urbanization and urban growth, and there is no question that cities generate wealth... Through a combination of density and diversity, cities improve the efficiency of economic transactions, improve the productivity of firms and cultivate innovation... Getting the best from cities requires sound planning and effective economic governance at both local and national levels (Beall and Fox, 2009, p.100).

#### **2.4.1 URBAN SCALE: SMALLER CITIES**

Hall has extended the global cities analysis to create a hierarchy between all cities and differentiate between cities of different sizes (Hall, 2004). Hall suggests that global cities are home to approximately 5 million people and serve very large global areas; sub-global cities are home to approximately 1-2 million people and provide a global service in specialized services (for example banking or fashion); regional cities have a population of approximately 250,000 to 1 million residents, and; provincial cities have a population

between 100,000 to 250,000 (Hall, 2004, p.36). However, it can be argued that size alone is not enough to define a city:

...Smallness is in the urban habitus; it's about ways of acting, self-image, the sedimented structures of feeling, sense of place and aspiration. You are only as small as you think you are – or as other cities make you feel (Bell and Jayne, 2006, p.5).

Bell and Jayne's analysis of urban size and its implications, considers, as a theme throughout their work, the impact of larger cities on their smaller neighbours, arguing that in general the larger city has a negative impact upon the smaller city. This differs from the work of Duranton and Puga, who argue that smaller cities will reap benefits from proximity to larger urban areas, as development in the smaller city is encouraged by success in the larger city (Duranton and Puga, 2000, p. 538). Bell and Jayne, on the other hand, argue that the relationship between small and large cities causes problems in terms of ineffectual attempts to translate big-city policies into a smaller city context and in relation to how the smaller city should define itself: "...small cities are faced with a problem of definition and redefinition, caught between bulking up and staying small" (Bell and Jayne, 2006, p.2). Perhaps this problem of definition is due in part to the lack of literature on smaller cities (a gap which this thesis is responding to) and the tendency among urban academics to assume bigger is always better:

... the woeful neglect of the small city in the literature on urban studies means that we don't yet have to hand wholly appropriate ways to understand what small cities are, what smallness and bigness mean, how small cities fit or don't fit with the 'new urban order', or what their fortunes or fates might be (Bell and Jayne, 2006, p.2).

## **2.5 HIGHER EDUCATION**

Higher education has been part of the institutional infrastructure of Western society for centuries. Its role in society has changed over time, but this change has never been as marked and rapid as it has in recent decades. Outlining higher education's traditional role in society, this section of the literature review will then move on to discuss in what ways the sector has changed. Tackling its move away from an elite towards a more mass

model of higher education, universities have also found themselves expected to play a greater role in their locality than ever before, as well as being expected to perform a socially inclusive function not previously required of them. In responding to the needs of the knowledge economy, another challenge facing universities of today is the expectation that they will engage more closely with the private sector and local government. This penultimate section of the theory literature review will therefore address the evolving role of higher education in issues of regional development, the knowledge economy and triple helix partnerships.

Before addressing these current challenges faced by higher education, however, it is important to first understand the history of universities and how the demands of today differ from the climate within which higher education was borne. This section of the literature review will therefore begin with a discussion and analysis of the historical context of higher education.

### **2.5.1 HISTORICAL CONTEXT**

The roots of the modern intellectual university lie in ancient Athens, where a desire for knowledge, scientific 'truth' and an engagement with arts and culture was a fundamental part of society (Bligh, 1990). Many scientific and intellectual discoveries were achieved in Athens and philosophical, intellectual thinking was established. However, this philosophical, intellectual thinking was the domain of a body of few learned men and thus, an intellectual status quo was established which prevailed throughout the Medieval era:

Their [the Medieval] reliance upon the authority of the Classics, the Church and the State runs contrary to our modern emphasis upon encouraging students to think for themselves (Bligh, 1990, p.25).

With British universities funded by the Church, this status quo reigned, despite the Enlightenment and humanist period which encouraged a philosophy of critical thinking towards the Church and established intellectual thinking (Bligh, 1990). This time can be regarded as one of contradiction and challenge for universities: advances in intellectual

understanding and scientific knowledge brought the established approach to higher education into question.

It was during this time of conflict that Newman wrote his tome 'The Idea of a University' (written in 1852 in response to a proposal that the Catholic Church of Ireland would establish a university). Arguing that the main purpose of a university is to instil in its scholars a liberal education, Newman's conception of higher education is led by his deep religious beliefs. Discussing Newman's view of higher education, Turner emphasises the importance of Newman's religion, arguing that this was the root of his call for a more theological conception of a university education. Not only does Turner argue that Newman is out of date with regards to the modern conception of higher education, but rather argues:

Newman was out of touch with the major trends in the university world of his own time... Newman did not envisage universities as engines for the generation of new knowledge... Newman's was not a voice of the academic future (Newman and Turner, 1996, p.284).

The spiritual and theological emphasis Newman gave higher education is something very rarely seen in universities of today "modern universities, he [Newman] would soon realise, were not shaped by any unifying 'idea'. They were products of the market" (Newman and Turner, 1996, p.302). Indeed, it can be argued that, Newman's work not only represents a university far different from the ones of today, but that it also has led to a misconception regarding their history and the roles higher education is able to play in terms of society and the economy (Gray, 1999). Arguing that Newman's understanding of universities was based on romanticism, Gray argues that this has encouraged others to see the institutions in a similar vein providing a poor basis for developing our understanding of the sector (Gray, 1999, p.4). Gray argues that most universities originate from economic motives, rather than the romantic notion of providing a liberal education: "universities owe their existence to financial transactions" (Gray, 1999, p.11). In this way, Gray is arguing that the universities of Newman's day were as much products of the market as the universities of today.

It was not long before Newman's 'The Idea of a University' that Humboldt University, an institution heralded as a template for Western higher education, was founded. Credited with having provided a system which all others would attempt to emulate, Humboldt University, founded in Berlin in 1810 with the mission of providing all students with an all-round humanist education, influenced the development of higher education as we understand it today. The Humboldtian University of the nineteenth century can be seen as the first 'revolution' in the organisation of higher education, providing a rational, secular, universal approach to higher education that was emulated across the Western World in its approach to universities (Benneworth *et al.*, 2006, p.7). Parallels between Newman's vision of higher education and the mission of Humboldt University are apparent, with the institution founded on a set of core principles: autonomy; unity of teaching and research; unity of all knowledge; education through academic knowledge, and; scholarly life in solitude and liberty (Rau in Gellert, 1993, p.37). However, although some parallels between higher education of today and the Humboldt University of the nineteenth century can be made, changes in the structure of capitalism since that time have altered higher education and the role of universities in society. Charting the evolution of higher education over centuries, Rau argues that in a modern capitalist society, with globalisation, increased competition and unemployment:

...they realised that the Humboldt ideal of 'education through academic knowledge', and its transformation into the routines of teaching and research, no longer served their interests and future plans (Rau in Gellert, 1993, p.41).

With the Industrial Revolution came the establishment of a second tradition of higher education, far removed from the model provided by Newman and Humboldt University and more suited to the needs of changing industry and society. In the second half of the nineteenth century the industrial cities of Britain (and the United States) established civic universities, separate from the Church but tied closely to local industry. This is the second higher education 'revolution' discussed by Benneworth, with universities moving away from the elite Humboldtian model towards a more socially (or, industry) engaged institution (Benneworth *et al.*, 2006, p.6). These institutions were vocational in focus, put



in place to equip workers with the skills needed to perform in a newly-industrialised era. With a local emphasis, these institutions served industry, the locality and the economy, by providing workers with the skills needed to further the industrial progress of the surrounding area and businesses. In this way, we see parallels with the demands being placed on today's universities: their role in the knowledge economy.

As society and the economy have changed since the industrial revolution, so the perceived function of higher education has altered. Ever-accelerating globalisation has changed our utilisation of knowledge, impacting upon universities as such fundamental knowledge providers: "of all the social resources, it is knowledge, because of its depersonalised and universalistic nature, that lends itself most easily to globalisation" (Delanty, 2002, p.4). The final chapters of 'Challenging Knowledge' focus on debates surrounding globalization. In a post-modern, global world where there are many sources of knowledge production and it is recognised that all truths are valid, the university as sole provider of knowledge is regarded by some critics as redundant. Blackmore's 'Universities in Crisis? Knowledge economies, emancipatory pedagogies and the critical intellectual' cites "academic capitalism" as the underlying challenge facing higher education today, by feeding into the 'end of knowledge'. Arguing that postmodernism has undermined universities claim on the truth, and so its position in society, Blackmore claims that "education is now viewed as another form of cultural consumption and commodification" (Blackmore, 2001, p.362).

Unlike Blackmore, Delanty argues that rather than representing an end of knowledge, changes in higher education in fact represent the end of one particular type of knowledge and one particular function for universities. Delanty argues that now the intellectual (the university) has a role as translator and disseminator of knowledge rather than as the body with the sole claim on knowledge and 'the truth'. Rejecting the traditional, elite definition of a university, Delanty argues that if higher education is to become more than a corporate and commercial machine it needs to move towards a new role in which it democratises knowledge and is more closely aligned with civil society.

Since the late 1960s, the number of students attending higher education has grown massively, with 1964 proving to be a pivotal year in British higher education. The Robbins Report, published in 1964 and accepted by the Labour Government of the time, established what became known as the 'Robbins Principle' that "courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so" (Bligh, 1990, p.34). This 'massification' of higher education represents the third revolution in higher education (Benneworth *et al.*, 2006, p.6). From this point forward, it has generally been recognised that more students attending university is in the interests of the common good as university-educated students can then play an active part in society and the economy. This 'massification' of higher education has impacted on the functioning of universities. Facing increasing pressure to attract more and more students, institutions are forced to become more customer focused, to respond to what the market wants and to develop brands in a bid to compete with other institutions (Bebbington, 2009, p.27).

Askling's paper 'Concepts of Knowledge and their Organisation in Universities' (2001) is an interesting addition to the debates surrounding knowledge, universities, the knowledge economy and social inclusion. This article ultimately highlights the potential tension between what Askling describes as the dual aims of the learning economy:

The dual aims, to promote equality by reducing barriers to learning opportunities and, at the same time, to promote productivity and economic growth in an international competitive market, cannot... be achieved simultaneously... lifelong learning is a non-democratic concept... an instrument of social control which serves the needs of the free market with political and ideological overtones (Askling, 2001, p.343).

Askling briefly comments on the varying attempts by different European countries to widen attendance in higher education, which is relevant to this research project. It is interesting to note Askling's comment on this, that only France, Sweden and the UK have made some moves towards accepting less traditional students into higher education by putting some emphasis on previous experience and non-formal learning (Askling, 2001, p.344).

### **2.5.2 REGIONAL DEVELOPMENT**

As learning has taken on a new emphasis within the global economic market, so the definition and role of higher education, given its knowledge production role, in relation to society and the economy has changed. The economic, industrial and social impacts of globalization, compounded with the change in universities from an elite to a mass model have placed new demands on universities and their role in their locality.

The rise of globalization and the knowledge economy has increased the importance placed on universities, now regarded as key players in an urban landscape (Charles, 1999; Benneworth *et al.*, 2006). Globalisation has intensified and complicated the challenges brought to bear on both universities and urban areas, which has heightened their mutual dependency (Benneworth *et al.*, 2006, p.4). Higher education has become increasingly instrumental in society, with the move from elite to mass higher education and increased emphasis on vocational education:

...although a more traditional form of HE remains in certain institutions, the consequence is of a much more diverse and locally based sector than previously, within which community and employer relevance was inevitable (Charles, 2003, p.9).

Charles, in 'Universities and Territorial Development: reshaping the regional role of UK universities', goes on to discuss the institutional basis of universities, the role of a university's charter and mission, and the importance of human capital and wider civic culture. It will be useful to draw on Charles' work when preparing for fieldwork and to explore these issues of internal governance in interviews and findings.

As urban landscapes (and higher education institutions) differ massively in terms of history, size, structure and capacity it is important to consider the varying impact different types of universities can have according to their urban surrounding. Goldstein and Drucker argue that as universities have regional development impacts, by raising

average earnings and via knowledge spillovers, they are especially important in small and medium sized areas (Goldstein and Drucker, 2006). As the case study element of this research will focus on smaller cities, these conclusions are especially important. Benneworth likewise argues that a university's significance alters according to its locality, and that a university in a smaller city can have greater impact in terms of urban competitiveness:

... in smaller urban areas, universities may be key actors by virtue of their size and in the absence of a strong commercial real estate sector to promote physical city centre development (Benneworth *et al.*, 2006, p.12).

Higher education Institutions differ as much as the localities they are situated in and so when discussing higher education, it is important to remain aware that universities differ massively in their scope and mission, the students which attend and the economic and social power they command. 'The Widening Local and Regional Development Impacts of Modern Universities' by Glasson (2003) undertakes an analysis of the relationship between universities and regional development, by looking at the role two modern UK universities (Sunderland and Oxford Brookes) play in local and regional regeneration. Glasson's work argues that new universities are especially well positioned to contribute to local urban regeneration, concluding that "it is important to recognise the valuable role, and the widening role, of all universities, and in particular the modern universities" (Glasson, 2003, p.35). However, Glasson neglects to comment on how, why and when the case study institutions were founded, for example, therefore failing to consider their historical context. Likewise, neither the learning opportunities offered by the universities, nor their stated missions are discussed, information which would have created a clearer understanding of their desire to engage with the learning economy and regional development needs. This article is therefore limited by the omission of important information in the analysis of the case studies, taking them out of their individual context and therefore placing the credibility of the findings in question. Reviewing this article has been an informative process for this research project in itself, as it has highlighted the need to plan case study analysis carefully to ensure that all relevant information is collected and discussed.

Boucher *et al.*'s 'Tiers of Engagement by Universities in their Region's Development' (2003) breaks down tiers of university engagement in their region by the type of university (modern or traditional, the only HE establishment in the region or one of many) and type of region (core or periphery), joining other authors in recognising the importance of regional context to a university's contribution to regional development (Allison and Keane, 1999; Benneworth, 2006; Goldstein and Drucker, 2006). Boucher's work is especially relevant in addressing objective three of this thesis and in informing the rest of the research project. It will be interesting to test Boucher's conclusion: "universities that are comprehensively engaged in their region's development tend to be single player universities located in peripheral region" (Boucher, 2003, p.895). As the case studies for this research will be focussed on smaller urban settings close by large metropolitan cities, Boucher's findings, which support those of Benneworth and Goldstein and Drucker discussed earlier, pose some relevance.

It is interesting to note here, Charles finding that new universities (in Britain, those that have attained university status post-1992) consider engaging with economic development to be a higher priority than older universities and colleges (Charles, 2003, p.16). It seems that newer universities have a greater need to engender a local role and by being engaged in regeneration processes they can embed themselves in the urban landscape, attaining the definition, recognition and purpose bestowed on older universities as a consequence their historic and traditional role. This supports Boucher's findings that it is single player universities in peripheral regions which have the most to contribute in terms of local regeneration: these universities not only have the most to gain from engaging with economic development, they also have the opportunity to be a 'big fish in a small pond'. Therefore, according to the literature, it is newer universities within smaller, more peripheral urban settings that have the most potential for influencing regeneration.

As the university itself as well as the size of its urban setting influences its potential for local engagement, so does the institutional structure of that locality. For a university to be enabled to engage in urban regeneration, the institutional structures of that city must

allow partnerships to grow: structures of urban governance must facilitate a partnership approach to regeneration which allows for the involvement of local higher education institutions. Local institutional structures and their processes of urban governance will define the extent to which, and the ways in which, local higher education institutions are involved in local regeneration:

...local governance remains important in shaping the political economy of a place, and it is in this context that the role of universities, as one of the key local agencies, finds significance (Benneworth *et al.*, 2006, p.6).

The importance of a local context conducive to the involvement of universities in the urban governance of regeneration is highlighted by Allison and Keane, who address the ways in which a university can contribute to regional regeneration. Allison and Keane argue that human infrastructure and institutional structures that encourage learning are key to the success of a 'learning region', and as universities are a central part of that infrastructure, they clearly have an important role to play in the development and maintenance of a successful learning region or city (Allison and Keane, 1999, p.899). For localities to have success in a knowledge economy that moves so rapidly, institutions must collaborate and industry must have more involvement in education than ever before, so that teaching and learning reflects current and future needs of the knowledge economy (Goddard, 1999).

However, it seems possible that the importance of a university in urban regeneration can be exaggerated and too much pressure can be placed on the institutions when, in actuality, other factors have a greater influence on economic development. Goldstein and Drucker argue that despite the potential importance of universities in urban regeneration, they are not as pivotal to their region's development as other factors:

...despite the importance of university influences, factors external to universities, including the stock of business services and the education attainment level, remain the most influential determinants of regional economic progress over all size regions (Goldstein and Drucker, 2006, p.37)

This is supported by the work of LeGates and Robinson, who likewise focus on the institutional structure of a university, stressing that the potential of a university to influence urban regeneration should not be exaggerated. The authors argue that universities should not try to be all things to all people:

... to succeed as they venture into urban affairs, universities must play to their strengths and not undertake activities for which they are less qualified than other local players (LeGates and Robinson, 1998, p.312).

### **2.5.3 THE KNOWLEDGE ECONOMY**

As the previous section illustrates, the context of the knowledge economy has been hugely influential in altering higher education and the role we prescribe it in economic and social terms. Given higher education's primary function as a producer and disseminator of knowledge, it is inevitable that in an economy defined by knowledge, higher education will have a key role to play. This in turn will have an impact on the sector and alter the way in which higher education institutions are perceived in general and the roles they are expected to fulfill:

This market-led, corporate approach [to higher education] involves transforming universities into corporations or sites of entrepreneurship in line with the belief that education should serve economic purposes (Bebbington, 2009, p.26).

A number of changes in the socio-economic landscape of Western capitalism have combined to give rise to the 'knowledge economy'. Western capitalism has moved from the rigid, traditional economy of the Industrial Revolution towards a global, flexible, rapidly-changing economy which sees knowledge and 'knowledge workers' brought to the fore. Delanty tackles these issues when he charts the socio-economic changes that have shaped the current knowledge economy in 'Ideologies of the Knowledge Society and the Cultural Contradictions of Higher Education'. Discussing the industrial revolution, postmodernism, neo-liberalism (and its relationship with the 'McUniversity') and Third Wayism, Delanty emphasises the underpinning role of globalisation:

Today the university is having to adjust to global forces; it is no longer an institution of the national state, and the contradictions it is currently experiencing are in many ways expressions of the deeper contradictions of globalisation and the nation state (Delanty, 2003, p.77).

As the nation state loses sovereignty in a globalised market-place, universities find themselves swept along. Rapid changes in the structure of capitalism have seen nations struggle to keep up and adjust; likewise universities are struggling with these same issues. Considering all of these factors, Delanty presents a bleak picture of higher education in the current global climate, arguing that the climate of the knowledge economy has impacted upon higher education to the extent that the institution has lost its place in society (Delanty, 2003, p.80). This conclusion is underpinned by the work of Bengt-Åke Lundvall, one of the founding contributors to the debates surrounding the knowledge economy, who argues that: "... the tearing down of the 'Ivory Tower' has resulted in scholars ending up in a somewhat stressful marketplace" (Lundvall, 2002, p.6). Change from an elitist, distant institution was inevitable for higher education in the knowledge economy, but it seems that higher education has now been thrown into a state of confusion whereby its core values are being questioned, even threatened, and it is now struggling to find a purpose and definition that is relevant and realistic.

One core purpose that is potentially being undermined by engagement with the knowledge economy is that of academic autonomy. Arguing that the increasing cost of higher education and research has led to increased state intervention, which in turn has caused the decline of traditional university autonomy, Thorens claims that "universities must remain or become once more the chambers of reflection of mankind, a source of imagination and innovation, but in a spirit of generosity and enterprise at the local, regional and international level" (Thorens, 1996, p.275).

Pears' article 'Universities are not Businesses' also argues that academic freedom is under threat, with an analysis of the way in which higher education is increasingly being treated akin to business, despite fundamental differences (Pears, 2010). Pears tackles the issue of university management, charting the increase in the salaries of Vice-



Chancellor's, which he argues is an indication of where the power in higher education now lies, with pay rises accompanied by greater authority of university managers over their institutions (Pears, 2010, p.43). Pears argues that despite the way in which higher education is increasingly being treated as part of the private sector, the differences in terms of accountability and funding between the two sectors is marked and he expresses concern for the implications on academic freedom. The private sector closely monitors its Chief Executives and holds them responsible for poor results, but academia has not replicated this system of checks and balances on its management, perhaps due to its historical culture of trust. Pears also highlights the different funding concerns between academia and business, in that higher education has an assured government income (Pears, 2010, p.44).

However, other scholars and policy-makers argue that the changes higher education has undergone within the context of the knowledge economy, and the more business-facing the sector has become, the more relevant the institutions are to society. Andersson *et al.* (2010) argue that higher education can now be split into three distinctive types of university: traditional universities; entrepreneurial universities, and; corporate universities. The authors argue that traditional universities, once the prime creators and diffusers of knowledge, have seen their monopoly on the truth undermined in the face of greater competition. Entrepreneurial universities are regarded by the authors as "the most advanced forms of educational institutions" which use university research and know-how to develop knowledge-based industries (Andersson *et al.*, 2010, p.153). Corporate universities are those which are linked directly to companies, created by them to provide in-house training for employees.

Many scholars argue that universities are now faced with dual, contradictory demands, causing the confusion and conflict in purpose and aims that seems to be defining modern higher education. Naidoo's 'The 'Third Way' to Widening Participation and Maintaining Quality in Higher Education' (2000) also assesses the effect of the learning economy on access to education and issues of social inclusion. The article is focussed on an analysis of what Naidoo describes as the dual state intervention policy. Naidoo argues

that this dual state intervention policy stems from the learning economy: government policies aimed at increasing the inclusiveness of HE, and; government monitoring of the quality of HE. This angle contextualises the learning economy in terms of UK political theory and policy: “reform strategies in HE are thus likely to reflect both the ‘marketisation’ as well as the ‘equity’ strands of the ‘third way’ policy frameworks” (Naidoo, 2000, p.26). Naidoo criticises the ‘third way’ approach to HE arguing that:

...the ‘third way’ approach to policy reform, through which policy mechanisms to temper some of the consequences of the marketisation of HE within a quasi-market framework are implemented, appears likely to lead to a higher education system that penalises the very institutions serving the students with the greatest prior educational and social disadvantages (Naidoo, 2000, pp. 34-5).

Naidoo’s dissection of the policy and political context of education as a tool to further social inclusion will be informative in working towards objective two and four in this project.

Consensus among scholars is that, despite an increased focus on furthering social inclusion in higher education, one feature of the knowledge economy has been the furthering of the schism between the ‘haves’ and the ‘have nots’ in university education (Naidoo, 2000; Thorens, 2002; Lundvall, 2002; Brown and Lauder, 2003; Delanty, 2003). As highlighted by Naidoo, there is a fundamental contradiction in the current higher education policy to be committed to both greater profitability and greater inclusion (Delanty, 2003, p.80). Delanty argues that the current approach to higher education, informed by the knowledge economy rhetoric and based on ideas surrounding the market, cannot simultaneously encourage wider participation and inclusion (Delanty, 2003, p.79).

Exclusion operates not merely on an individual level, but can be seen in terms of cities, regions and universities. Lundvall’s work highlights the potential for the knowledge economy to further social exclusion on a meso, as well as micro, level:

the learning economy will, if left on its own, polarize society by excluding those who cannot keep up with the accelerating speed from the ordinary labour

market... as globalization develops universities in poor regions and countries tend to become more and more marginalized and excluded, seen in relation to the most dynamic networks of knowledge” (Lundvall, 2002, pp. 8-9).

#### **2.5.4 TRIPLE HELIX PARTNERSHIPS**

Changes in the role of higher education in society have been reflected in growing demands being placed on universities in terms of local development. Traditionally, universities were peripheral in economic and social development, but they are now regarded as central to regeneration, often referred to as an ‘engine’ of development (Gunasekara, 2006). In an increasingly knowledge-based economy, the role of knowledge not only becomes more important to economics on a global scale, it also becomes more important locally:

One can argue that the generation of new knowledge serves global development, but it also becomes a solid factor of competitive advantage for cities where it is produced to such an extent that it is managed in the best interest of the local society (Russo *et al*, 2007)

The strengthening of the relationship between knowledge and place has placed increased emphasis on the role of higher education. As a generator of knowledge, higher education can play a bridging role between place, knowledge and the economy. Working with local government and the private sector, higher education can play an enabling role in furthering a place’s engagement with the knowledge economy:

In a knowledge-based economy, the university becomes a key element of the innovation system both as human capital provider and seed-bed of new firms. Three institutional spheres (public, private and academic), that formerly operated at arms length in laissez-faire societies, are increasingly interwoven (Etzkowitz *et al.*, 2000, p.315).

A ‘triple helix’ relationship between higher education, local government and local industry can be mutually beneficial, with universities providing new knowledge and skilled workers for private business, industry providing financial resources and applied teaching and these processes furthering the ability of the locality to thrive in the global

knowledge economy. As well as representing a means for a stronger, more competitive local economy, higher education is bound to its locality in terms of physical presence, employment and revenue, a reliance on local services and infrastructure and contributing to, as well as relying on, “city brands” (Russo *et al.*, 2007). Local government then places a facilitating role between higher education and industry, enabling the development of a ‘virtuous cycle’ whereby an attractive city draws in further people and resources for its higher education establishments, which then boosts the reputation of the city (potentially, on a global scale) and furthers the attractiveness of the locality for citizens, tourists, investors and knowledge workers (Russo *et al.*, 2007). This triple-helix relationship has become increasingly prominent in times of governance where, as discussed above, management of the state and its localities has moved from a central command and control style to a more devolved, partnership-based approach.

For higher education to fulfill its role in local development, therefore, depends on its ability to forge and maintain strong and healthy relationships with other local stakeholders, especially private business and local government. The ‘virtuous cycle’ spoken of by Russo is not automatically achieved and depends upon the key three agents working harmoniously and being in balance. It is interesting to note that these relationships should not merely be understood in institutional terms, but also on an individual basis. Relationships between higher education and the local society and economy exist between institutions, but also between individuals within those institutions who form relationships based on “mutual interest” (Russo *et al.*, 2007). The internal communications and governance processes of the higher education institutions impacts on its ability to meaningfully contribute to local development. Gunasekara (2006) found that the local development role of a university can be hindered by poor internal communications, for example when academics lacked clarity regarding the definition of local engagement, could not see how it related to their work or felt that it was not rewarded in the promotion criteria of the university (Gunasekara, 2006, p.108).

The triple-helix model, akin to the concepts of governance and partnerships, requires the three institutions of higher education, local government and private industry to work

together as never before, transforming their relationship with one another but also how they work individually and their internal governance processes (Etzkowitz and Leydesdorff, 2000, p.122). This poses a challenge to all three institutions, faced with changing their internal 'way of working' as well as their external operations and image.

The literature regarding higher education's role in its host city takes an overwhelmingly normative approach to university engagement, always assuming that it is good (Gunasekara, 2006). If handled poorly, however, it is easy to see how a negative relationship between a university and the other large institutions of its locality (private business for example, or local government) could have a detrimental, and long-term, impact on local development. In this regard, it is important that the 'triple helix' relationship is understood and that universities, and other stakeholders, are aware of the potential, and limitations, of higher education's local development role. In forming partnerships between a university and its host city, there is a high risk of failure, with Hagen's research indicating that the failure rate of alliances between universities, industry and local government is 70 percent (Hagen, 2002, p.209). Hagen argues that there must be a strategic fit between all partners, supported by other work which suggests that there can be a mis-match in expectation between the partners (see also Baum, 2000). For city partnerships to succeed, the literature tells us there needs to be a balance between the stakeholders and a shared vision of where the partnership, and the city, is aiming (Russo *at al.*, 2007). Aims and resources need to be carefully clarified and communicated to prevent fantasy overwhelming reality, with partners made accountable to one another (Baum, 2000). Finally, it seems internal governance and communication is as important as externally, with a need for clarity and clear communication within universities so that academics and managers feel aligned in their relationship with the city (Gunasekara, 2006).

In recent years the triple helix model has been expanded, with the role communities play in the knowledge economy gaining increasing recognition. Cultural events, wealth creation and intellectual capital all open new opportunities for the exploitation of opportunities in the knowledge economy (Cohendet and Simon, 2008).

## **2.6 SOCIAL INCLUSION**

Economic decline in urban areas over the last 30 or so years has been paralleled by striking social and spatial polarisation, and deprivation in many urban areas (Tallon, 2010, p.13).

The concept of social inclusion emerged in France in the 1970s to refer to individuals who had slipped through the state net of services. The concept did not become widely used, however, until the 1990s when it overtook poverty, deprivation and ‘the underclass’ as the most appropriate and useful way to make reference to mechanisms and manifestations of social inequality. Poverty refers to a lack of financial resources, which in turn constrains the action of individuals. The term deprivation stems from the concept of poverty, recognizing that those in poverty have complex problems relating to inadequate housing, poor health and low education opportunities and resources. The notion of an ‘underclass’ became popular in the 1980s, especially in the US, where it was originally used to categorise those in long-term unemployment but became loaded with judgment and associated with the perceived behaviour of affected groups rather than the causes of their circumstances (Tallon, 2010, p.14).

In the 1990s, the terms social inclusion and social exclusion increasingly became part of European political rhetoric, especially in Britain under the New Labour government who set up the Social Exclusion Unit in 1997 (replaced by the Social Exclusion Taskforce in 2006). The Amsterdam Treaty of 1999 set social inclusion as an EU social policy goal, reinforced by the Lisbon Summit of 2000, where a commitment was made that all EU member states would adopt the promotion of social inclusion and social cohesion as a strategic goal. However, despite some political consensus in Europe and Britain that problems of social exclusion should be tackled and eradicated, the definitions of social inclusion and exclusion are vaguer than this consensus would imply.

Underlying the language differences and different concepts is a long-standing tension – whether people are poor through no fault of their own (due to the

system) or whether they are responsible in some way (original sin) (Tallon, 2010, p. 14).

Within the social exclusion discourse, there is a distinction between 'weak' and 'strong' conceptualisation of social exclusion. A weak conceptualisation of social exclusion regards the solutions (and therefore, arguably, the causes) as lying in altering the individual's characteristics: change the individual (via more education or skills, for example) and problems of social exclusion will be removed. A strong conceptualisation, on the other hand, emphasizes the role of those doing the excluding and argues for social change. Britain and Europe in general, takes an individualistic approach to social problems (and are therefore aligned with the weak conceptualisation), for example blaming the issues of un- and under-employment on individuals rather than addressing the problem at a social level:

In the UK both the social integrationist discourse and the moral underclass discourse have been strengthened by Conservative and Labour governments as they have targeted their attention on 'the unemployed' and have systematically linked training provision to state benefit entitlement (Brine, 2001, p.125)

In 'Social Exclusion: towards an analytical and operational framework', Bhalla and Lapeyre align their arguments with the 'strong' definition of social exclusion, addressing the social, political and economic aspects of social exclusion. The role of employment in social inclusion/exclusion is a theme throughout the article, in terms of its social as well as economic role and in terms of the effect of precarious employment. It seems that both of these employment-related issues could be magnified when considering the social exclusion effects of the knowledge economy. In terms of the social effects of employment, in an increasingly credential-based economy the low self-esteem and status associated with unemployment can only be heightened. Likewise with many regions, cities and individuals focusing on embracing the knowledge economy, those 'left behind' will be subject to employment in precarious jobs, experiencing the social exclusion that is associated with such employment. Bhalla and Lapeyre also explore the global experiences of social exclusion, demonstrating the effect that patterns of development can have on national and individual experiences of exclusion, and comparing Britain and the United States: "Europe is experiencing growing social problems and high rates of long-

term unemployment. In North America, although long-term unemployment is not growing, poverty and exclusion are” (Bhalla and Lapeyre, 1997, p.421). ‘Social Exclusion: towards an analytical and operational framework’ will be useful in defining the concept of social inclusion used in this thesis, raising some interesting questions.

This section of the literature review will focus specifically on issues of social inclusion and social exclusion related to the development of the knowledge economy.

### **2.6.1 SOCIAL INCLUSION AND THE KNOWLEDGE ECONOMY**

In recent years, a new ‘techno-optimism’ can be observed, related to the new possibilities of ICT to fight social exclusion (van Winden, 2001, p.863)

Within some schools of thought, as van Winden demonstrates, it is believed that the knowledge economy and increased engagement with ICT will be a positive social force, enabling greater social inclusion and cohesion. Within the UK context, the DTI have argued that greater use of ICT can positively impact social inclusion and has the potential to further neighbourhood renewal (DTI, 2000). This argument stresses the idea that engaging with ICT can be democratising, that with ICT access comes flexible access to education, training, knowledge, social networks and opportunities.

However, this seems a somewhat naïve assumption, relying on ICT access for all: ICT can only generate a solution to social exclusion if the excluded population has access to it and the skills to use it, but this is generally not the case (van Winden, 2001, p.865). Despite the optimism of some authors that the knowledge economy represents a process of democratization, whereby all workers can up-skill and engage with new ways of working, it seems apparent that in actuality the knowledge economy is furthering the schism between the haves and the have-nots in society. In an economy that rewards education, knowledge, skills and training, those without qualifications (or the resources to pursue them) are left behind (Lundvall, 1996; Castells, 1999; Brown and Lauder, 2003). At a time when higher education is generally becoming more expensive, this is especially disheartening.



It seems fundamental to the knowledge economy that “success breeds polarization” (Charles, 1999, p.4). Guth has labeled this phenomena the “innovation dilemma” whereby innovation is needed to enable regions to economically transform themselves, but that with such innovation comes redundancies and growing inequalities (Guth, 2005, p.334). Innovation processes are needed to engage with the global economy, attract investment and contribute to the wealth of an area, but in doing so can generate more unemployment (for example by replacing labour-intensive work patterns with machine-intensive ones). In old industrial regions this is especially dangerous to the social fabric, as unemployment, deprivation and income disparity is generally already high in these areas (Guth, 2005, p.336). Charles’ work on core cities highlights the dangers posed by the knowledge economy to deprived regions, arguing that investment is required for young people in old industrialized regions to have the training and focus on skills that is needed to engage with the knowledge economy (Charles, 1999).

There is the growing inevitability, however, that the global knowledge economy increasingly represents a two-tier economy. Those with the education and skills are able to engage with the knowledge economy and reap the economic, social and cultural rewards which flow from this. Those who lack skills and qualifications become increasingly trapped in a service sector economy, which effectively functions to support the knowledge workers. For example, despite numerous initiatives to improve access to higher education, there remain large differences in participation rates between social and cultural groups in society. Beyond the issue of access to higher education, there are also issues of outcomes, for example with ethnic minority students in Britain attaining lower class degrees compared to their white peers (Bebbington, 2009, p.28). There is the potential here for a downward spiral where the disparities between these groups increasingly escalate. Above an individual level, this represents the clear possibility for growing inequalities at a spatial scale:

Innovation-winners are for the most part adaptable employees working in adaptable and innovating organizations. They enjoy relative safe jobs with at the same time high salaries. Winners of the innovation process are also adaptable and

learning regions which successfully created regional network structures... 'Losers' of the innovation cycle are low or unqualified people, low performing firms and regions... regions where interactivity and inter-organizational learning does not take place (Guth, 2005, p.336)

The knowledge economy poses the threat, therefore, of widening the gap between the 'haves' and 'have-nots' in society on a spatial level, with those cities and regions not well-equipped for engaging with innovation, and already suffering from unemployment and a wide income gap within their population, at threat of being left behind. Within and between cities, social fragmentation will potentially intensify in a global, knowledge economy. Old industrialized regions are most vulnerable, as they are already experiencing deeper problems of social exclusion (Tallon, 2010; Guth, 2005; Charles, 1999; Schienstock, 1999). Their industrial and institutional structures consist of a rigidity that hinders the smooth and fast working processes which define the knowledge economy. Cities themselves are becoming more polarized as issues of inclusion and exclusion become increasingly relevant to the neighbourhood level, with richer neighbourhoods becoming more prosperous and poorer ones becoming increasingly deprived (Tallon, 2010, p.16).

For these reasons, many authors call for greater emphasis to be placed on social inclusion when considering policies aimed at increasing local and regional innovation, when trying to further the extent to which an area engages in the knowledge economy (Morgan, 1997; Amin, 1999). The potential of the knowledge economy to further problems of social exclusion has prompted an awareness that focussing on generating economic growth in traditional ways will only further deprivation and disenchantment, which in turn will hinder the development of learning regions and knowledge cities:

If we are serious about addressing unemployment and social exclusion we need to recognise that conventional economic growth no longer offers a credible solution to the long-term unemployed in our societies (Morgan, 1997, p.501)

It has been argued (for example, see Florida, 2005) that diversity actually provides circumstances in which a local creative and knowledge economy can thrive. However, a

distinction needs to be made between diversity and inequality: a city which is home to a diverse population will have greater potential in the knowledge economy, if that population enjoys equal rights and opportunities. However, a city which is home to a population that is both diverse and unequal (in terms of economic deprivation, for example, or issues of racial discrimination) will face more obstacles in terms of engaging with the knowledge economy than a community which is homogenous. Innes and Booher discuss the pitfalls of diversity within the context of a hostile indigenous population, when new immigrant groups can be perceived as a threat to local identity and values (Innes and Booher, 2010, p.3).

## **2.7 CONCLUSION**

Having outlined the theoretical context of this research, with an extensive review of the literature concerned with the concepts of globalisation, the knowledge economy, higher education and social inclusion, the thesis will move on to examine the policy context. This chapter has outlined the conceptual foundations of this research, outlining the way in which, within the context of globalization and the knowledge economy, regions and cities face increasing processes of competition and large, successful (global) cities have come to dominate the economy as well as policy and academic discourse. Processes of governance have become increasingly important, with the role of actors, institutions and sectors outside of traditional forms of government facing increasing responsibility to take on a civic role. With more and more students attending university, and higher education's role in knowledge production and dissemination, universities are increasingly expected to engage in urban and regional development, as well as becoming more socially responsible and inclusive.

The following chapter will place this research in the context of relevant policy by addressing historical and current approaches to policy concerned with the role higher education plays in partnerships and processes of urban regeneration. In addressing current policy approaches to higher education's role in urban regeneration, the chapter will look specifically at the United Kingdom and the United States before concluding by unpicking the implications that the policy context has on higher education.

## **CHAPTER THREE**

### **LITERATURE REVIEW: POLICY**

#### **3.1 INTRODUCTION**

Chapter 2 discussed theoretical and conceptual debates surrounding globalisation and the knowledge economy, and the impact that these forces have had on higher education. This chapter will explore the evolution of the policy context concerning the role higher education plays in processes of governance and urban regeneration. Beginning with a discussion of how higher education's role in social and economic development has grown over time, this chapter will move on to examine the way in which current policy approaches higher education's regional and local civic role. The chapter will end with a discussion over the implications for universities of these changes in the policy arena.

#### **3.2 HISTORICAL CONTEXT**

...policy discourses have become permeated with the knowledge economy rhetoric and have accepted the existence of the knowledge economy as a seemingly unchallengeable fact (Perry and Harloe, 2007, p. 27)

As Perry and Harloe argue, the concept of the knowledge economy has become, in recent decades, increasingly significant in policy relating to regeneration and the role of higher education therein. Historically, however, the policy context in Europe in particular has not encouraged a close interaction between universities and their localities. The higher education perspective of nineteenth century Europe can be described as a “denial of place”, with the Humboldtian ideal of the university regarded as underpinning the national development of the state “at a distance” (OECD, 2007, p.35). In the twentieth century, the nationalisation of science and education further weakened the ties between universities and their places, encouraging higher education institutions to focus on the national level (OECD, 2007, p.36). Although this was the general policy approach to higher education and their localities across Europe, in the United States there was a different approach to their public higher education. Here, the land grant tradition of the nineteenth century laid the foundations for states to encourage the active engagement of universities in their cities and regions:

Indeed, state intervention in higher education to tackle industrial decline in New England and to attract new federal investment in areas facing structural adjustment in agriculture in California laid the foundation for subsequent high technology corridors such as Route 128 and Silicon Valley (OECD, 2007, p. 32)

While the United States has a tradition of emphasising the role of higher education in regional development, policy in Europe has not traditionally linked the academic arena with social and economic development at the regional and sub-regional level. Historically, European countries have sought to target their regional development policy at reducing disparities between the poorer and more affluent regions. Rooted in Keynesian economic theory, underlying this approach was the belief that, without state intervention, the free market would result in the widening of disparities between regions. Providing financial support for established industries was a key focus of interventions aimed at reducing disparities (OECD, 2007, p. 31). When structural problems in industry emerged in the 1970s, post-war consensus regarding state intervention in regional disparities broke down.

### **3.3 CURRENT APPROACHES**

The European policy approach to regional development, therefore, has moved away from a perspective which attempts to provide security and protection for weaker cities and regions, and towards an approach which focuses on the building up and harnessing of innovation and competitiveness. This focus on innovation and competitiveness has brought with it a greater emphasis on the role of the university in the economic and social development of its locality:

Higher education institutions stand out as potentially important partners because they link up multiple strands of society and strands of activity. More and more aspects of the academic enterprise are thus being perceived as significant to the regeneration and transformation of cities and regions (OECD, 2007, p.35)

At the supranational level, the European Commission (EC) has focussed its attention on seeking to guarantee that innovation and competitiveness are central to internal policies within the EU. Initially concentrated on more general education, training and

employment with 'Towards a Europe of Knowledge' in 1997, the EC has since focussed on higher education policy, with the Bologna Process requiring member states to engage in the creation of a European Higher Education Area (EHEA) by 2010 (OECD, 2007, p.29). In Lisbon in 2000, the EC reaffirmed its commitment to innovation and competitiveness, setting the target for Europe to become "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion" (European Commission, 2003, p.?). As well as reaffirming the EC's commitment to innovation and competitiveness, this also underlines the EC's belief that engaging with the knowledge economy can generate greater social cohesion, and therefore can play a role in the regeneration of localities and regions.

Core to the target of becoming the most competitive knowledge-based economy in the world was the agreement to create a European Research Area (ERA) to coordinate national research policies and promote efficiency. It was decided that within the ERA

...the role of each of the actors, public and private, needs to be re-examined to establish synergies and take advantage of complementarities among European national and regional instruments to achieve a 'reinforced partnership' (European Commission, 2001, 9) (Harloe and Perry, 2007, p. 30)

At the centre of European policy on regional development, then, is the importance of building up local and regional capacity within a knowledge economy, which is regarded as dependent upon universities working in partnership with other local and regional actors and institutions.

### **3.3.1 THE UNITED KINGDOM**

Globalisation, the new economy and the emergence of global cities frames economic regeneration policy in the UK... Within the context of deindustrialization and depopulation, the main goal of regeneration is to generate employment, preferably in the form of middle- to high-income jobs in the service sector (Jones and Evans, 2008, p.54).

In the UK the European policy approach has been adopted, to some extent, by New Labour with the government's economic development policy framework focussing on:

- The notion of the knowledge economy, and its importance in the regeneration of British cities:

Our success depends on how well we exploit our most valuable assets: our knowledge, skills and creativity... They are at the heart of a modern, knowledge-driven economy (Blair in DTI, 1998, p.5)

- Some devolution of power
  - To Scotland, Northern Ireland and Wales
  - To the English regions, via the establishment of a Regional Development Agency (RDA) in each region in 1999 (with London's RDA established in 2000)
  - Increasing the role local authorities play in local economic development
    - But, throughout all of this, maintaining, and perhaps even increasing, a level of control over local and regional development with central monitoring via targets and indicators
- Increasing the role played by other sectors and agencies in local economic development, especially the private sector and higher education:

The relationship between universities and employers is crucial for both parties and the future prosperity of our country... We expect universities and businesses to work together to anticipate, shape and respond to demand for skills in the economy (Department for Business Innovation and Skills, 2009, p.46).

## **The Knowledge Economy**

A theme running throughout New Labour's policy approach, from their coming to office in 1997, has been the knowledge economy and the need to upgrade skills, enterprise and

innovation throughout the UK as a means of extending growth and promoting regeneration. The notion of the knowledge economy runs as an underlying theme throughout much of New Labour's policy discourse, especially in relation to economic development and regeneration. The urban focus of the knowledge economy, its quick-moving pace and the need for bottom-up development of knowledge industries, has encouraged the government to pursue, in some ways at least, a more devolved approach to regeneration:

Globalisation and technological change mean that regions and localities need the tools and incentives to build on their indigenous assets so that they can respond quickly to changing economic circumstances if they are to increase prosperity (HM Treasury, 2007, p.7)

### **Some Devolution of Power**

The 2007 Review of Sub-National Economic Development and Regeneration argued that the government's approach to regeneration was, despite a number of reforms, still over-centralised and that greater working at the sub-regional level would bring more regeneration benefits to more areas. One key theme of the review is the need to manage policy at the most appropriate spatial scale, arguing the need for local responses to local problems. However, it was argued that "... the greater the powers devolved, the greater the premium on clear, accountable and transparent leadership" (HM Treasury, 2007, p.23).

### *Regions*

Between 1999 and 2000, the British government established nine Regional Development Agencies (RDAs), one in each English region, and since that time has increased their role and power. Each RDA is responsible for drawing up the economic development vision of its region, the Regional Economic Strategy (RES). From 2007, New Labour enabled the RDAs to take on more responsibility from central government, increasing their funding to £2.3 billion. From their establishment in 1999, the government has altered the



role of RDAs: at the time of their conception, the remit of RDAs was to fulfil a detailed set of output targets for their region, but the 2007 Sub-National Review argued that the RDAs objectives need to be streamlined and that they could be more productive if their framework was defined by an over-arching growth objective. The extent to which RDAs fulfil this new over-arching growth objective is measured by five performance indicators:

1. GVA per hour worked, as a measure of productivity
2. Employment rate, as a measure of the proportion of the population in employment
3. Skills attainment (categorised as basic, intermediate or higher level), to assess the skills level of an area
4. R&D expenditure (as a proportion of GVA), as a measure of innovation levels
5. Business start-up rates, as a measure of enterprise levels

Together with the refocus of objectives, central government has also altered the RDAs role in relation to the regional strategy. Previous to 2007, the RDA's RES worked alongside the Regional Assembly's Regional Spatial Strategy. However, the Sub-National Review increased the capacity and role of RDAs, whilst disbanding the Regional Assemblies and formally making RDAs the Regional Planning Body (RPB). RDAs now have executive responsibility for the regional strategy, which they produce in conjunction with local authorities and other agencies. The RES sets out the economic, social and environmental objectives for each region and must include: vision; evidence; strategic priorities; policy and spatial priorities; delivery strategy; spending information, and; consultation strategy. Local authorities are now responsible not just for working with RDAs and helping to formulate the RES, but also for scrutinising their performance.

#### *Northwest Development Agency: RES 2006*

The 2006 RES for the North West of England sets the vision of creating “a dynamic, sustainable international economy which competes on the basis of knowledge, advanced technology and an excellent quality of life for all”. The vision then goes on to highlight: the importance of high levels of productivity, enterprise and innovation; the importance

of city-regional growth focussed on Manchester and Liverpool; the utilisation of Key Growth Assets (making reference to higher education); an aim of high employment and the elimination of pockets of unemployment (NWDA, 2006, 3). The vision of the North West RES therefore clearly reflects the national vision and policy framework of the New Labour government. This is also evident in the document's discussion of the North West's key assets, firstly listing that the region has the highest number of people with graduate level skills outside of London and the South East and moving on to list above average levels of business R&D per head of the population, and that the region has world class centres of excellence in its 14 Higher Education Institutions. By prioritising these assets, the North West RES is aligning itself with the national government's policy focus on the knowledge economy and the importance of higher education as a knowledge asset within the knowledge economy.

### *Local Authorities*

The Local Government Act of 2000 gave all Local Authorities in England and Wales the power to promote economic, social and environmental well-being of its area. Local Area Agreements (LAAs) were established, to be prepared by local authorities in partnership with other local agencies, with the purpose of setting out a single set of priorities for the area. Local Strategic Partnerships (LSPs: non-statutory multi-agency partnerships working to the local authority boundaries) were introduced to facilitate partnership working at the local level. LSPs were at first introduced in areas which were receiving Neighbourhood Renewal Funding (NRF) but since 2008 were expanded to be in place in all areas. The government has also enabled local authorities to join together with other partners and establish Urban Regeneration Companies (URCs).

Although there have been some devolution efforts in the UK, the system is still highly centralised in general and while the regional levels have some opportunity to coordinate national policy regionally, this power does not extend to initiating or amending policy:

This practice differs from that of most OECD countries, and flies in the face of evidence which shows that the most successful regions are those with their own strategic decision making powers (OECD, 2007, p.105)

### **Other Sectors and Agencies**

New Labour's approach to economic development and regeneration has also focussed on the need to include other sectors, agencies and partners in the process, highlighting that it is not merely government that is responsible for local prosperity and growth. Higher education is seen as a key stakeholder in its locality and, given the government's policy emphasis on the importance of the knowledge economy and skills levels, is perceived as a key driver of economic and social development. Central government has also encouraged local government to develop an increasingly close relationship with local business, for example the Local Government White Paper of 1998 ('Modern Local Government: in touch with the people') argues that local government needs to be "... taking their [the private sector's] views into account and responding to their needs and demands" (1998).

However, it can be argued that the funding of higher education in England does not encourage universities to play an active role in their localities, for example with the allocation of research funding determined by a Research Assessment Exercise which puts emphasis only on academic excellence (OECD, 2007, p.107). The centralisation of higher education funding in England deters higher education from playing a role in local and regional development, by encouraging universities to prioritise their national and international academic role. This differs to, for example, the United States where:

...the localised nature of the funding base derived from sources such as state taxation, tuition fees and regional alumni have been reinforced by the land grant tradition and the existence of many state universities. As a result, many institutions are strongly integrated in the community economy. Their missions emphasise not only the intellectual or academic dimension, but also the commitment of the institution to the state or region (OECD, 2007, p. 52).

### **3.3.2 THE UNITED STATES**

Current economic development policy in the US is coordinated by the Economic Development Administration (EDA), under the US Department of Commerce ([www.eda.gov](http://www.eda.gov)). EDA's mission is:

To lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy ([www.eda.gov/AboutEDA/Mission.xml](http://www.eda.gov/AboutEDA/Mission.xml)).

The underlying principle of EDA is that communities need to be empowered to design and implement their own regeneration strategies, and so EDA works in partnership with state and local governments, local public agencies and the private sector (*ibid.*). EDA is keen for higher education to contribute to regeneration and fulfil its potential in terms of economic development, demonstrated for example by its University Center Economic Development Program, which is a partnership between the Federal government and academia aimed at making university resources available to economic development communities (<http://www.eda.gov/AboutEDA/Programs.xml>).

Within the United States, the Department of Housing and Urban Development (HUD) is also responsible for urban regeneration and economic and social development. HUD's mission is:

To increase homeownership, support community development and increase access to affordable housing free from discrimination. To fulfill this mission, HUD will embrace high standards of ethics, management and accountability and forge new partnerships--particularly with faith-based and community organizations--that leverage resources and improve HUD's ability to be effective on the community level (<http://www.hud.gov/library/bookshelf12/hudmission.cfm>).

Within HUD, the Office of University Partnerships which was formed in 1994 to encourage the development of partnerships between university campuses and their surrounding communities, arguing that these partnerships play a crucial role in addressing urban problems and revitalizing localities (<http://www.oup.org/aboutoup.asp>).

The United States has a history of encouraging close links between higher education and the wider community, with the land-grant tradition in its system of higher education. Land-grant universities originate from the Morrill Act of 1862, which enabled the establishment of public universities to meet the needs of the working classes, especially focused on agricultural skills:

The Morrill Act was intended to provide a broad segment of the population with a practical education that had direct relevance to their daily lives (<http://www.wvu.edu/~exten/about/land.htm#what>).

Since this time, there have been a number of amendments and additions made to the land-grant policy, with a focus on providing federal support to make access to higher education an equal opportunity for all. There is now at least one land-grant institution in every state in North America, with each institution managed by its state but conforming to the broad policy agenda of federal law. Since the original Morrill Act of 1862, the state has contributed to the maintenance of its land-grant institutions, but this contribution has expanded considerably over time, with federal funds now contributing over \$550 million per annum to the development and maintenance of land-grant institutions (<http://www.wvu.edu/~exten/about/land.htm#what>).

The Association of Public and Land-Grant Universities (APLU), formerly known as the National Association of State Universities and Land-Grant Colleges (NASULGC), is the United States' oldest higher education association, with roots going back to 1887 (<https://www.aplu.org/NetCommunity/Page.aspx?pid=183>). The association is in place to enable discussion, debate and development of policy relating to higher education and the public interest, with a membership of 218 institutions (including 76 land-grant institutions) (<http://www.aplu.org/NetCommunity/Pa>).

### **3.4 POLICY IMPLICATIONS FOR HIGHER EDUCATION**

It is widely accepted that the university is assuming growing importance in policy terms as an engine of economic growth and social transformation. Consequently, universities across both the developed and developing worlds are being

encouraged, and in some cases coerced, into greater engagement with their localities and regions (Perry and Harloe, 2007, p. 25)

The changes described so far have put a greater emphasis on the expectations of the role universities can and do play in local and regional development, with the perception, especially in policy circles that:

...universities are to the 'information age' what coal mines and steel mills were to the industrial economy, that is to say spatially rooted engines of economic, social and environmental change (Scott and Harding, 2007, p.3).

Higher education is now regarded as possessing a much greater sphere of influence, as a key contributor to social and economic development as well as a driver of innovation and economic competitiveness. With the policy arena embracing the knowledge economy concept, nations are increasingly aware of the role higher education can play as a producer of knowledge, in generating an educated and skilled workforce and in contributing to the social and economic fabric of its locality. The perception that higher education institutions play a greater role in the economic development of places has encouraged the state to take a much more active role in defining the focus and direction of higher education (Peters and Olssen, 2005, p. 41).

At the local and regional level, higher education institutions and local governments and development agencies recognise the mutual interests that can be furthered from their working together, a large proportion of which benefits are economic. The following table, adapted from text in the OECD's report 'Higher Education and Regions; globally competitive locally engaged (2007, p. 30), outlines the benefits universities are seeking in engaging with local and regional development and the benefits their engagement represents to local and regional development agencies:

*Table 1: Mutual Reciprocity between Higher Education and its Locality*

<b>Higher education institutions seek:</b>	<b>Higher education institutions represent:</b>
Local support for global aspirations	Major businesses generating tax and other revenues
Increased local student enrolment	Global gateways in terms of marketing – attracting private sector
Increased profits from consultancy and professional training services for local business	Generators of new businesses and source of expertise for existing businesses
To attract and retain creative academics and motivated students	Enhancers of local human capital – students, graduate, existing workforce
Legitimacy and security, by demonstrating their value and relevance to wider society, in turn justifying public investment	Providers of content and audience for local cultural programmes
	The bringing together of national interests and a national and international spokesmodel for the locality

Globally and locally, therefore, higher education institutions have become increasingly important within the policy arena:

Higher education institutions, like airports, have become “magic bullets” in many regional development strategies, symbolising the significance of the global/local nexus (OECD, 2007, p. 118).

The importance of higher education in regional development policy, especially in economic terms, has become even more important within countries that have a market-driven economic structure (OECD, 2007, p. 190). The UK, for example, has become an increasingly market-driven economy since the Thatcher administrations of the 1980s and it is from this time that the national level has paid more attention to the higher education sector:

The quite fundamental and basically neo-liberal reforms of higher education initiated by Margaret Thatcher have resulted in a major shake-up in the system and the creation of a variety of metrics for measuring how well universities are meeting nationally set goals (Greenwood, 2007, p. 105).

Naidoo's chapter in Barnett's 'Reshaping the University' (2005) supports Greenwood's argument above, outlining the ways in which higher education in the UK has been subjected to a process of "marketisation", with a decline in state funding for research and teaching and more external control on academic activities, for example via quality assurance systems (the RAE), league tables and performance indicators. To some commentators, the increasing emphasis on the economic role of higher education has led to the 'commodification' of higher education:

The concept of 'commodification', which refers to the development of a product or process specifically for exchange on the market rather than for its intrinsic 'use' value, captures the shift from activities aimed at the acquisition of scientific and academic capital to activities intended for income generation (Naidoo, 2005, p. 29).

Naidoo goes on to argue that this has fundamentally altered the role and remit of higher education, with academic success no longer judged in academic terms but rather financial criteria such as the income generated from student enrolment and involvement with commercial activities (*ibid.*).

This marketisation and commodification of universities appears to be a worldwide phenomenon in the higher education sector, with the work of Marginson and Considine (2000) and Slaughter and Leslie (1997), comparing different countries and institutions, apparently indicating:

... the increasing momentum toward viewing universities as if they were private-sector corporations, the imposition of increasingly hierarchical forms of administration under the guise of corporate discipline, the reconceptualisation of students and research funding as customers and faculty as a labour force, and the view of teaching and research products as forms of intellectual property to be bought and sold, etc. (Greenwood, 2007, p.97).

Whilst higher education policy has resulted in the sector becoming more market-driven, it is important to recognise that there are nevertheless still elements of higher education which are distinct to the sector and which contradict the notion that universities have become completely akin to private corporations:



Unlike private corporations, driven by tests of profitability of particular goods and services, universities are composed of a mixed, confusing and even contradictory set of activities. They are expected to promote respect for the past, to pass on the values and understandings that make for good citizenship, to provide job training, to advance the frontiers of knowledge on all fronts and to serve the public. Nothing in this package of missions guarantees or even suggests university economic self-sufficiency or profitability (Greenwood, 2007, p. 98).

In this way, we can see that, whilst higher education has become increasingly subjected to policy which regards its institutions as akin to private corporations, universities are not and have not become institutions of the private sector and still possess many distinct qualities and elements which make them distinctly 'public'. Likewise, although universities are expected to play a greater role in the economic and social development of their regions and localities, it is also worth noting that this activity still remains somewhat sidelined as the 'third task' for the institutions, firmly behind their core responsibilities of research and training:

Even when engagement with business and the community has been recognised and laid upon HEIs as a "duty" by national governments, it has remained a "third task", not explicitly linked to the core functions of research and training (OECD, 2007, p. 13).

### **3.5 CHANGE IN GOVERNMENT: MAY 2010**

At the time of writing, the British Government has recently changed, with Labour out of power after 13 years and a coalition between the Conservative Party and the Liberal Democrats forming a new government. Early indications suggest that this new coalition will introduce large spending cuts in Higher Education as well as in terms of local and regional government. The new coalition has announced cuts of over £200 million in the higher education budget as well as £74 million cut from Regional Development Agencies ([www.bis.gov.uk/news/topstories/2010/may/bis-savings](http://www.bis.gov.uk/news/topstories/2010/may/bis-savings) accessed on 24/05/2010). It is very early to speculate on the impact of these cuts and any further policies introduced by the change in government; however it is clear that British universities now face greater pressure to compete for funding within a global marketplace, and the capacity of local and regional actors will be diminished.

### **3.6 CONCLUSION**

Having outlined the theoretical and policy context of this thesis, the next chapter will describe the methodological approach undertaken to explore the issues at the heart of this research. This chapter has outlined the European and North American policy approach to urban regeneration and the role of higher education. Innovation and competitiveness have become increasingly important in the policy discourse, coupled with a greater focus on the role other sectors and agencies can play in urban and regional regeneration. In both the UK and the US, therefore, higher education is expected to play a greater role in economic and social development, facing increasing demands in terms of its roles globally and locally.

The methodology chapter will examine why a case study approach is most suitable for meeting the aim and objectives of this research as well as examining all methodological approaches that were considered and why some were rejected. The methodology chapter will illustrate and describe the conceptual framework of this research before ending with the core research questions and how these relate to the four main objectives.

## **CHAPTER FOUR**

### **METHODOLOGY**

#### **4.1 INTRODUCTION**

This research uses a case study approach to elicit an in-depth analysis of the issues at its core, answering the research questions and meeting the overall aim and objectives. Two cities, and their universities, are explored to further our understanding of the role of higher education in the urban regeneration of smaller cities within a knowledge economy.

This methodology chapter will begin by outlining in more detail why a case study approach has been selected as the most fruitful means of exploring the core concepts, meeting the overall aim and objectives. The main approach undertaken to explore the case studies was interviewing key players in each case study location, which will be explained in further detail. Issues of data analysis will be explored, with an explanation of and justification for the approach taken in this research, thematic analysis, and a discussion of other data analysis methods and why they were rejected. The chapter will then go on to detail the particular locations selected as the case studies and why these locations are the most relevant in terms of this research, before moving on to describe the interviewees in terms of their background and job role (whilst retaining the anonymity of the participants). The chapter will then examine the conceptual framework underpinning the research, which is represented by way of three figures which narrow in on the core of the research. The chapter will draw to a close by outlining the research questions and how these research questions correspond to the four main objectives.

#### **4.2 WHY A CASE STUDY APPROACH?**

Qualitative research claims to describe life-worlds ‘from the inside out’, from the point of view of the people who participate. By doing so it seeks to contribute to a better understanding of social realities and to draw attention to processes, meaning patterns and structural features (Flick *et al.*, 2007, p.3)

As this research aims to simplify and synthesise the interaction of big, evolving concepts, a case study approach is the most appropriate avenue to take in terms of research methodology. A case study approach enables us to examine the core concepts of this research as a whole: analysing the urban regeneration efforts of smaller, post-industrial cities, and the role of higher education and partnership working therein, by comparing and contrasting two such cities and their universities:

Case studies arise out of the desire to understand complex social phenomena... the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events (Yin, 2009, p.4).

Looking at the role of higher education in processes of governance and urban regeneration, a case study approach enables a close examination of internal and external institutional relationships within partnership working in the chosen case study locations. As the research is concerned with processes, the means by which individuals, institutions and partnerships approach urban regeneration and the development of knowledge cities, using case studies is the most appropriate methodological tool:

The advantages of a case study approach are that it allows for an 'in-depth' treatment of the subject, where a large amount of detail about the practices and processes being studied can be understood in relation to a particular social context (Innes in Gilbert, 2003, 212).

Comparing and contrasting the urban regeneration of two cities, and the role their universities play therein, enables an analysis of different approaches to urban regeneration, different means of engaging with the knowledge economy and the impact of partnership working and the role of universities in such processes. This will further our understanding as to which approaches to urban regeneration, within the context of the knowledge economy and knowledge cities, are most appropriate and worthwhile. The two case study locations are cities which are making moves to engage further in the knowledge economy, with their university regarded as playing a key part in this, in an attempt to drive urban regeneration. Other methods of research take the phenomena being studied out of context, but in case study research, the context is part of that being studied. This factor is very important with regards to this research in which the context

of globalisation and the knowledge economy is a very important consideration in the examination of the role of higher education in the urban regeneration processes of two smaller, post-industrial cities:

...you would use the case study design because you wanted to understand a real-life phenomena in depth, but such understanding encompassed important contextual conditions (Yin, 2009, p.18).

A case study approach can be criticised on the basis that the findings could be very specific to the individual case study, and so the ability to make wider generalisations is limited. However, by focussing on two case studies with many similarities, the findings can be compared and contrasted to elicit commonalities and understand differences. Using more than one case study makes the research more rigorous and in turn more valid: conclusions from two cases are more powerful and less vulnerable than using one case study alone (Yin, 2009, p.61). Using two case studies negates some criticisms that can be made of the case study approach, i.e. that the specificity of the case makes it difficult to generalise. With two case studies, there is more support for using the results to take a broad view of the concepts being explored. Selecting two cities with similar histories and facing many of the same challenges enables some generalisations to be drawn from the research, and so recommendations can be disseminated and applied to other localities. Likewise, the research is concerned with a particular 'type' of urban form: a smaller post-industrial multi-cultural city which was once a 'key player' in the industrial revolution but which is now struggling to find its place in a global knowledge economy and facing problems of social exclusion. By choosing cases which are 'typical' of many smaller cities across the world, this research allows for future comparative research to be conducted on similar locations (Bryman, 2004, 88).

### **4.3 INTERVIEWS**

Semi-structured, in-depth interviews are the main methodological tool employed in the collection of data for this research. Interviewing a range of local stakeholders in both case studies generates an understanding of the key themes of this research. The interviews are approached in the manner of a structured conversation, with topics and

questions prepared in advance of the interview but with flexibility as to the order of discussion and which topics will be most relevant depending upon the individual participant:

One of the most important sources of case study information is the interview... The interviews will be guided conversations rather than structured queries (Yin, 2009, p.106)

Using semi-structured in-depth interviews will also limit the pitfalls associated with some case study research. Conducting a high number of interviews in both case study locations will allow for clear messages and patterns to be elicited from the data, establishing a sound basis for drawing conclusions and comparisons between the two case study localities. Likewise, by conducting a wide scope of semi-structured interviews in both case studies, a large cross-section of individuals and groups will be given a voice in the research:

Research which relies on unstructured interviews within the qualitative tradition may be slightly less vulnerable to the charge of limited generality, since respondents are often drawn from a variety of social and geographic milieux (Bryman, 2004, 88).

#### **4.4 DATA ANALYSIS**

Interviews for this research were recorded, with the interviewees' permission, and then transcribed. To analyse the data, the researcher undertook a process of 'immersion' as part of a thematic analysis of the data, repeatedly reading the transcripts to become very familiar with the data and gain awareness of the overriding trends and themes within the interviews as a whole: "...the themes and subthemes are the product of a thorough reading and rereading of the transcripts or field notes that make up the data" (Bryman, 2008, p.554). This process of data immersion facilitates the researcher becoming highly familiar with the data overall as well as the responses of each participant and indeed their general world-view:

After a whole day working on the transcripts of a particular participant... we would feel inhabited by that person in the sense that our imagination was full of him or her (Holloway and Jefferson, 2000, p.69).

Key words, phrases and discussions were identified, those which occurred recurrently in a number of separate interviews and in both case study locations, and organised in a matrix according to the dominant themes and sub-themes. Searching for themes involved looking for repetitions, indigenous typologies or categories (local expressions that are unfamiliar or used in an unfamiliar way), metaphors and analogies, similarities and differences (how interviewees within and between the case studies discuss topics in comparable or contrasting ways), missing data (what participants did not say or what could be interpreted 'between the lines' of what they were saying) and theory-related data (Ryan and Bernard, 2003). This thematic approach to data analysis is especially applicable to the international comparative case study approach used in this research, as it encourages the identification of similarities and differences between the UK and US case studies, as well as facilitating the search for 'indigenous typologies' as identified by Ryan and Bernard (*ibid.*).

The use of computer-analysis qualitative data analysis (CAQDA) software, such as NVivo, was considered and rejected on the basis of its inflexibility in general, but especially in relation to the specificities of this work, an international piece of research. The use of CAQDA means that "it is hard to pin down subtlety and intuition" (Holloway and Jefferson, 2000, p.68) and this inflexibility limits the identification of underlying meaning and nuance in participants' responses. As different words and phrases are used in the United States compared to Britain, data analysis software packages would be too rigid as to enable the identification of common meaning expressed through different language and phrasing. CAQDA software was also rejected on the basis that, as discussed earlier, an awareness of context is crucial in this work but "...the fragmentation process of coding text into chunks that are then retrieved and put together into groups of related fragments risks de-contextualising data" (Bryman, 2008, pp.266-7). It is worth noting that, overall, using CAQDA takes over the "manual labour" involved in data analysis but does not interpret, code and retrieve it and therefore, on the basis of the

criticisms of CAQDA discussed here, it was decided that the limitations associated with its use outweighed the potential benefits (Bryman, 2008, p.565).

#### **4.5 THE CASE STUDY LOCATIONS**

To analyse the issues involved in the urban regeneration of smaller cities, a careful case study selection process was undertaken to enable the most robust identification of cities most suitable for the investigation of the research questions, allowing for further generalisations to be made from the findings. Having conducted an in-depth literature review of the knowledge economy and its spatial manifestations across cities in Europe and North America, a framework of criteria was established to best identify potential locations for case study analysis. Such a framework enables the locations to be judged on their suitability in terms of this research, with the aim of ensuring that the most appropriate cities will become the case study locations.

The industrial heritage of the case studies was an important criterion: cities with an industrial 'hangover' are sought, ones which have experienced economic and industrial success in the first Industrial Revolution. Likewise the current economic and industrial context of the cities was a factor in case study selection, within the context of a global marketplace the case study locations are those cities which are making attempts to regenerate via engagement in the knowledge economy. The two case study locations are cities which are currently facing challenges, with problems of social exclusion and a diverse community, in terms of economic base and ethnic origin. These factors were important in the search for case study locations as these are the cities facing the greatest challenges in terms of regeneration: cities with a prosperous industrial history, yet which today are facing problems of social and economic exclusion and thus are attempting to regenerate via engagement in the global knowledge economy.

The problems these cities face in regeneration seems to be compounded when they are smaller cities (with less human capital and a less diverse industry base) which are not central players in the economy of their country or even region. Therefore the choice of

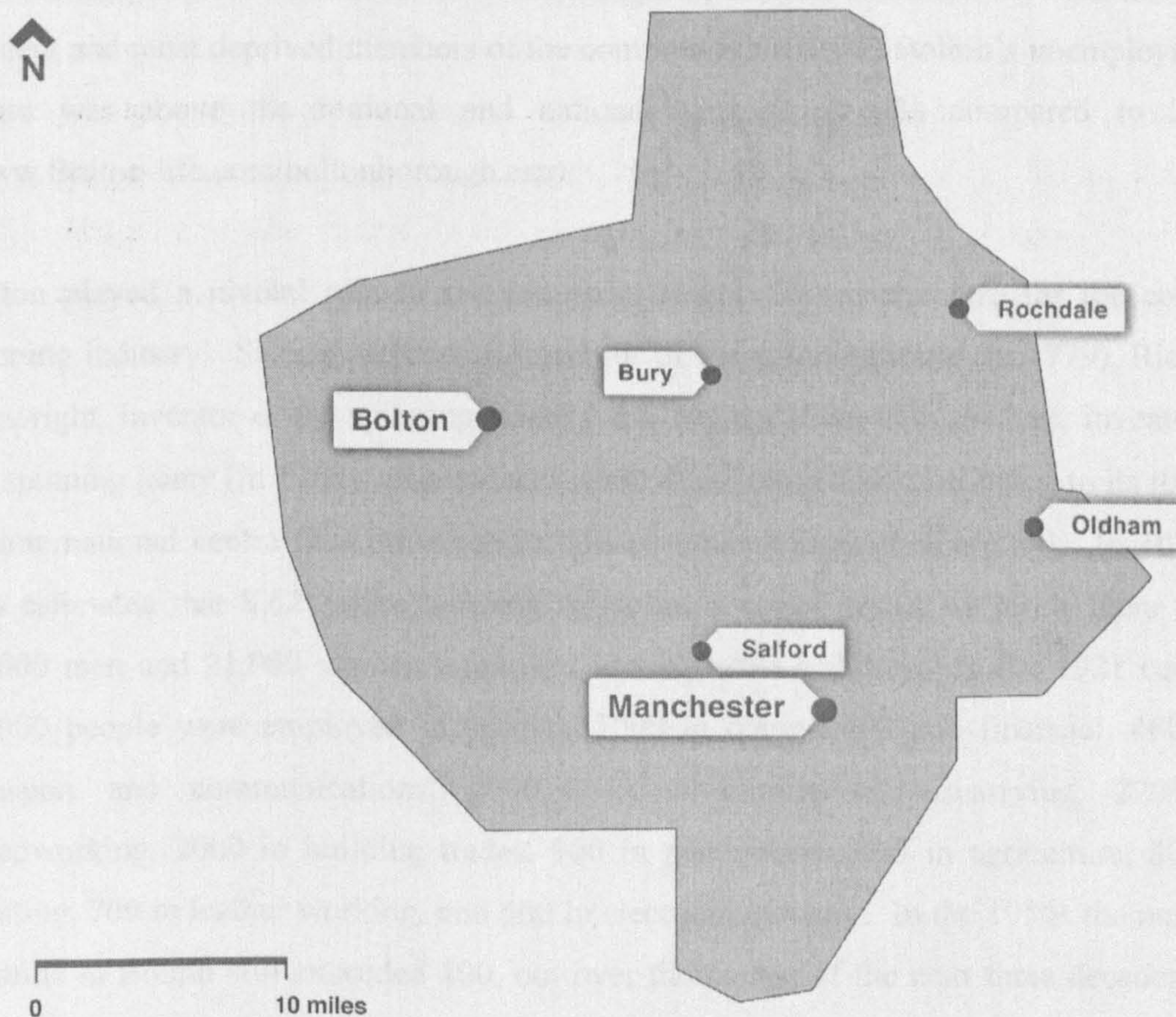


case study location was narrowed further: the case study locations are smaller cities, which are a 'satellite' rather than a central player, in their region. As the role of a university within a partnership approach to urban regeneration is to be examined, it is crucial to select a case study location where a partnership approach to regeneration appeared to be taken with the local Higher Education Institution seemingly actively involved.

#### 4.5.1 BOLTON

Bolton is in the North West of England, 10 miles northwest from the metropolitan city of Manchester.

Figure 1: Map of Bolton and Wider Region



In 2000 Bolton's population was approximately 267,001. In comparison to many other English towns, Bolton has a relatively ethnically diverse population, which may indeed stem from its industrial heritage. The 1991 census indicated 8.3% of Bolton's population originates from ethnic minority groups including Pakistani, Indian, Chinese, African and Caribbean communities. Over ten years on, this figure is thought to now be closer to 10% with a recent influx of Polish, Ukrainian and Irish communities (1991 and 2001 Census).

Bolton is also diverse in terms of its economic fortunes, with areas of both wealth and deprivation. The 2000 Indices of Deprivation show that seven of Bolton's twenty wards, where a third of the population reside, are amongst the 10% most deprived wards in the country. The most deprived ward in Bolton is ranked 51st, out of 8414 in the country, with the least deprived ranked 5520<sup>th</sup>, demonstrating the gulf in Bolton between the most affluent and most deprived members of the community. In 2002 Bolton's unemployment figure was above the regional and national average, at 4% compared to 3.3% ([www.Bolton-life.com/boltonborough.asp](http://www.Bolton-life.com/boltonborough.asp)).

Bolton played a pivotal role in the Industrial Revolution as a centre for the cotton-spinning industry. Samuel Crompton, inventor of the spinning mule (in 1779), Richard Arkwright, inventor of the spinning frame (in 1768) and James Hargreaves, inventor of the spinning jenny (in 1768), all lived and worked in Bolton and contributed to its role as an international centre for cotton production ([www.boltonrevisited.org.uk](http://www.boltonrevisited.org.uk)). In 1838 it was estimated that 8,621 were working in Bolton's cotton trade; by 1911, there were 15,000 men and 21,000 women employed in the textile industry. In the 1921 census, 33,000 people were employed in textiles, 7000 in commercial and financial, 4600 in transport and communications, 4000 in coal mining and quarrying, 2200 in woodworking, 2000 in building trades, 900 in paperworks, 900 in agriculture, 800 in painting, 700 in leather working, and 500 in electrical industry. In the 1950s the number of mills in Bolton still exceeded 100, but over the course of the next three decades this changed dramatically: by 1979 just eight working mills remained in the textile industry

([www.Bolton.org.uk/history](http://www.Bolton.org.uk/history)). A BBC film catalogues the decline of Bolton, as it happened: "Bolton, in the heart of cotton country, is typical of the Lancashire towns to which unemployment has come with a sharp suddenness" ('Crisis in the Cotton Industry', 1952). 'Crisis in the Cotton Industry' addresses the recession which had suddenly hit Bolton, describing how a town which only one year previously had attracted immigrants to fill its labour shortage, now had one third of its cotton workers unemployed, many of whom were the recent immigrants.

Since the industrial revolution, Bolton's strength in traditional industries has steadily diminished, and continues to do so. In the years from 1998 to 2007 the proportion of manufacturing jobs in Bolton fell from 21% to 15%; likewise, over those same years, the traditional industries centred on agriculture, fishing, energy and water declined from 2% to only 0.5% of local employment (Bolton Council, 2009, p.3). Whilst these industries have been declining in Bolton, the proportion of jobs in the banking and finance sector has increased from 14% to 18% (ibid.). However, these figures demonstrate the Bolton still has a greater proportion of its population employed in manufacturing, and a smaller proportion employed in banking and financial services, compared to the UK as a whole (Bolton Council, 2009, p.4).

The roots of the University of Bolton can be traced back over one and a half centuries (albeit in many different forms and with different names). In 1824 the Bolton Mechanics Institute was founded, inspired by Dr Birkbeck's work in Glasgow and the third such institution in Britain. Bolton Mechanics Institute, like its predecessors in London and Glasgow and comparable with Lowell Textile School, serviced the textile economy and provided education for the workers. Bolton became home to a School of Art in 1857 and the Crompton Literary and Scientific Institute in 1868. Following World War Two institutions providing further and higher education became much more widespread in the town, with the development of the College of Arts, the Technical College and Bolton Training College in 1946 ([www.Bolton.ac.uk](http://www.Bolton.ac.uk)).

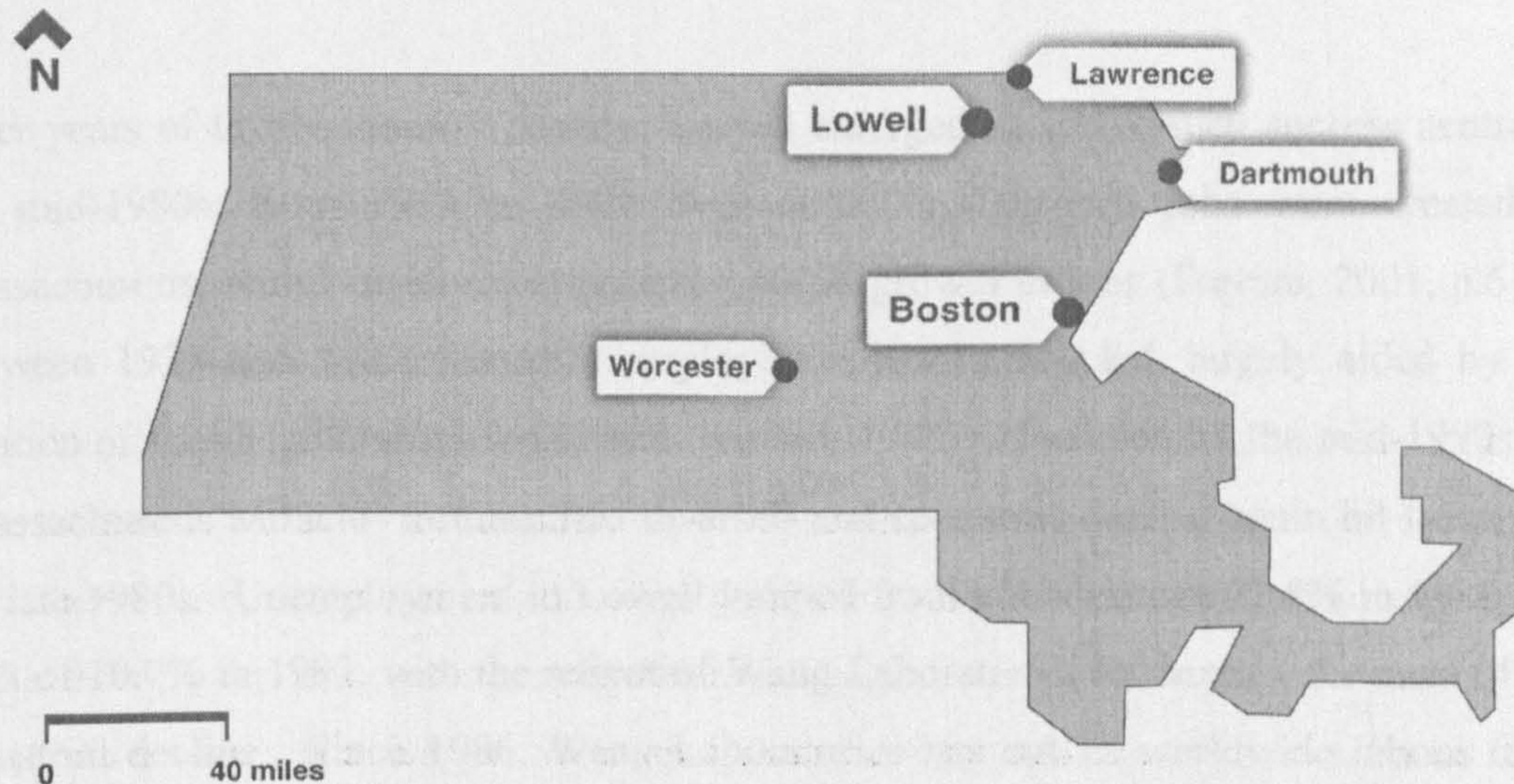
In 1982 Bolton's Institute for Higher Education came into being and in April 2004, following a struggle on behalf of the institution, it became a university, when the Privy Council approved it for university status. In January 2005 it was named the University of Bolton and has since become one of Britain's fastest-growing universities, with approximately 9000 students. Eight percent of the student body is comprised of international students from over 70 countries, but the vast majority of students come from Bolton and the North West of England (approximately 80% of the student body). Almost 50% of the University of Bolton's student body studies part-time and approximately 60% of its first-year undergraduate population are mature-age students. The university also has a higher-than-average proportion of disabled students and one of Britain's most ethnically-diverse student populations, with ethnic minority students comprising 13% of its home student population. Much like the location of the University of Massachusetts campus in Lowell, the location of the university in Bolton is certainly important to its local economy. The university is one of the town's largest employers, with over 700 staff and an income of approximately £37 million ([www.Bolton.ac.uk](http://www.Bolton.ac.uk)).

Bolton was selected as a case study location for this research, fitting as it does so many of the criteria. It is a smaller urban area, and so is a manageable size for analysis, and it is in very close proximity to the large metropolitan city of Manchester, allowing for an analysis of the relationship between a smaller 'satellite' city and its dominating neighbour. Although technically a town, in lots of ways it displays characteristics of a smaller city. Bolton's population would also make it an appropriate and interesting choice as a case study, with some ethnic diversity as well as pockets of very deprived communities living side-by-side areas of substantial affluence. Bolton has a rich industrial legacy which has given way to a social and economic fabric now defined by inequality, pockets of deprivation and some ethnic diversity. After success in the industrial revolution, Bolton has faced years of industrial decline and rising unemployment and deprivation and is in need of regeneration. The city is committed to engaging further in the knowledge economy as a means of regeneration, with the University of Bolton regarded as a key player in this process. For all of these reasons, Bolton (and the University of Bolton) was selected as one case study location.

## 4.5.2 LOWELL

The North American city of Lowell is the fourth largest city in the North Eastern state of Massachusetts, situated 30 miles North West of the metropolitan city of Boston.

Figure 2: Map of Lowell and Wider Region



The city of Lowell has a population of approximately 104,000 and has been described as a “city of immigrants” (Farrant, 2001, p.615). The population of Lowell increased by 10% from the 1980s to 1999, with the immigrant and minority share of the population increasing from 5% to 25% in that time (*ibid.*). Although there has been this recent surge in immigrant populations living in Lowell, the city has long been home to immigrant settlers, first attracted to work in the textile industry.

Lowell was a city at the forefront of the Industrial Revolution, founded in 1821 by a group of entrepreneurs inspired by Francis Cabot Lowell’s vision of an industrial community with the textile industry at its heart. By 1840, Lowell was the second largest city in New England (after Boston) and the centre of the textile industry in the United States. From the 1880s, for four following decades, Lowell was a booming town and a prosperous example to other parts of America, of the benefits of trading in cotton.

Lowell's industrial pinnacle came in the time immediately before and after World War One, when the city's industry was focused on producing war materials. However, this heyday could not continue and as cotton manufacturing moved to the Southern States and then further south to Mexico, driven by cheap production costs, Lowell fell into a decline, intensified by the depression of the 1930s. A brief revival came when the war industries were needed once more in the 1940s, but by the 1950s the textile industry had largely left Lowell behind.

After years of textile industry decline, Lowell emerged as a high-tech success centre in the mid-1980s: from 1975 to 1980 over 100,000 high tech jobs were created in Massachusetts, with Lowell experiencing a 400% growth in jobs (Farrant, 2001, p.616). Between 1972 and 1989, Lowell's employment nearly doubled, largely aided by the location of Wang Laboratories in Lowell (Gittell, 1995). However, by the mid-1990s the 'Massachusetts Miracle' fortunes had reversed and economic decline again hit Lowell in the late 1980s. Unemployment in Lowell jumped from a low point of 2.8% in 1988 to a peak of 10.7% in 1992, with the retreat of Wang Laboratories accounting for most of the industrial decline. Since 1986, Wang Laboratories has cut its worldwide labour force from 31,000 to 6,200, with approximately 40% of these cuts in Massachusetts and the majority in Lowell (*ibid.*). However, despite this downturn in fortunes it should be acknowledged that Lowell in the mid-1990s, following the high tech boom and bust, was still better positioned than before: employment declined in Lowell from 1989 to 1994 but was still 75% above the 1972 level (*ibid.*).

Today, Lowell is faced with problems of social exclusion and pockets of deprivation. In 2007, Lowell had a large number of residents living in poverty, with 17.6% of its population living below the poverty line compared to the state-wide figure of 9.9% ([www.city-data.com/poverty/poverty-Lowell-Massachusetts.html](http://www.city-data.com/poverty/poverty-Lowell-Massachusetts.html)). 24.6% of Lowell's children were living below the poverty line in 2007, compared to 12.6% in Massachusetts as a whole (*ibid.*).

The University of Massachusetts: Lowell (UMass: Lowell) is home to 12,000 resident and commuter students. The university began as Lowell Normal School (known as Lowell State), founded in 1894 to prepare students to become teachers, and Lowell Textile School (known as Lowell Tech), founded 1895 to prepare workers for the local textile industry. In 1975, Lowell Normal School and Lowell Textile School merged to form the University of Lowell, which became part of the University of Massachusetts in 1991. The university provides 85 degree programmes in five colleges: arts and science; education; engineering; health and environment, and; management ([www.uml.edu](http://www.uml.edu)). The university markets itself to “students of all backgrounds” and states “the mission of the University of Massachusetts Lowell is to provide students an affordable education of high quality and to focus some of its scholarship and public service on assisting sustainable regional development” ([www.uml.edu](http://www.uml.edu)). In 2004, the campus awarded over \$36 million in aid, with UML offering to meet, on average, 90% of student’s demonstrated need ([www.uml.edu](http://www.uml.edu)).

Lowell shares many similarities with Bolton. With its history in the industrial revolution and years of boom-and-bust, Lowell is a place in need of regeneration. With a highly diverse population, both in terms of ethnicity and in terms of wealth and deprivation, an analysis of Lowell would allow for these issues to be explored. Lowell is situated in very close proximity to the large, metropolitan city of Boston, which has itself been through periods of intense decline and which is home to a large number of universities (including Harvard and MIT, two of the most prestigious universities in the world). This can be paralleled with the close proximity of Bolton to Manchester (which has, like Boston, also been through periods of decline and which is also home to a number of universities). Lowell is home to a university which has a long history in the city (albeit under different names and remits).

Parallels can also be drawn between the industrial history of the two areas, with both Lowell and Bolton credited as playing an important part in the Industrial Revolution. Both cities were thriving industrial centres for cotton and experienced great success as manufacturing towns. Both cities have likewise experienced decline since their heyday

with the fall in manufacturing in the US and UK in general. The sharp decline in both of the cities industries has left its scars, with Lowell and Bolton home to complex problems of social exclusion, with pockets of deep deprivation (as well as pockets of affluence). Both cities now show signs of seeking regeneration via the knowledge economy, with their universities seen as playing an important part in this process. The shared history of the two cities and the parallels between the challenges they both face make them highly suitable for comparing and contrasting, to elicit what approaches are working, and which are not, in the regeneration of such cities. In doing so, this research can make recommendations which may be applied to other smaller-scale, post-industrial cities that are facing problems of social exclusion and in need of regeneration.

The combination of these factors, and the parallels which are already emerging between Lowell and Bolton, are the motivations for using Lowell (and UML) as the second case study location.

#### **4.6 FULFILLING THE METHODOLOGY**

To meet the aim and objectives of this research, the main focus of the methodology will be on case study analysis. A case study approach has been chosen as it allows for a deep analysis of the central issues of the research:

The advantages of a case study approach are that it allows for an 'in-depth' treatment of the subject, where a large amount of detail about the practices and processes being studied can be understood in relation to a particular social context (Innes, 2003, p.212).

To explore the case studies, a desk-based analysis of literature relating to the two locations was firstly undertaken to develop a general understanding of the areas. Contacts in each case study were identified (through literature and Internet research) and these contacts were approached for interview. To explore the case study of Lowell, in North America, a six week fieldtrip was planned to take place April to June 2007. Following on from this trip, the case study of Bolton, in the North West of Britain, was



explored in interviews beginning in November 2007, with the final interview conducted in January 2008.

In both case study locations, the main method of research was semi-structured, in-depth interviews, with respondents including academic and managerial staff in the local university, staff in local government, members of the local private sector, community workers, students and local artists as well as some regional actors. As well as these interviews, a large amount of documentary research was conducted to underpin and further the researcher's understanding and analysis of the case study locations.

#### **4.6.1 LOWELL**

Six weeks of fieldwork research was conducted in Case Study 'A': Lowell, Massachusetts, USA, from the April until June in 2007. During this time the researcher lived in Lowell and so a certain amount of participant observation, both overt and covert, was inevitably conducted. However, the main method of data collection was semi-structured, in-depth interviews. The interviewees were identified through a combination of research before the fieldwork trip (identifying local 'key players' through literature and Internet research) and 'snowballing' of contacts established once in Lowell. Here, the term 'key players' refers to people who take an active role in the local community in relation to the core concepts of this research. Therefore, interviewees included academics and university staff, students, local business owners, local artists, City Council staff and community workers. In total 25 interviews were conducted, lasting between 45 minutes and one and a half hours each, with interviews averaging one hour in length. The interviews were approached as if they were structured conversations and so the researcher entered the interview with a list of general topics and issues to be addressed in the course of the discussion, but the order of this discussion was flexible and, to an extent, the content was likewise flexible as the researcher allowed the interviewee to talk relatively freely on the topics, guiding the discussion when necessary. This approach was employed so as to get the most out of the interviewee. The researcher was aware of the topics to be discussed, but allowed the interviewee room to prioritise what they felt was important. When this took the interview off course, the researcher was able to guide the

interview back in the desired direction, but this approach was successful in that it instilled confidence in the interviewees and made the interview less formal, both of which had the effect of soliciting more information and discussion from the interviewee.

All interviews were recorded, with consent from the interviewee attained at the start of the interview. When attaining consent, the interviewer made clear that the purpose of recording was merely to aid in the transcription process and that it allowed the interviewer to be focused on the conversation rather than taking notes. The interviewer made clear that the recordings would only be heard by herself and that all names and comments would be kept anonymous. In general, interviewees showed no signs of discomfort at being recorded, although there were a few raised eyebrows and jokes that they “would have to watch what they said”. Only one interviewee requested that the recorder be turned off, at the end of the interview, so he could “tell me more” before passing on some sensitive information.

Out of the 25 interviewees in Lowell, 17 were male and 8 were female. Four of the interviews were more akin to focus groups, with up to three interviewees as well as the interviewer engaging in the discussion. In general, interviews were not planned this way, but occurred in this manner when the interviewee arranged to interview an established contact, who then suggested one or two colleagues could also participate. The researcher felt it was better to accept such offers, for the purpose of generating more data and maintaining favourable relations with the interviewees.

Lowell is a very multi-cultural city, and this was reflected to some extent in the composition of the interviewees. However, the dominant representation of the ‘White’ ethnic group in the interviewees reflects the ethnic make-up of some of the key institutions in this research, for example eight out of the 11 University of Massachusetts Lowell staff (non-academic as well as academic staff) who participated in interviews were White, reflecting the overall statistics for the institution.

Interviewees were approached for interview by means of a brief email, which outlined the research project, explained the interest in Lowell and requested interview. Once interviewees had agreed to be interviewed, a brief document (between one and one-and-a-half pages long) was sent to interviewees two days prior to interview, which gave some more detail on the research project. It was intended that this document prepare interviewees for the general topics that would be discussed in interview. Sending this briefing document was very successful, a number of interviewees commented on its usefulness and some used thoughts generated by reading the document to structure their responses to questions.

Whilst staying in Lowell and conducting research, a number of other events and meetings were attended, which contributed to the gathering of data and knowledge. These events and meetings included university lectures, city council meetings and cultural events and festivals. The researcher resided in university accommodation, usually reserved for international students or mature students with families. Staying in this accommodation and attending a variety of events enabled more research opportunities and contributed to knowledge and understanding about the city of Lowell.

#### **4.6.2 BOLTON**

As part of the research design, data was then collected in relation to Case Study 'B'. Approximately six weeks of research was also conducted in case study 'B': Bolton, North West England. As in Lowell, interviews were used as the main data collection method, and similar key players were identified in Bolton as in Lowell. Aside from this, however, data collection in the British case study did differ to that of the North American case study. Interviews were conducted from November 2007 through to January of 2008. For this phase of the research, the residential basis of the researcher was in Liverpool, approximately 35 miles from Bolton, and so the interviewer commuted for each interview and spent additional time within Bolton on a daily basis. Whilst this meant that there was less opportunity for participant observation and that the researcher was less immersed in the local community of Bolton, this has partly been offset by the researcher's experience

of living and working in the North West region of England for the last six years, which has provided knowledge of the wider regional context of, and challenges facing, Bolton.

As in Case Study 'A' semi-structured in-depth interviews with local key players were still the main data-collection method and sixteen of these were carried out in Bolton. Selection of these interviewees was conducted in a likewise manner to that of Lowell, through literature and Internet research followed by 'snowballing' of contacts. The interviews were approached in the same way, with a brief email outlining the research and requesting interview, followed by emailing the briefing document in the days preceding the interview to aid the interviewee in preparing and ensure the interview was 'on topic'. Again, this briefing document proved valuable, with interviewees commenting upon its usefulness and referring to it in interview. As in Lowell, the researcher entered the interview with a list of general topics and issues to be addressed in the discussion but then approached the interview as a structured discussion. The interviews lasted between 45 minutes and one-and-a-half hours, typically lasting one hour.

Sixteen interviews were conducted in relation to the case study location of Bolton, with one of these interviews functioning more like a focus group with three interviewees engaging in the discussion: in total, therefore, eighteen respondents engaged in the interview process. Out of these eighteen respondents, eleven were male and seven were female; fifteen were white and three were from non-white ethnic groups. Four interviews were conducted with staff at Bolton council; four were conducted with staff at Bolton Council; four were conducted with academic staff at the University of Bolton; one interview (with three respondents contributing) was conducted with staff working at the University of Bolton in a community outreach capacity, and; two interviews were conducted with regional agencies.

In both Lowell and Bolton, the structure of the interviews, the general topics and issues to be addressed in each, came from the aim and objectives of this research and more specifically the research questions. The general list of interview topics was then tailored

to meet the particular expertise or knowledge of the interviewee. This tailoring was carried out before each interview, based on the researcher's knowledge of the interviewees' work or area of expertise. The structure of each interview was then flexible enough to facilitate the discussion of additional or fewer topics, or more or less emphasis given to certain topics, should the need for this become apparent in any of the interviews. The specific list of topics for the interviews is included as Appendix Two (Lowell) and Appendix Three (Bolton).

## 4.7 THE INTERVIEWEES

Each respondent involved in this research has been labelled using a simple code, to retain the anonymity of the interviewees whilst enabling the reader to navigate the discussion of the findings with consistency. Interviewees from both case studies have been labelled numerically, with an 'L' preceding the label for all respondents from Lowell and a 'B' preceding all respondents from Bolton. The tables below list the interviewees by their code name as well as detailing which organisation they work for and what their position within that organisation is as well as some information on their background / area of expertise.

### 4.7.1 LOWELL INTERVIEWEES

*Table 2: Details of Lowell Interviewees*

Research Code Name	Organisation	Further Information
L1	UMass Lowell (academic)	PhD, Professor, academic background in history; teaching and research interest in regional economic and social development, specialising in labour issues. Active in community boards/organisations.
L2	UMass Lowell (academic)	PhD, Professor, academic background in economics; teaching and research interest in regional

		economic and social development. Background in public policy research.
L3	UMass Lowell (academic)	PhD, Professor specialising in economics; teaching and research interest in regional economic and social development.
L4	UMass Lowell (academic)	PhD, Professor; teaching and research interest in regional economic and social development, specialising in community issues.
L5	UMass Lowell (academic)	PhD, Professor in engineering, specialising in nanotechnology and nanomanufacturing
L6	UMass Lowell (academic)	PhD in engineering, specialising in engineering and economic and social development. Background in private sector.
L7	UMass Lowell (academic)	PhD, Assistant Professor in Political Science specialising in Southeast Asian culture
L10	UMass Lowell (academic)	PhD, Associate Professor in Management, specialising in competitive markets and the commercialisation of IP
L9	UMass Lowell (academic and management)	PhD, Professor in subjects relating to economics and social development, specialising in international political economy. At time of research was also in senior management position in the university.
L10	UMass Lowell (management)	Ex-Chancellor of the university (with a background in the private sector)

L11	UMass Lowell (student and community worker)	Postgraduate student in regional economic and social development. Active in the community through voluntary and Church work.
L12	Lowell Council	City of Lowell Planner – senior member of staff specialising in Economic Development
L13	Lowell Council	City of Lowell Planner – senior member of staff specialising in Planning and Development
L14	Lowell National Park (management)	PhD (history), Senior member of staff in the management of the National Park. Active in community boards/organisations.
L15	Local artist	Local artist – founder and director of local museum and art gallery
L16	Lowell Business	Proprietor of local coffee shop (hosting cultural and arts-based events, exhibiting local artwork)
L17	Lowell Business	Local business proprietor and senior member of staff at local independent bank
L18	Lowell Community worker	Community worker in local community development corporation
L19	Lowell Middlesex Community College (MCC) (academic)	PhD, Professor in cultural anthropology. Active in MCC-Umass Lowell partnerships
L20	UMass Presidents Office	Member of senior management staff working across the University of Massachusetts 5 campus network
L21	Regional research institute	Member of staff working at senior level in regional research institute focussed on economic development

L22	UniverCity Partnership	Founder and Director of Worcester UniverCity Partnership (collaboration between higher education, private sector and public sector). Background in US Department of Housing and Urban Development.
L23	Regional academic (MIT)	Associate Professor of Urban Planning at MIT, specialising in city-campus partnerships
L24	Regional academic (MIT)	Professor of Urban Planning and Design at MIT, specialising in redevelopment of former industrial areas
L25	Regional academic (Umass Boston) and community worker	PhD, academic background in sociology. Board member and Vice President / Chair of various non-profit organisations aimed at education-community partnerships.

#### 4.7.2 BOLTON INTERVIEWEES

*Table 3: Details of Bolton Interviewees*

Research Code Name	Organisation	Further Information
B1	University of Bolton (management)	Ex-Director of Finance at Bolton University
B2	University of Bolton (academic)	PhD, specializing in Built Environment
B3	University of Bolton (academic)	Artist, teaching art and design
B4	University of Bolton (academic)	Arts, Media and Education, specializing in liaison with external industries and partners.
B5	University of Bolton (community)	Member of staff in the marketing and communications department, specializing in arts and social science.



		Active in a number of community organizations in Bolton.
B6	University of Bolton (management)	Senior member of management staff at the university, with a background in the private sector (for example previously worked for the Chamber of Commerce)
B7	University of Bolton (management)	Senior member of management staff at the university.
B8	Bolton Council	Senior City Planner specializing in Development and Regeneration.
B9	Bolton Council	Senior City Planner specializing in Inward Investment.
B10	Bolton Council	Senior City Planner specializing in Bolton Innovation Zone.
B11	Bolton Council	Senior City Planner, specializing in Environment and Planning.
B12	Business	Managing Director of home retailer; background in finance.
B13	Business	Retired senior banker; active in private-public sector boards within Bolton
B14	Business	Founder and Chairman of large local engineering business; active in private-public sector boards within Bolton
B15	Regional Development Agency	Senior member of staff specialising in regional policy and partnerships
B16	Manchester Knowledge Capital	Senior member of staff at Manchester Knowledge Capital; background in international knowledge

		transfer, regeneration and knowledge-based business development.
--	--	--

## 4.8 CONCEPTUAL FRAMEWORK

The thesis will now outline the conceptual framework of this thesis, in which the context of the research is first explored before the specific focus of the research is outlined. The conceptual framework is represented by the three following diagrams, which illustrate the research according to different scales. The first diagram is a representation of the broad context of the research, showing knowledge cities within the context of the global knowledge economy.

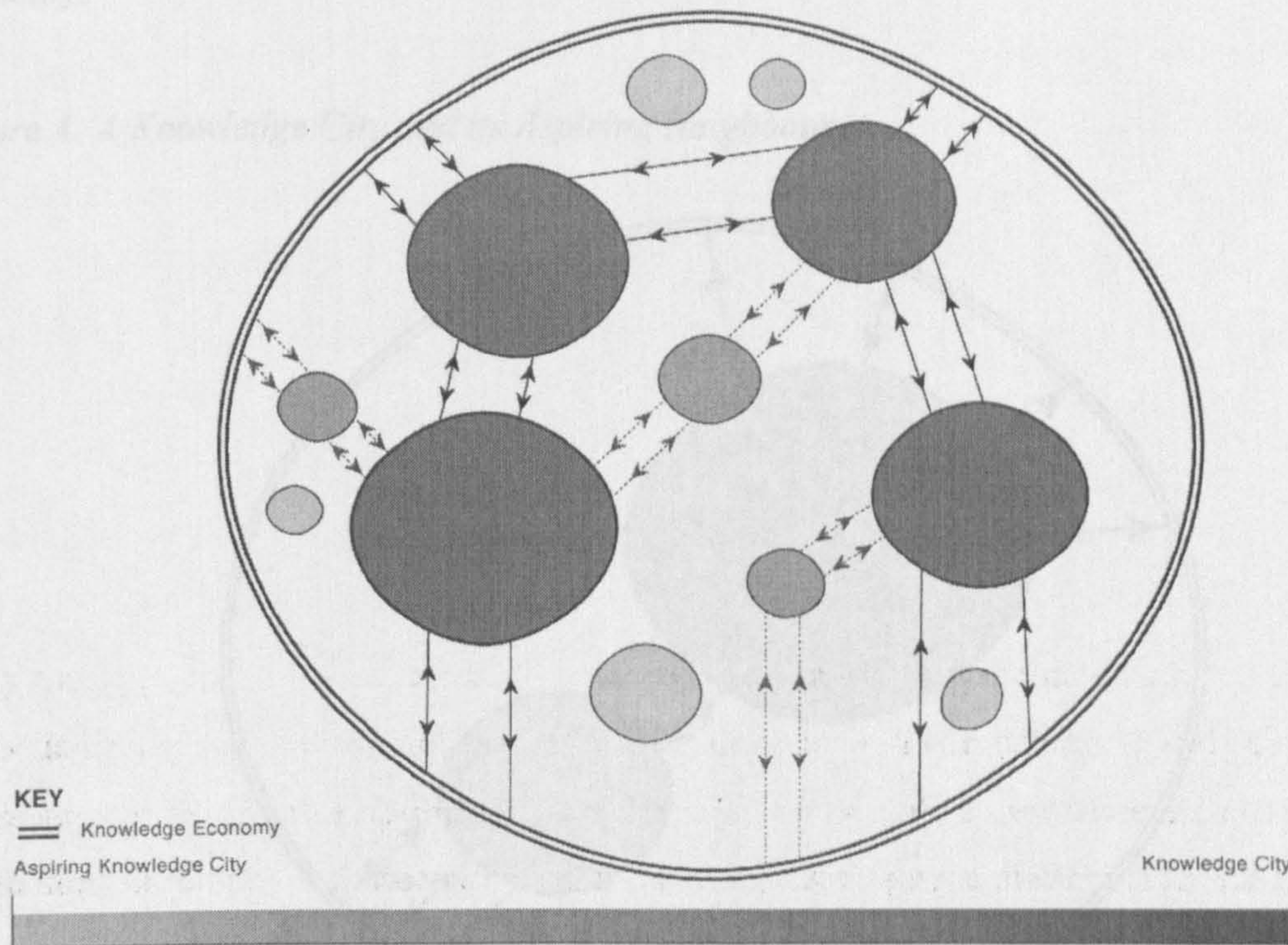
In all of the diagrams, the knowledge economy is represented by a double line and cities are represented by oval shapes. The extent to which those cities are successfully engaging with the knowledge economy (and can be described as knowledge cities) is illustrated in size and depth of colour: the greater the engagement in the knowledge economy and success of the economy, the larger the shape and the deeper the colour. Strong links between the cities and the knowledge economy, are represented by block lines, whereas weak ties are represented by dashed lines.

The conceptual framework underpins this research and illustrates the broad context of the work as well as the core focus. The first figure represents the global context, showing the relationship between successful knowledge cities and their smaller urban neighbours on a general global scale. This figure shows the strong ties between knowledge cities to one another and the knowledge economy, as well as the weak ties between less successful cities and other urban areas as well as the global economy. Some cities, the least successful, have no ties to other cities or the knowledge economy, and these cities are the most disadvantaged. The second figure in the conceptual framework narrows in on the closer context of the research, illustrating the relationship between a successful, dominating knowledge city and a smaller satellite city in its proximity. This represents,

for example, the relationship between Boston and Lowell (in the US), or Manchester and Bolton (in the UK). This second figure shows the strong ties between knowledge cities and the global knowledge economy, and the weak ties between smaller cities. The final figure shows the smaller city, the subject of this research, up close, with an exploration of the inner processes. Within the city we see the triple helix network, between higher education, the private sector and the public sector, working in partnership in pursuit of the knowledge city concept as a means of urban regeneration.

The first figure of the conceptual framework, figure 3 represents the broad context within which this research is situated. The knowledge economy, tied up as it is in processes of globalisation and post-industrialisation, is represented on the diagram (as in all the conceptual framework diagrams) by a double line. This global, post-industrial knowledge economy is the broad context of this work, as it has impacted upon the way in which cities and regions operate, the role they play in the economy and processes of regeneration. Changes in the economy have led to the increasing importance of cities and regions, in terms of productivity and innovation, wealth-generation and regeneration, and so the diagram represents cities and regions rather than nations. In general, it is large metropolitan cities which have flourished rather than smaller ones. These large, successful 'knowledge cities' are represented on the diagram by large ovals, with strong links (represented by the block lines) both to one another and to the knowledge economy. The smaller shapes next to these dominant shapes are the focus of this research, representing smaller cities, which are in such close proximity to their metropolitan neighbours that they can be described as 'satellite' cities. These smaller cities are less successfully integrated into the knowledge economy, represented by their weaker ties (the dashed lines) to other cities and the knowledge economy.

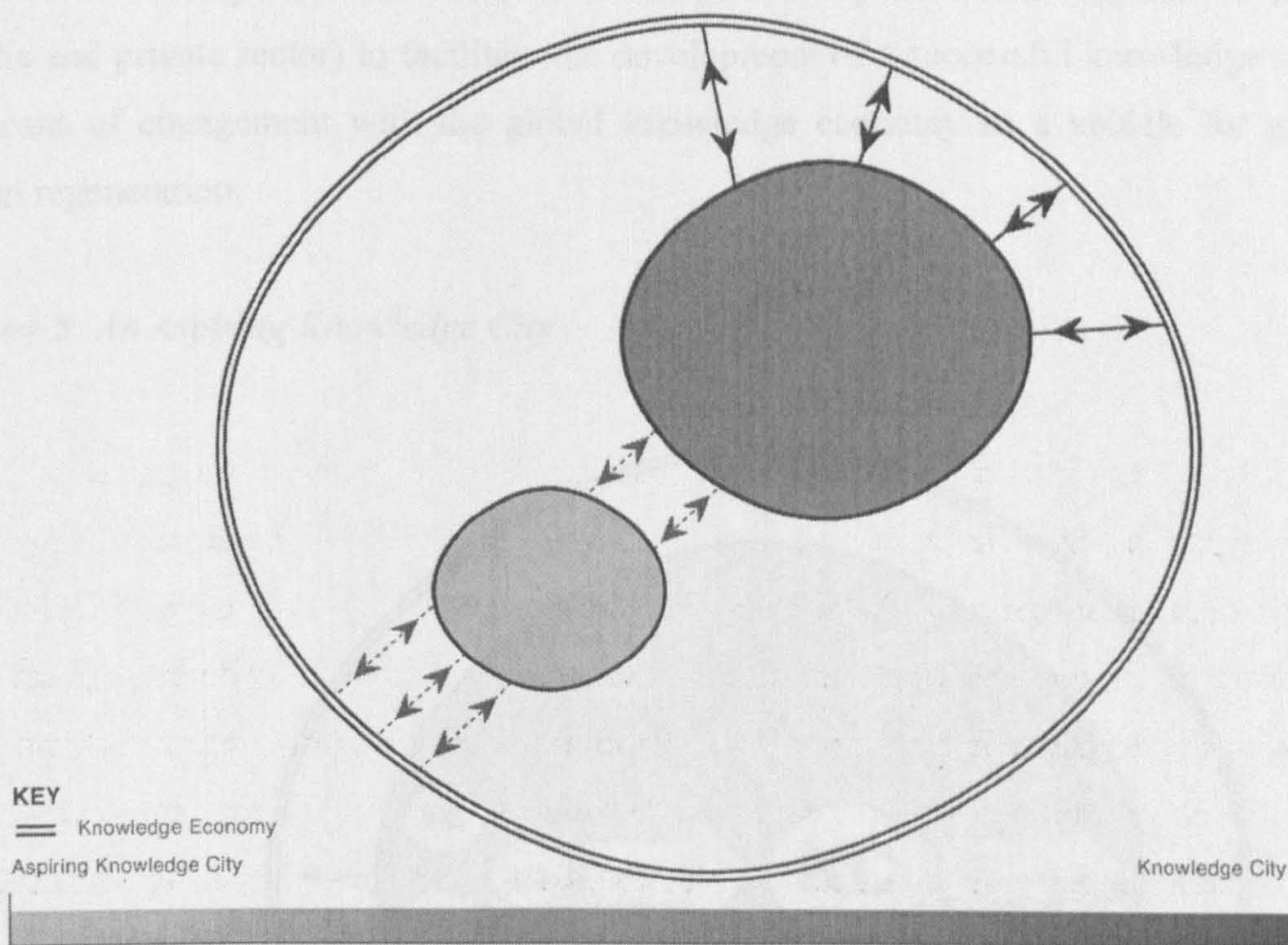
Figure 3: The Global Knowledge Economy



In figure 4, the second in the conceptual framework set of diagrams, we move closer to the immediate context of this research. Figure 4 shows the smaller post-industrial city (the focus of this research) and its dominant metropolitan neighbour, represented by a smaller oval shape next to a much larger one. As shown in figure 3, the large metropolitan city has strong ties to the knowledge economy and, on figure 4, we can see that it has strong internal relationships in terms of its governance. These strong internal relationships are represented by the block lines, strong ties, between the urban institutions. Within the two cities shown on this diagram we can see the triple helix relationship, discussed in the literature review. between higher education, local government and the private sector which, in this research, is seen as playing a central role in the ability of a city to engage in the knowledge economy. In the large metropolitan city the ties binding the partnership between higher education, local government and the private sector are strong (again represented by bold lines) but in the smaller city, the ties

between the three are weak, paralleled by weak ties between the smaller city and its dominant neighbour and by the weak ties between the smaller city and the knowledge economy.

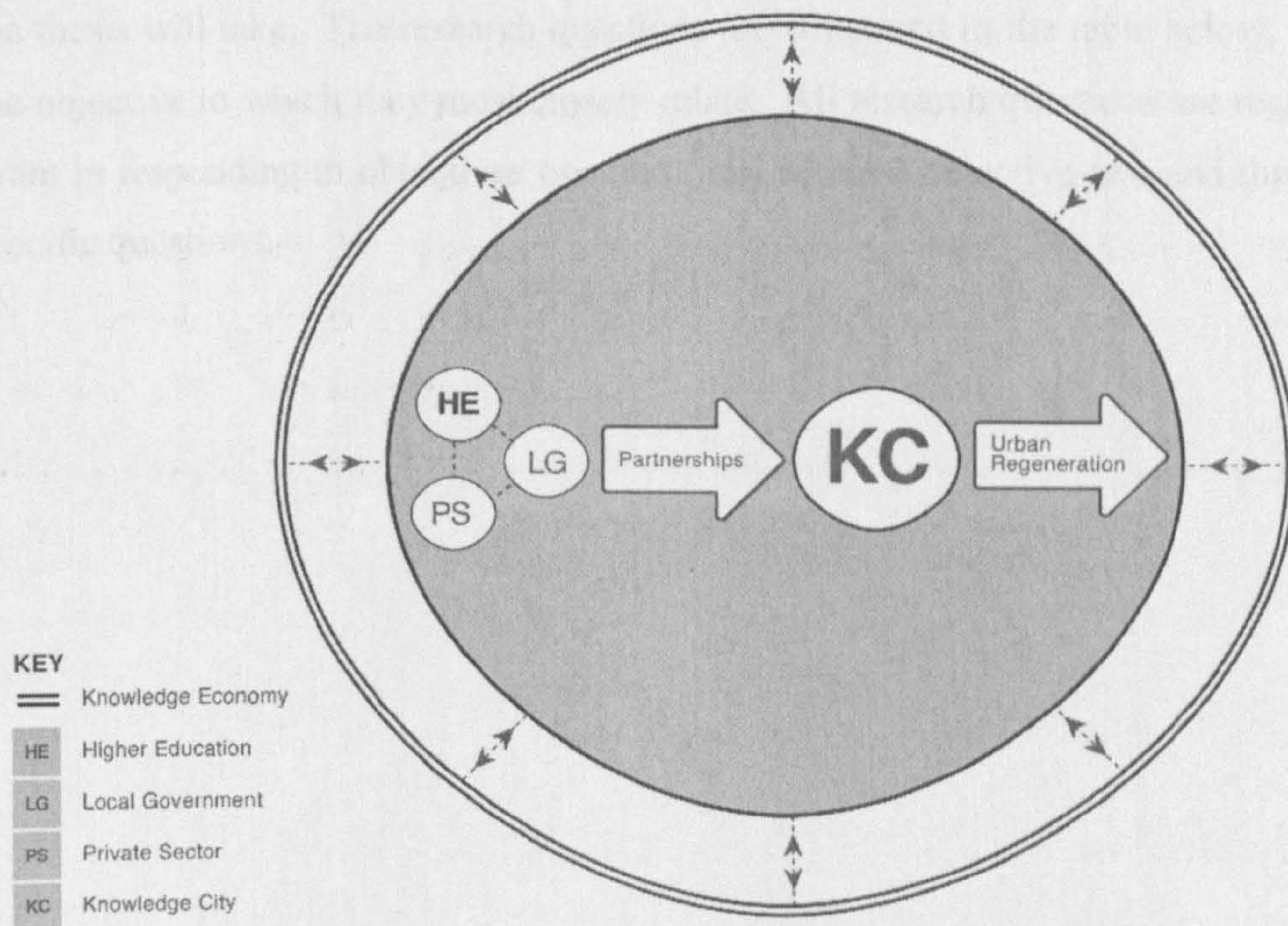
*Figure 4: A Knowledge City and its Aspiring Neighbour*



In figure 5 we move to the core focus of this research, the smaller post-industrial city which is seeking to engage more fully with the knowledge economy as a means of regeneration, specifically the internal civic mechanisms whereby the knowledge city concept is realised as a means of generating urban regeneration. This type of city was visible in figures 3 and 4 as a small oval shape, compared to the larger ovals representing successful knowledge cities. Again the knowledge economy is represented by the double, outer line. Within the smaller city we again see the triple-helix relationship between higher education, local government and the private sector, working together in partnership to encourage the transformation of their city into a knowledge city, bringing with it processes of urban regeneration. It is this relationship which will be explored in

more depth in this research, with higher education the particular focus (represented in the diagram by higher education being bold in comparison to local government and the private sector). The research will consider, in the context of the global knowledge economy and with reference to neighbouring successful knowledge cities (illustrated in figures 3 and 4), the role higher education can play in the urban regeneration of smaller cities and how higher education can work in partnership with other institutions (in the public and private sector) to facilitate the development of a successful knowledge city as a means of engagement with the global knowledge economy as a vehicle for greater urban regeneration.

*Figure 5: An Aspiring Knowledge City*



Having illustrated the conceptual framework underpinning this research using three diagrams, which illustrate the broad context of the research, before narrowing in on the close context and then finally the direct topic of the research, the research questions will now be outlined. The research questions provide the basis on which the research will move forward and highlight the issues to be addressed in meeting the overall aim and four objectives of this research (Chapter 1, section 1.2).

#### **4.9 RESEARCH QUESTIONS**

Having discussed the aim and objective for this research, examined the relevant literature and reviewed the conceptual framework, we will now move on to address the research questions which have emerged so far, and which will underpin the direction that the rest of the thesis will take. The research questions are structured in the table below, in terms of the objective to which they most closely relate. All research questions are regarded as relevant in responding to objectives one and four, whereas objective two and three relate to specific questions.

<b>Objective</b>	<b>Research Questions</b>
<p><b>Objective 1</b> To explore the evolving role of higher education in governance and processes of urban regeneration, within a globalised knowledge economy</p>	<p>All (see below)</p>
<p><b>Objective 2</b> To examine, using a case study approach, the spatial dimensions of the knowledge economy in relation to smaller cities, to further our understanding of what it means to be a knowledge city and the path cities take in becoming knowledge cities</p>	<ol style="list-style-type: none"> <li>1. How can the concept of a knowledge city be understood in practicable terms?</li> <li>2. What path does a place take to become a knowledge city - what are the necessary prerequisites of becoming a 'Knowledge City'?</li> <li>3. To what extent can the knowledge city concept be successfully applied to smaller cities?</li> <li>4. What role and function do universities fulfil within a Knowledge City? <ol style="list-style-type: none"> <li>a. In what ways do these roles and functions differ from the traditional roles and functions of universities?</li> <li>b. What impact does this have on universities and their academic and managerial staff?</li> </ol> </li> </ol>
<p><b>Objective 3</b> To explore the evolving role of higher education in processes of urban governance and urban regeneration, to analyse how and to what extent a university can promote urban regeneration through partnership working aimed at the exploitation of opportunities in the knowledge economy</p>	<ol style="list-style-type: none"> <li>5. How can a university work with other urban partners to further regeneration?</li> <li>6. To what extent should a university fulfil a civic role?</li> <li>7. What impact does partnership working have on a university? <ol style="list-style-type: none"> <li>a. What are the challenges and benefits?</li> <li>b. In what ways have universities had to adapt?</li> <li>c. What has been the external change?</li> <li>d. What has been the internal change?</li> </ol> </li> </ol>
<p><b>Objective 4</b> To consider implications for the nature of regeneration policies, and the role of universities therein</p>	<p>All (see above)</p>



## **4.10 CONCLUSION**

This methodology chapter has analysed the most appropriate methodological approach for this research, selected and described the case studies and the interviewees, outlined the conceptual framework and listed the core research questions. A case study approach was selected for this research as it facilitates the synthesizing of large, evolving concepts, which is crucial in this analysis. A case study analysis encourages a deep, holistic exploration of complicated issues, at the same time allowing for an exploration of the context of the research. Comparing two case studies enables a more rigorous, valid approach to the research and facilitates the making of generalizations. Interviewing a wide cross section of participants in both case studies further encourages a holistic understanding of the core issues in this work. Having explored the methodology, the conceptual framework and the research questions underpinning this research, three discussion chapters will now outline the findings of the research and begin to unpick the wider implications.

The first discussion chapter will explore the knowledge city concept, specifically focused on the smaller post-industrial cities which are the focus of this research. Chapter 5 will build on an existing typology of knowledge cities, developing that typology by focusing on smaller cities (van Winden *et al.*, 2007). In developing this typology, the chapter will explore the case studies at the heart of this research by analysing their knowledge city foundations (knowledge base, industrial structure, urban amenities and quality of life, accessibility, urban diversity, scale and social equity) as well as any indications that the cities are progressing towards engagement with the knowledge economy (by analysing the development of their human capital and development of knowledge industries).

## **CHAPTER FIVE**

### **A TYPOLOGY OF SMALLER KNOWLEDGE CITIES**

#### **5.1 INTRODUCTION**

Having established the conceptual framework for this research, focussed as it is on the urban dimensions of the global knowledge economy, this chapter will further explore the concept of the knowledge city, in relation to smaller post-industrial cities that are in need of regeneration. Building on an attempt to generate an existing typology of knowledge cities, the objective of this chapter is to further our understanding of what is required of a city in its attempts to become a 'knowledge city'. Using the case studies of Lowell and Bolton, this chapter will analyse the prerequisites of a knowledge city, the path a place undertakes in attempting to become a knowledge city and how we can judge where different cities are situated on that path.

As discussed in the literature review (Chapter 2, section 2.3.2) it is widely argued that the knowledge economy operates most successfully at an urban level: "...the geography of the knowledge economy... is highly urban in focus" (Cooke *et al.*, 2002, p. 233). International transport links; networks of knowledge industries, companies and workers, and; a creative and diverse population (most often found at an urban, rather than rural, level) are all factors in creating an environment within which the knowledge economy can flourish more easily. This relationship between the urban environment and the knowledge economy has encouraged a renewed focus on cities. Economic and social development initiatives are often targeted at the urban level and the 'city-region' has become increasingly important in regeneration terms, with large urban areas seen as the driving-force for wider, regional and even national, economic development. Within academia, the city has become a focal point for discussion and research.

However, as discussed in the literature review (Chapter 2, section 2.3.2) this focus on cities in the knowledge economy has too often been abstract and ill-defined. The idea of a 'knowledge city' has been developed without much insight being shed on how such a

city develops, what path it follows, how it looks at different stages along this path, and whether every knowledge city possesses the same features or whether (depending upon a number of factors, for example the industrial heritage of a city, or its demography, or scale) there are a number of types of knowledge city. As highlighted in the literature review (Chapter 2, section 2.4, especially 2.4.1), cities vary widely and so it seems naïve to assume that cities engaging heavily in the knowledge economy will conform to one type; will play the same role in the knowledge economy; will reap the same benefits; will house the same sorts of knowledge industries, and; will become part of the knowledge economy in the same manner. The knowledge city is often discussed merely as an end-state, with the transition that the urban area goes through in becoming a knowledge city too often overlooked. This gap in the literature fails cities which are in need of regeneration, cities that want to take advantage of the knowledge economy as a means of achieving that regeneration, because it leaves the 'knowledge city' as an imprecise, vague concept that cannot be easily pursued. There is no bench-mark for cities to assess themselves against, no route-map (or set of route-maps) for councils and regeneration agencies to consult when formulating their strategies.

It is for these reasons that van Winden *et al.* (2007) have begun the process of formulating a knowledge city typology. The authors argue that not all cities benefit equally from engagement in the knowledge economy and so they look at different types of city to analyse the ways in which urban areas with different characteristics engage with the knowledge economy. Van Winden *et al.* discuss which characteristics make a city most able to take part in the knowledge economy and draw conclusions for the regeneration paths of different types of cities based on this. To enable this analysis, the authors draw up a list of seven foundations of the urban regime (knowledge base; industrial structure; urban amenities and quality of life; accessibility; urban diversity; scale, and; social equity) and argue that a city which has strength in these foundations is well-positioned to engage with the knowledge economy. These foundations are not given equal weight in the typology; rather the knowledge base and industrial structure foundations are seen as the most important factors in a city's ability to engage with the knowledge economy, with the other five foundations supporting these two greater ones.

Van Winden *et al.* argue that the foundation mix which a city possesses is a key determinant for that city's ability to successfully engage in the knowledge economy. The authors then look at two progress indicators to assess the extent to which a city is thriving in the knowledge economy, and so can be termed a 'knowledge city'. These two progress indicators are: the development of human capital, and; the development of new knowledge industries. Influencing all of this, the foundation mix and the progress indicators, is the role of urban governance (termed 'organising capacity' by van Winden *et al.*). The authors incorporated an analysis of urban governance in their study, looking at policies concerned with the knowledge economy, and judging to what extent it was produced and implemented via a partnership of city stakeholders, and whether there was clear leadership within the organising capacity structures.

Van Winden *et al.* stress that their typology is by no means intended as a comprehensive typology of knowledge cities, and call for it to be extended to include further types of city. The authors propose that the inclusion of smaller cities would be especially interesting and would build upon their existing typology in a meaningful way. It is this gap which this chapter proposes to address, by looking at the case studies of Lowell and Bolton in light of van Winden *et al.*'s typology, firstly assessing the condition of the two case studies' foundation mix, and the extent to which both of the cities have strength in the seven foundations. The chapter will then move on to an analysis of the cities in terms of van Winden *et al.*'s two progress indicators. In doing so, the objective of this chapter is to further our understanding of the ways in which smaller cities, facing social exclusion challenges and in need of regeneration, can engage with the knowledge economy and the knowledge city concept in a meaningful way. The chapter will end by briefly turning its attention to urban governance (or 'organising capacity'), with an in-depth analysis of governance in Bolton and Lowell in the following chapter.

## **5.2 FOUNDATIONS OF A KNOWLEDGE CITY**

This section of the chapter will review van Winden *et al.*'s seven 'foundations of the urban region' in regards to the two case studies of Lowell and Bolton. Doing this will enable an analysis of the extent to which Lowell and Bolton are well-equipped (have the potential) to engage with the knowledge economy, which in turn will enable the development of policy recommendations for similar post-industrial, smaller cities aiming to pursue a strategy of regeneration based on engagement with the knowledge economy, as well as contributing to theory surrounding knowledge cities. This section will tackle each foundation individually, describing how it is defined and why it is crucial to a city's ability to engage in the knowledge economy, interweaving the case studies and discussing where their strengths and weaknesses lie in regards to the individual foundations. The seven foundations are:

- knowledge base
- industrial structure
- urban amenities and quality of life
- accessibility
- urban diversity
- scale
- social equity

### **5.2.1 KNOWLEDGE BASE**

A city's knowledge base, as defined by van Winden *et al.*, refers to the universities, polytechnics and other public and private R&D institutions in that urban region, as well as the education level of the population. The authors argue that a strong knowledge base is crucial in the development of a knowledge city, acknowledged by the UK policy agenda, for example discussed in the Department for Business Innovation and Skills report 'The Future of Universities in a Knowledge Economy' (and as discussed in the literature review, chapter 3 section 3.3.1) This discussion will begin with an examination

of the knowledge base of the two regions involved in this study before moving on to the internal knowledge base of the cities themselves.

Table 5 catalogues the higher education provision of the two regions within which the case study cities are located. Higher education provision within Boston, Massachusetts, is vast with over 35 universities in the city and surrounding area. Therefore, for the purposes of this research only the networked University of Massachusetts system has been included in Table 5 to illustrate what need the separate institutions in the system are responding to and what individual role each campus plays. As we can see from the table, Amherst is the flagship institution; research based and with the largest number of postgraduate programmes out of all UMass institutions. Amherst has, by a great deal, the most students, the largest campus, the highest number of faculty and the most expensive tuition fees. UMass Boston is the urban arm of the UMass system and, after Amherst, has the second largest student body. UMass Dartmouth and UMass Lowell are the local institutions, with more inclusive aims, more focussed on teaching than research and more financially accessible. The UMass Medical School, in Worcester, is a small institution with a modest number of students.

Moving on to the second half of the table, dealing with higher education provision in England's Greater Manchester, we see that institutions there parallel the higher education provision in and around our other case study of Lowell. As shown by the table, the University of Manchester is the region's flagship institution, with global aims, just over 25,000 students (a figure very similar to UMass Amherst) and the largest staff body in the region. Manchester Metropolitan University can be compared to UMass Boston, describing itself as "the University for World-class Professionals", but with a much larger student body than its US counterpart (a total to rival the University of Manchester and UMass Amherst) but a much smaller body of staff. The University of Salford is an urban institution, meeting a local need (for example the way it stresses community in its branding). Finally, the British case study institution in this research, the University of Bolton, is a local institution with the smallest staff and student body out of the British institutions represented in table 5, half of whom are part-time students. This table situates

our case study universities (UMass Lowell and Bolton University) within the context of higher education provision in their regions, demonstrating their position and role in the institutional landscape of their region, indicating not only what local role they play but also what role might be most suitable for them in the context of the other institutions in their proximity.

**Table 5: University-Region Table**

<b>Flagship</b>	<b>Urban</b>	<b>Local</b>	<b>Local</b>	<b>Technical</b>
Amherst  “superb faculty, outstanding teaching and top-notch students”  Research based; computer science, business, nanotechnology, polymer science, linguistics and engineering	Boston  “a model of excellence for urban universities”  Five colleges, two graduate schools, approximately 30 research institutes	Dartmouth  “World-Class, Within Reach”  “Inclusive, open and diverse”	Lowell  “The University seeks to meet the needs of the Commonwealth today and into the future”	Worcester Medical School  “The Commonwealth’s only public medical school”
Over 25,000 students from 50 US states and nearly 100 countries	13,300 students	8,700 students	11,635 students	990 students
93 undergraduate programmes	Over 100 undergraduate programmes	40 undergraduate programmes	76 undergraduate programmes	School of Medicine
73 Masters programmes	60 graduate programmes	25 graduate programmes	50 graduate programmes (30 Masters)	4 Masters programmes
53 doctoral programmes	13 doctoral programmes	4 doctoral programmes	15 doctoral programmes	13 doctoral programmes
Campus spans 1,463 acres	Urban campus spanning 175 acres	Campus spans 710 acres	Campus spans 125 acres	-
1,175 faculty members	818 faculty members	359 faculty members	1,395 faculty members	317 basic science faculty, 2,371 clinical faculty
MA resident, full-time undergraduate  Tuition fees \$10,232	MA resident, full-time undergraduate  \$4,565	MA resident, full-time undergraduate  \$1,417	MA resident, full-time undergraduate  \$8,731	-
Non-resident, full-time undergraduate  Tuition fees \$21,929	Non-resident, full-time undergraduate  \$10,658	Non-resident, full-time undergraduate  \$8,099	Non-resident, full-time undergraduate  \$20,384	-



<b>Flagship</b>	<b>Urban</b>	<b>Urban/Local</b>	<b>Local</b>
The University of Manchester  "By 2015 The University of Manchester aims to be one of the best universities in the world"	Manchester Metropolitan University "The University for World-Class Professionals"	The University of Salford  "Your CommUNITY"	University of Bolton  "Professionals in Practice"
Undergraduate 25,656	Undergraduate 24,554	Undergraduate 13,313	Approximately 9,000 students
Postgraduate taught 5,635	Postgraduate total 5,819	Postgraduate total 1,780	Approximately 50% of students are part- time; over 60% of first year, full-time undergraduates are mature age students
Postgraduate research 3,437	A further 1,788 students on professional courses and 699 on foundation courses.	-	-
Total staff: 11,699  Academic – 3,787  Research - 1,916	Total staff: 4,400  Full-time teaching – 1,500 Part-time teaching – 700 Support staff – 2,200	Total staff: 2,608 1,995 full-time 613 part-time  Academic – 848 Academic related – 390 Research – 190 Support staff – 1,180	Total staff: 677 513 full-time 164 part-time  Academic – 309 Non-academic - 368

As well as a university each, within Lowell and Bolton the cities both have a community college. In Lowell there is a physical disconnect between the community college and the university, with the community college in central downtown and the university spread across campuses further out of the city. However, this physical disconnect does not seem to impede interaction between the two educational institutions, with the community college playing a supportive role in regards to the university. Students who wish to attend UMass Lowell but do not have the appropriate grades have the opportunity to attend Middlesex Community College to study there for a couple of years, boost their academic credentials and then transfer across to UMass Lowell. There was also interaction between UML and MCC at a higher level, with academics from the community college joining UML research projects. This enabled staff at the community college, who would not, as part of their role there, have much opportunity for research work, to engage in academic research projects as well as strengthening the ties between the two institutions.

In Bolton there is currently a physical disconnect between the university and the community college, but the council plans to address this with the creation of an innovation zone. The innovation zone will bring all of the university to the one central campus and will facilitate the relocation of the sixth form and community colleges to this same site. The aim of this policy, as described by a member of staff from Bolton council, is “the creation of a critical mass of knowledge assets” (B10, *personal interview*). However, it seems from interviewee data that there is less enthusiasm in the University of Bolton (compared to UMass Lowell) for the university to interact heavily with the community college, as the following quote from a member of Bolton University’s managerial staff implies:

Bolton have talked about this area as an Innovation Zone so we’re seeking to have the university as the focal zone of that Innovation Zone, possibly eventually working with the community college and the sixth form college who are going to hopefully relocate over the road here (B7, *personal interview*) [author’s emphasis]

These findings suggest that Lowell’s knowledge base, in terms of the knowledge economy, is stronger and more cohesive than Bolton’s. UMass Lowell works more

closely with the other educational providers in the city and is more willing to be one part of the interlinked local knowledge base. Referring back to the literature review suggests that this will be an obstacle in partnership approaches to urban regeneration in Bolton, as Russo *et al.* (2007) argue, for city partnerships to succeed requires a shared vision between stakeholders.

### **5.2.2 INDUSTRIAL STRUCTURE**

In reference to the industrial structure of a city, van Winden *et al.* argue “this deeply affects the starting position of the urban knowledge economy” (van Winden *et al.*, 2007, p. 6). As discussed in the literature review (section 2.5.1 ‘Social Inclusion and the Knowledge Economy’) old industrial regions and cities are at a disadvantage within the knowledge economy. With an industrial heritage, argue the authors, comes a lower educated workforce, fewer high-level amenities, poor housing stock, and often a negative image (supported by Guth, 2005). All of these factors conspire against the city, making it difficult to attract and retain knowledge workers and industries. Having previously been highly specialised in traditional industries constricts a city’s ability to become a dynamic and innovative centre in the knowledge economy: “...highly innovative clusters cannot be bred in previously highly specialised environments” (Duranton and Puga, 2000, p. 553).

In general, interviewees in both case studies recognised that the industrial legacy of their region had left scars on the economic, social and environmental landscape that make a transition to the knowledge economy more challenging to achieve. This was most accurately expressed by an interviewee in Greater Manchester:

...if one looks at the way things were organised in the old industrial economy, it was very top-down, very hierarchical, it was very much leaders and people. In a knowledge economy it is very much entrepreneurial, it is bottom-up, it is fast moving, it is non-structured, it is relational not transactional and all of those things make this challenge a major job, a major challenge to move a leading industrial city into a knowledge economy (B16, *personal interview*)

This quote was made in reference to Manchester, the large metropolitan neighbour of Bolton. It is interesting to consider the challenges the interviewee raised in relation to Manchester (“a leading industrial city”) in relation to Bolton and Lowell, smaller cities that, historically, played an important role in the beginning of Industrial Revolution but which one would not describe as leading industrial cities. As the literature review suggests, these cities have been neglected in academic discussions of cities and their fortunes. Is it more challenging to transform a large industrial city than a smaller one? Or would the challenges indeed be even greater for the smaller city? Will Manchester’s struggle to regenerate have an impact on Bolton (likewise, what will Boston’s regeneration efforts mean for Lowell?)?

Although the majority of interviewees acknowledged, as above, the difficulties in moving from a traditional industrial structure to one rooted in the knowledge economy, there was a tendency among some interviewees, in both case studies but Lowell in particular, to argue that having been through economic downturns and hardships made the city better positioned to regenerate: “We can survive anything... we’ve suffered under the grime and grit and hard work and we’ll do it again” (L14, *personal interview*). Evidence from the interviewees in both Lowell and Bolton suggests that having endured economic, industrial and social hardships had instilled a greater sense of community and identity in both cities. There was a sense in both case studies that the cities, and their people, had struggled against external economic forces and, in doing so, had engendered a sense of community. Data from both case studies implies that Lowell and Bolton have a strong local identity and it seems possible that, in the face of their close proximity to dominating metropolitan cities, the economic and industrial downturns experienced in the smaller cities has encouraged a sense of local comradeship, an ‘us against them’ mentality that strengthens the community at a grass-roots level. It seems plausible that this is somewhat idealistic, as literature suggests “...[there is] the possibility that a romanticization of the past may serve to conceal the manifestations of those divisions in the present” (Miles, 2005, p. 1023), but if members of the community feel a sense of comradeship then there is the potential, at least, for this to be self-fulfilling.

Important as a sense of local community, identity and kinship is, in terms of economic regeneration continuing periods of 'boom-and-bust' economics leave scars on a city that are challenging to overcome. The cycle can become self-perpetuating: with each bust comes greater unemployment, a blow to the city's external image and a drain to public spending and services: all of which, in turn, impedes the city's strength in becoming (and being seen as) a knowledge city. A strong internal sense of community cannot protect against these very real economic circumstances, which create a climate in which the more educated, more qualified will follow employment opportunities elsewhere. With each decline in the economy, damage reaped on a city becomes deeper, as this quote from a UMass Lowell academic testifies:

... there have been numerous booms and busts over the 20<sup>th</sup> and early 21<sup>st</sup> centuries and the booms are getting shorter and the busts are coming more quickly and they're deeper and so that's... where things are at now (L1, *personal interview*).

Within the foundation of 'industrial structure', van Winden *et al.* also explore the benefits and drawbacks of a diversified versus a specialised industrial base and the extent to which firms in a city, regardless of the sector, are innovative. The authors address these issues as they are seen as interplaying with the industrial heritage of a city and impacting upon its ability to engage with the knowledge economy. Van Winden *et al.* conclude that, in general, a diversified economic base offers more protection against decline and is more conducive to innovation, but that a diversified economic base is difficult for a smaller city to maintain and so, for smaller cities, "...a strong economic specialisation is an asset" (Van Winden *et al.* , 2007, p. 531). In both of the case studies for this research, the arguments regarding diversity versus specialisation were a strong theme, with interviewees in both Lowell and Bolton disagreeing over the extent to which their city should pursue a broad, or narrow, economic base:

In terms of our specialisms we have a particular distinctive specialism on smart materials based on the old textile industry...the things we're trying to emphasise is the extent to which we're involved in novel fabric development... like the aerospace industry, health care, the medical devices all these sorts of areas are the areas we want to focus on so we're almost talking about new manufacturing and new manufacturing skills that are needed (B7, *personal interview*).

The argument proposed in the quote above was in relation to Bolton, but the sentiment was also echoed in data collected from the second case study, Lowell. Interviewees argued that their city should forge success in the knowledge economy based on old specialisms, building upon a skills base that has been fostered in their city for generations. This is an approach most generally taken by cities, especially smaller ones:

Cities tend to persist over time in what they produce, because there is a body of local knowledge about how best to produce and market the city's particular export product (Henderson, 1997, p. 610)

As well as having a historical body of knowledge, cities also gain a reputation and image based on their industrial heritage and so by continuing to produce what they always have, they can tap into this image. However, an opposing argument likewise emerged in both case studies: that focussing on a specialist knowledge economy industry as a means of economic and social regeneration would make the cities open to economic turbulence and decline once more, as expressed by this member of staff at Bolton Council:

Traditionally it's booms and busts all the time, so for me if we're going all out to pursue this knowledge economy where's the Plan B? Where's the back-up? If that all goes in the next 10-20 years, what have we got next? (B8, *personal interview*)

The conflict between interviewees regarding specialism and diversity taps into a wider debate in the literature. It is interesting, at this point, to refer to Henderson *et al.*'s research on the issue, which concluded that industrial diversity is important for attracting new and innovative industries, but that a history of similar past specialisation can be more important for mature industries (Henderson *et al.*, 1995). Both Lowell and Bolton are attempting to build their regeneration via the knowledge economy by drawing on their past strengths, both seeing their role as a knowledge city in terms of their manufacturing past.

The issue of image, and the negative image which can be associated with cities that were once heavily industrialised, was addressed in both Lowell and Bolton:

Bolton council at the moment are really keen to upgrade their cultural identity and try to have some sort of impact in the region, because Bolton's not really thought of, most people don't know where it is (B3, *personal interview*)

This problem with an industrial image goes beyond the smaller cities of this study and, as Van Winden *et al.* highlight, also impinges on large, more metropolitan cities, as the following quote regarding Manchester testifies:

...it's still the Lowry painting: it's still externally seen as the old industrial so it's got a big transformation-perception issue. Internally, locally, it's seen as dynamic, exciting, innovative, but externally it's seen as old; industrial; tired; smoky; dirty; rainy! (B16, *personal interview*)

However, there was evidence that both Lowell and Bolton were successfully altering their image, at least in regional political circles. It seemed both cities had acknowledged problems with their image and were actively working to change perceptions in key areas and, whilst this might be harder to communicate to the general population, interviews with regional players in both case studies demonstrated that these steps were beginning to prove fruitful. Interviewees at the regional level expressed comments which suggest that both Lowell and Bolton are regarded as increasingly economically viable, for example with interviewees in Boston arguing that Lowell has been the most successful of all the mill towns in reinventing itself and positioning itself for investment. Interviewees in Manchester discussed Bolton in likewise terms, as the following quote illustrates:

It's [Bolton's] got an award-winning marketing campaign... there's a university... it's now starting to attract major employers, it's presenting itself on a global scale, leading trade delegations to China, being the number one/number two after Central Manchester in terms of inward investment promotion, all of these things are slowly changing people's perceptions of what Bolton is. In places like the agency I think that's starting to work. If you said "where should we choose to invest in North Manchester?" you would look around and then you'd probably say "well Bolton's probably the only option" (B15, *personal interview*).

One issue which can be associated with ex-industrial, deprived cities is that of crime. Lowell, more so than Bolton, has had to overcome a history of high-crime rates (associated with drugs and gangs) and, although the crime rate in the city has decreased

in recent years crime and safety is still an issue and, as these Lowell academics suggests, perhaps mostly in regards to its image:

Lowell in particular has a reputation among some students and some other people as being a dangerous place because there's crime and drugs (L9, *personal interview*)

From the suburbs, people were always afraid almost to go into Lowell (laughs) there was this idea 'oh there's so much crime' but gradually that reputation has definitely changed, just in the last ten years, now most people that come here from the suburbs are really amazed... occasionally you do still hear people saying negative things about Lowell so still for some people there persists this idea of Lowell being an unsafe place (L19, *personal interview*).

The industrial heritage of both Lowell and Bolton, as with many other industrial cities, has therefore left a legacy in terms of the industrial structures in both cities, which must be overcome for them to become successful knowledge cities. Decades of economic turbulence has destabilised industry and employment, but both Lowell and Bolton are home to specialisms which offer potential in extending the base of the knowledge industry within the cities. The strong local identity within the civic base of both Lowell and Bolton strengthens the capacity of each city but to progress further on the path towards becoming knowledge cities they must both overcome lingering negative external perceptions. In both case studies there are encouraging signs that within regional policy circles a change in image is underway. Strengthening the industrial base of the cities and continuing to modernise their image, would facilitate greater regeneration in both cities in terms of the knowledge economy.

### **5.2.3 URBAN AMENITIES AND QUALITY OF LIFE**

The lifestyle that a city can offer is seen as key in dictating to what extent knowledge industries and workers will be attracted to a city and will relocate themselves and / or their business to the area (van Winden *et al.*, 2007; Florida, 2005; Castells, 1999). Attracting these knowledge industries and workers to a city is key in that city's development as a knowledge city. Interviewees in Lowell were more enthusiastic about the amenities their city has to offer, and this seems to stem from the history of investment



in Lowell compared to other surrounding mill cities, as well as the location of the university there and the rail connection to Boston:

There's a certain cache in Lowell, because Lowell got the national park and all that massive investment, Lowell has the university and those other [neighbouring mill] cities don't, Lowell has a minor league professional baseball team and stadium and none of these other places do. Lowell has also, very importantly, a train station and a rail connection to Boston and those other places don't (L1, *personal interview*).

As the above quote demonstrates, accessibility to the wider region and the city of Boston in particular, is regarded as a strength of Lowell and one which is seen as enhancing the quality of life for residents. The importance of accessibility as a foundation in the creation of a Knowledge City will be further explored, with reference to the case studies of Lowell and Bolton, below.

Within the city of Lowell itself, the national park and baseball stadium were referred to by virtually all US interviewees, who regarded them as key urban amenities that the city has to offer. During the decline of the 1970's Lowell politicians (especially Senator at that time, Paul Tsongas) fought for the increasingly dilapidated mills, once the pride of the industrial era, to be restored to their former glory as a means of reinvigorating civic pride and encouraging regeneration. Lowell's mill complex became restored under an initiative which created the United State's first urban National Park. Lowell's national park tells the story of the city's heritage by focusing on the remaining textile mills, using them as an interactive museum, arts and community space. Many interviewees commented on the role of the park in restoring civic pride in the city and in the preserving the heritage of Lowell, and the majority of interviewees referred to the role played by Senator Tsongas in achieving park status for the city: he was regarded by many as having played a hugely important role in lobbying for the park and, in doing so, restoring faith in the city at a time when problems of economic and social exclusion were rife. The role and contribution of individuals, such as Senator Tsongas in Lowell, will be further explored in the following chapter on urban governance.

However there was some indication that whilst impressive facilities such as the national park and the baseball stadium are attractive to outsiders, that does not mean visitors are attracted to engage with the city as a whole:

There seems to be some evidence here that people come in and go to those two stadiums and then they leave, they don't go downtown because they're fearful of it or they don't like Asian food and all that other stuff (L9, *personal interview*).

In both Lowell and Bolton the wider region and what it could offer were regarded as a key element in the attractiveness of the cities, and there was a sense, as the quote from Lowell demonstrates, that quality of life is indeed imperative in attracting and retaining knowledge workers:

New England – many of the people from New England, never wanna leave New England, even if they have better opportunities elsewhere!... It's a nice, nice place to live... It's small in the sense that within a couple of hours you can get to anything, ocean, mountain, beach, lake, culturally. It's a city but... it's enough city, comfortable ... You really do get the sense that everybody in Lowell knows each other! (L5, *personal interview*)

I love Bolton, I love the contrast between the wild hills... and the other side is Manchester, where the theatre world is second-to-none... One of Bolton's major assets is the theatres of Manchester (B14, *personal interview*)

I like the geographical location [of Bolton], we are... you can get into the countryside really quickly... I love having a sophisticated, big city on my doorstep within half an hour, nice restaurants and good theatre, Bolton is somewhere that is easy to pop into (B12, *personal interview*).

Both case study locations, therefore, have attractive urban amenities and offer a high quality of life to residents, strengthening their potential to attract knowledge industries and workers and therefore expanding their capacity in terms of engaging with the knowledge economy. Lowell and Bolton are both advantageously located within their regions, close to rural amenities as well as the cities of Boston and Manchester (the relationship between the two case study cities and their larger metropolitan neighbours will be explored further in the following section on accessibility). However the history of investment in Lowell and its urban amenities, and in particular the elevated civic pride associated with this, advances the city further on the path towards becoming a knowledge

city. It is interesting to consider, in light of this, the socio-political context of the two cities at the time and the impact that this might still generate, not only in terms of infrastructure but also in relation to civic pride. During the late 1970s, Senator Tsongas fought for Lowell's industrial heritage to be celebrated with the creation of the USA's first urban national park in the city and in 1978 the US Congress established Lowell National Historical Park. In 1979, the Thatcher administration came to power in Britain, representing an era when the industrial cities of the North faced increasing decline as the financial sectors of the South East and London flourished. At a time when a political actor was building up the urban amenities of Lowell, celebrating and making use once again of its industrial heritage, Bolton received no such boost within the context of a national policy framework which undermined the city and its industrial past.

#### **5.2.4 ACCESSIBILITY**

National and international connectivity is crucial for a city to be well-placed to engage in the knowledge economy as "the knowledge economy is a networked economy" (van Winden *et al.*, 2007, p. 7). For a satellite city, proximity to the larger metropolitan neighbouring city could be a lynch-pin to economic prosperity, as the satellite is able to offer all of the benefits of the larger city just a short distance away:

...for example, I had a meeting in Boston [this morning]. Yes, it's a bit of a drive but it's fine to think "I'll go to Boston for a two hour meeting and then be back here"; it's no big deal (L5, *personal interview*).

Being a small city close to a large metropolitan city might indeed be the 'best of both worlds', as the smaller city can offer all of the benefits of its larger neighbour without the cost, a factor which many interviewees referred to. There is the potential for a smaller satellite city to become, to some extent, a knowledge city by proxy, as suggested by the conceptual framework (see figures 3 and 4) and discussed in the literature review (Chapter 2, section 2.4.1; see also Duranton and Puga, 2000). The satellite city can 'piggyback' all that its larger neighbour offers, just a short distance away, but with less cost and, as this Manchester-based interviewee argues, a greater sense of identity:

I think its [Bolton's] connectivity means it's only basically ½ an hour from Manchester. But it's also got its own identity, because it's that little bit further out of Manchester, it's a town with its own identity (B15, *personal interview*)

Being so close to such a large city was not just perceived as a benefit to individuals, who could live a cheaper, quieter life in the satellite city whilst always having accessibility to the amenities and opportunities of the big city, but also to businesses which might want access to the dominant urban core without needing, or paying for, a city centre presence:

...you might get firms moving up there [to Bolton] that don't need a city centre presence per se but need to be close enough to the airport and other communications network. There's definitely an argument for it, for firms that don't want to be paying the high rents of the city centre (B15, *personal interview*)

In this way, cities such as Lowell and Bolton offer proximity to external economies of scale. As discussed in the literature review (Chapter 2, section 2.4 on cities) agglomeration within an urban area encourages the circulation of goods, workers and knowledge and innovation which generates an external economy of scale which in turn generates more innovation (Beall and Fox, 2009, pp.76-6). Smaller cities such as Lowell and Bolton, in such close proximity to global metropolitan cities, are in a position to 'piggy-back' on and benefit from the economies of their larger, more successful neighbours.

Being in the shadow of a large urban core not only opens access to the opportunities that city has to offer, but, if the larger city has strong national and international transport links, then the smaller city can likewise offer such accessibility and reap the benefits of those links. In both Lowell and Bolton accessibility to Boston and Manchester airport was frequently cited as one of the main benefits of such close proximity to a larger urban neighbour, for example by this business owner in Bolton: "the airport, without any doubt at all, that's the main [benefit, of Bolton being so close to Manchester]" (B14, *personal interview*).

## **Boston**

In the US Northeastern state of Massachusetts, Boston is home to approximately 590,000 residents. Over 50% of Boston's population are of ethnic minority origin, and one-fifth of the labour market is made up of people of immigrant origin: however, ethnic disparities are proven to be a key determinant of access to key resources (MassInc., 2007).

Traditionally a strong manufacturing city, Boston was home to the first mill built by Francis Cabot Lowell (built in 1814) which began a cotton manufacturing company which would have huge success. In today's global marketplace, Boston is re-branding itself as a knowledge city, with the highest proportion of US workers in 'knowledge jobs' and managerial and professional positions compared with all other US cities (1999 State of the Economy Index). Boston's strengths in the knowledge economy are related to Internet software and biotechnology, which the city is investing heavily in (stats).

The density of higher education provision in Boston supports and accelerates the city's ability to engage with the knowledge economy, with over 36 Higher Education Institutions in the city alone. MIT graduates and faculty have founded 4000 companies employing 1.1 million people and generating \$232 billion in worldwide sales (Bank of Boston, 1997). With an atmosphere and infrastructure conducive to innovation and enterprise, many graduates of Boston's university's and colleges remain in the city and region, for example with over 45% of the software, biotechnology and electric companies founded by MIT graduates being located in the state of Massachusetts. The city is conscious of the benefits of a strong higher education provision and of keeping its university graduates in the region:

In the knowledge economy of the 21<sup>st</sup> Century, our universities can maintain their role as generators of economic growth and jobs only as they go into new fields and continue to grow. We are committed to our essential role in assisting the Commonwealth's economic recovery (Leahy *et al.*, 2003)

With a plethora of HEI's, Boston has a large number of university graduates in its resident population: 36% of its workforce has a degree. However, the city also has one of the most fragmented workforce systems in the United States, with approximately the same amount of its population, one-third, lacking the necessary skills in literacy, language and technology to hold qualifications and compete in the knowledge economy. For those with skills, qualifications and jobs, life in Boston is good. Since 1979, real family incomes have increased for families headed by a university graduate by 30%. For those without a university education, life is much harder: from 1979 those families headed by a high school graduate have seen their income decline by 1%. At the same time, Boston's cost of living is higher than other states and from 2000 to 2002 house prices in the city leapt up by 37% (MassInc, 2007).

## **Manchester**

Manchester is the heart of Greater Manchester, and is the larger neighbour to Bolton at only approximately 15 miles to its South East. Manchester is home to a population of over 450,000, 76.9% of whom are white, with an Asian population of 9.2%, a Black population of 4.9%, a mixed ethnicity population of 3.2%, a Chinese population of 2.5% and people from other ethnicities making up 3.2% of the city's population. Pockets of deprivation are numerous and deep in Manchester, with the city ranking fourth in the Index of Multiple Deprivation. The city's unemployment rate is 3.7%, higher than the North West region as a whole (at 2.7%) and the UK (2.3%) (all statistics from Manchester City Council 'Manchester Fact Sheet').

Manchester was a prominent global centre of the Industrial Revolution, with a thriving cotton industry, home to 108 mills at its peak (Miller and Wild, 2007, p.77). However, from the late nineteenth century, Manchester's traditional industries fell into decline. Today, Manchester's strongest employment sector, with the highest number of employees at 68,200, is real estate, renting and business, followed by sales with 37,300, health and social care with 35,900 and education related industries employing 33,500 people (Manchester City Council, 2009, p.3). In recent years, between 2005 and 2007, it has been the financial and professional services industry which has shown the most growth, with 300 more businesses and 7,400 more employees in Manchester over that time (ibid.). The second largest growth in employment in Manchester has been in the Creative, Culture and Media sector with 2,800 more employees in this sector in 2007 compared to 2005 (ibid.). Employment in Life Science Industries has also grown, with 1,200 more employees and 100 new businesses in 2007 compared to 2005 (ibid.). Over this time, employment in manufacturing has also seen a small growth with 200 more employees in 2007, but the number of manufacturing businesses operating in Manchester has actually with 100 fewer businesses in 2007 compared to 2005 (ibid.).

Manchester has a very strong provision of higher education, with three universities close

to the city centre: the University of Manchester; Manchester Metropolitan University (formally Manchester Polytechnic), and; the University of Salford. A further 15 universities (including the University of Bolton) and higher education institutions operate in the surrounding area meaning that a student population of 360,000 students reside in Manchester (ibid.). The merger, in 2003, of Manchester University with the University of Manchester Institute of Science and Technology (UMIST) has created the largest higher education institution in the UK, with 30,000 students, 8,000 academic staff, 9,000 ancillary and support staff and an annual turnover of £500 million.

Undoubtedly, therefore, access from both Lowell and Bolton to their large metropolitan neighbouring city puts them at an advantage in relation to their potential to become knowledge cities. However, in both cities there are clearly problems with internal, local transportation links, as illustrated by this simple quote (which comes from a Lowell interviewee but was also echoed by respondents in Bolton): “the bus routes don’t go where the work is” (L1, *personal interview*). This problem appeared most marked in Lowell and most likely that is a feature of the public transportation system in the US in general, compared to the UK. However, although it was most marked in the American interviews, it was still commented upon by UK interviewees and, in both cases, references were commonly made to the disproportionate impact this had on low-paid shift workers: in both Lowell and Bolton the bus routes did not adequately serve the sites these workers needed to access for employment, or if they did the bus timetable did not correspond with patterns of shift hours. This example from both case studies demonstrates the usefulness of the concept of social inclusion, first discussed in the literature review of this thesis (section 2.5 ‘Social Inclusion’), indicating as it does that processes external to the individual can act as an exclusionary mechanism to restrict their ability to engage in employment and wider society (see Tallon, 2010; Bhalla and Lapeyre, 1997).

There was also a problem, again more marked in Lowell (and which, once again, could be attributed to a difference between North American and Britain in general), with



accessing the city by foot and it is interesting to note that this problem seemed most acute in both cities in terms of linking the university to the rest of the city by pedestrian-friendly routes. In both case studies, city planners discussed intentions to address this problem:

...with the North [UMass Lowell] campus there's a physical barrier that's the river, so that's not too appealing for students to walk across on the old bridge; once the new bridge is built it will be easier access (L12, *personal interview*)

We want very much to reconnect the university [of Bolton] and the civic core, if you walk over there you run the risk of getting mowed down at several really busy junctions but actually it's only 5 minutes away, it's the pedestrian route and the difficulty of that that makes it feel really disconnected from the town (B10, *personal interview*)

It is worth noting that interviewees at UMass Lowell were aware of the pedestrian inaccessibility between the city and the university campus, but paralleled awareness was lacking among some interviewees in the University of Bolton: "I don't think we're particularly inaccessible, I'm quite surprised at that" (B6, *personal interview*). However, other interviewees were clearly aware of the problem:

Try and walk [from the train station]... to the university; you'll see that Bolton's designed for vehicles and nothing else (B1, *personal interview*).

Bolton Council is aware of the need to improve accessibility internal to the city, with its 'Building Bolton' Supplementary Planning Document acknowledging in a section dedicated to the 'Cultural, University and Transport Quarter' of the city that pedestrian accessibility between the university, transport links, cultural attractions and the civic core of Bolton.

In terms of accessibility, both Lowell and Bolton are well-placed to become knowledge cities. Situated so close, and with strong local transport links to large metropolitan neighbours, Lowell and Bolton have the potential to be able to 'piggy-back' on the success of the flourishing knowledge economy in Boston and Manchester. Improving accessibility within Lowell and Bolton themselves, however, would further improve the

capacity of the cities in terms of engaging further with the knowledge economy, as well as in terms of social inclusion and environmental sustainability.

### **5.2.5 URBAN DIVERSITY**

Although van Winden *et al.* recognise that urban diversity can cause tension among the population; in general they align their arguments with Florida (1995, 2005) that an ethnically diverse population encourages creativity and entrepreneurship which in turn can engender an environment favourable to the development of a knowledge city. However, as argued in the literature review (section 2.5.1 'Social Inclusion and the Knowledge Economy') it is important to make a distinction between diversity and inequality. A diverse and equal society will provide the circumstances within which creativity and knowledge can thrive, but a city which is home to a diverse population and many problems of social inclusion will face obstacles in engaging with the knowledge economy. It seems a city's ability to welcome, embrace and integrate diverse groups is key to its ability to become a knowledge city as a cohesive social structure provides the basis for a harmonious community within which all sections have access to education and employment opportunities.

Both Lowell and Bolton have a relatively diverse ethnic base; reflective of Northern American, as opposed to British cities in general, Lowell's population is much more ethnically diverse than Bolton's. The diversity of the cities population was discussed by all interviewees in both case studies, with mixed feelings expressed in both case studies. In general, perhaps as a by-product of the greater history of ethnic diversity in the United States compared to Britain in general, interviewees in Lowell seemed more comfortable discussing the ethnic diversity of their city: hostility towards ethnic groups did not emerge in any of the interviews and all interviewees seemed unperturbed discussing ethnicity. Several interviewees in Lowell commented upon the entrepreneurialism of new immigrant groups, recognising that this was positive for the immigrant communities as well as the city as a whole:

I think immigrant groups; new American groups are very good at being entrepreneurial... Especially the new immigrants in Lowell are doing a great job of collaborating immediately, they provide resources and avenues to help people from their own country get established and purchase a home and get a business” (L13, *personal interview*).

There was a sense from a number of interviewees in Lowell that the new immigrant groups were very good at being entrepreneurial and taking care of themselves and others from their country of origin. This was recognised as a positive force for the immigrant families and communities, building a life of their own, and for the city as a whole, contributing to vibrancy and diversity. The response of Bolton interviewees to the ethnic diversity of their city was more mixed, with a number of interviewees apparently discussing the ethnic mix in terms of ‘political correctness’, as the following convoluted quote from a member of the managerial staff at the University of Bolton demonstrates: “Bolton also, I think, has, shall we say, quite a rich mix in terms of cultural heritage that makes for a livelier community, the Asian communities, it’s very important for us, I think, to be able to respond to the multicultural community” (B7, *personal interview*).

Occasionally, among Bolton interviewees, some underlying racial tensions and stereotyping emerged, with ethnic groups represented as a drain and a social element which needs managing, which contrasts with the Lowell interviewees, where immigrant groups were regarded as hard-working and entrepreneurial:

I’ve found, particularly with the ethnic community, that they don’t want to get off their *backsides*, very difficult to get them motivated at all... it’s [ethnic diversity in Bolton] probably as high as I would like to go in terms of mix, because you can’t absorb them and their culture will overtake the basic British culture which I don’t believe is the right way of going (B14, *personal interview*)

We’re very aware that we have a 10% ethnic community and that can be pretty explosive if that’s not managed properly (B12, *personal interview*)

The first quote above, from a Boltian businessperson parallels with Innes and Booher’s discussion of immigration, first referred to in the literature review (Chapter 2, section 2.6.1 ‘Social Inclusion and the Knowledge Economy’). Innes and Booher argue that immigration can threaten some indigenous groups on the basis of a culture clash and the

perception, on the part of the indigenous population, that their identity and value system is under threat (Innes and Booher, 2010, p.3). This is clearly the underlying fear behind the concern expressed that “their culture will overtake the basic British culture”.

Discussions regarding the relationship between diversity and regeneration often focus on the ethnic diversity of the general population, often neglecting the ethnic diversity of institutional and political representation in a city and the impact this may have on a city’s ability to regenerate. Diversity, or a lack thereof, in city stakeholders is vital to a city’s inclusiveness and, therefore, it’s potential to regenerate, not just in terms of the impact that may be had on policy but also on the level of engagement, optimism and aspiration among the city’s ethnic and immigrant groups. This in turn can impact upon the extent to which a city is home to a diverse but unified population, or a population that is segregated with some groups feeling excluded and marginalised. The importance of political and institutional diversity was more widely recognised by Lowell interviewees, but there was a split among the interviewees, with white interviewees more likely to regard the city as diverse at every level and non-white interviewees arguing that political and institutional diversity was still lacking. The extent to which an interviewee argued that city stakeholders in Lowell were ethnically diverse also seemed to be influenced by the extent to which the interviewee was involved in the running of the city, and so students and community workers argued that UMass Lowell and the city government needed much greater diversity, whereas those working in such institutions tended to acknowledge that more could be done but argued that substantial progress has been made. The following quotes demonstrate these arguments:

I would like to see more diverse representation on every level. If people take ownership of the city they will be much involved and put much more effort into improving it. But if people feel disenfranchised from the city they won’t be involved. If people start seeing much more diversity at the city and university level... the university needs to set the example. I would like to see more diversity (L11, *personal interview*)

... [There] is a growing Latino population surrounding our campus, we’re in a sea of change that’s all around us but yet when you come onto the campus it doesn’t reflect that – what are we doing to engage this broader community? What strategies, practices, policies, actions are we taking as an institution to

demonstrate our engagement in the community and how do we institute policies and practices that bring those people into the mainstream of the campus (L25, *personal interview*)

... what you see in Lowell, which makes a great civic case study, is you see how various waves of immigrants became slowly to take up the political power, a couple of years ago the first Cambodian [was] elected to the city council, it had been run by old White Irish guys for god knows how long, before then the Greeks and French... Same has happened with the university, though less so because to get through the university you have to have a higher degree and poor people are usually prevented from doing that (L9, *personal interview*)

...certainly we had a city council member who was of Cambodian descent, who's no longer anymore, but certainly that was helpful and we have somebody of Hispanic descent who is currently sitting on the council so there is some diversity (L12, *personal interview*)

A need for greater political diversity was only expressed by one Bolton interviewee, who discussed the issue in regards to diversity in general, rather than focussing on ethnic diversity, with the comment that "people at the top [of Bolton Council] all seem to be from the same mould" (B1, *personal interview*). This comment was followed by the recounting of executive meetings with the council where council members would all be dressed in black pinstripe suits; the uniformity of this seemed to represent, to this interviewee, uniformity among council members that encouraged some level of narrow-mindedness and lack of imagination.

### 5.2.6 SCALE

Van Winden *et al.* argue that bigger cities are better able to engage in the knowledge economy: they are more likely to have a greater quantity and quality of amenities; they are more likely to have greater external links, and; larger cities tend to have more diverse populations. Therefore, the authors' study is concerned with large metropolitan cities, such as Manchester in England's North West. However, the authors refer to the possibility that smaller cities can benefit from proximity to a larger city. It is this argument that this study will explore: the extent to which a smaller 'satellite' city, in close proximity to a large metropolitan centre, can reap the benefits of their large urban neighbour. Could, in fact, the smaller city be better placed to engage successfully with

the knowledge economy? It can potentially 'piggy-back' all of the benefits of its larger neighbour, whilst offering all of the advantages of a smaller city, such as cheaper accommodation (both for individuals and industry), lower crime rates and, less pollution and a greater abundance of cleaner, greener spaces. This argument is proposed by Duranton and Puga, who argue that larger cities can encourage development in smaller cities located in close proximity (80km or nearer) (Duranton and Puga, 2000, p. 538). As Van Winden *et al.* call for their typology to be extended in regards to smaller cities, any conclusions this study makes regarding scale will be especially interesting. As discussed in the literature review (section on Urban Scale: smaller cities) there is a lack of attention paid to smaller cities in the literature, in policy circles and in terms of our general understanding and awareness of what it means to be urban: "The very idea of cities is to be big and to get bigger: shrinkage, even statis, is a sign of failure" (Bell and Jayne, 2006, p.5).

The benefits to Lowell and Bolton of being so close to a large metropolitan city have been addressed in the 'accessibility' section (section 5.2.4) but these benefits can be unpicked further. In general, consensus was that "as Boston goes so goes the rest of this part of Massachusetts" (L1, *personal interview*) and "what's good for Manchester is good for Bolton because it's good for the North West" (B10, *personal interview*). Prosperity and success in the larger city was seen as automatically spilling over into the smaller satellite cities, in terms of a 'drip-down' effect. In other ways, Lowell and Bolton were seen as being able to offer the benefits of Boston and Manchester from a cheaper location:

I think there's a lot of advantage and potential in Lowell, being close enough [to Boston] but small enough that affordability becomes an advantage too. And, same thing again, because we're looking at companies that would be making product: it's tough for that to be affordable in the city but there's certainly spaces around here (L5, *personal interview*)

...arguable the city centre of Manchester is overheating a bit, and the South of Manchester, because of demand and property prices going up,. So there's a sense that Bolton is now positioning itself quite nicely as an economy that can draw in the knowledge workers" (B7, *personal interview*)

In a networked knowledge economy, smaller cities such as Lowell and Bolton are in a position to be able to play an important role as one link in a linked system of cities within a region:

...[small cities] are important nodes in the networks between places of different scales, and they are seen to mediate between the rural and the urban, as well as between the local and the global (Bell and Jayne, 2006, p.7).

In both Lowell and Bolton there was a sense from interviewees that their smaller cities were 'next in line' for development. Many interviewees referred to Manchester and Boston in the 1970s and argued that, as those larger cities had now undergone much regeneration, so Lowell and Bolton could follow. There was a sense in both case studies that as Manchester and Boston had experienced much regeneration, they had become more expensive for individuals, small businesses and a grass-roots cultural community; Manchester and Boston have moved up in the regeneration ladder and have left room for Lowell and Bolton to move into the space they have left behind:

I came to Manchester to do my MA in '79, Manchester was in decline and there weren't very many artists.... Then it started to burgeon and there must be about 30 studio groups in Manchester now, but the trouble is it's become a very good cultural centre and it's become v expensive and certainly the studios are almost too expensive to rent. Bolton's in the same position as that was in the 70s so it's very cheap to rent accommodation in Bolton and a few studio groups are setting up here... So to have that feel of cultural centre, a cultural core, and a council who are really keen to get a main cultural centre for the town and are talking about building a major art gallery" (B3, *personal interview*).

However, amongst all of the benefits of being a smaller city in the shadows of a larger one, there was some acknowledgement of the drawbacks:

Inevitably, the way the government strategy works, the concentration is very much on city-regions and the notion of Greater Manchester as a kind of planning space, which can have advantages in terms of creating a broader field within which to work... but it can sometimes lead to a slight tension between Manchester as a city, with its own interests and its own particular positioning, and what I'd call the peripheral old industrial towns that are trying to regenerate themselves and if you look at the local economies they are quite different (B7, *personal interview*).

There is a parallel here to the work of Bell and Jayne (2006) who argue that smaller cities can be overlooked in policy circles in favour of the dominant core city of a region. However, looking at Lowell and Bolton as smaller cities and in terms of scale does support the suggestion made in Van Winden's typology of knowledge cities that smaller cities in close proximity to larger ones can reap the benefits of that larger city (see also Duranton and Puga, 2000). Evidence from this research suggests that it is not merely scale which offers potential in terms of engaging with the knowledge economy, but also proximity to scale. Smaller cities such as Lowell and Bolton, with larger neighbours such as Boston and Manchester, offer all the benefits of scale associated with living in a tight-knit community as well as proximity to the assets of a large urban area without any associated negatives (for example greater expense, noise, pollution). However, as the quote above captures, and Bell and Jayne's work (2006) suggests, regeneration policy must be aligned with the notion of a city-region network as a whole (focussing on the many cities within a region, both small and large and in what ways they can be inter-linked) rather than the concept of a city-region (with a narrow focus on the one large city in a region).

### **5.2.7 SOCIAL EQUITY**

As discussed in the literature review (section 2.5.1 Social Inclusion and the Knowledge Economy), a socially inclusive society will have more potential within the knowledge economy. However, as the literature review highlighted, the global knowledge economy has created circumstances which threaten to exacerbate problems of social exclusion, especially in old industrial regions and cities (see Tallon, 2010; Guth 2005; Charles 1999).

Social equity is one foundation of the urban region impacting upon a city's ability to engage in the knowledge economy because it is "desirable for sustainable urban growth" (van Winden *et al.*, 2007, p. 8). An inclusive, equitable city is more likely to be home to human capital well-equipped to take part in the knowledge economy, whilst a city rife with social problems and inequalities is more likely to be home to pockets of deprived



and poorly educated populations, the majority of whom may not have the skills, education and qualifications to become 'knowledge workers'. The regeneration efforts of a town blighted by social inequalities are potentially going to be diverted away from the proactive building of resources to enable the city to be able to engage in the knowledge economy, towards 'fire-fighting' efforts of tackling economic and social inequality and deprivation. As discussed in the literature review (section 2.5.1 Social Inclusion and the Knowledge Economy) is important to make a distinction here between diversity and equity, for a city which has a diverse and equal population will have strength in the knowledge economy, but a city which has a diverse population with pockets of inequality will struggle in the knowledge economy. In this way, social equity is clearly a crucial foundation in achieving knowledge city status.

Both Lowell and Bolton have been undertaking regeneration efforts and, in both cities, these efforts have produced mixed outcomes. It was clear from the interviews that regeneration has produced positive benefits for both cities to some extent:

The development taking place in Lowell over the years, even the improvement on the roads or new buildings, new businesses coming in to Lowell, the downtown is completely different, more lively now, downtown Lowell you couldn't tell it was downtown before. There have been major improvements (L11, *personal interview*).

However, in both cities it was evident that this regeneration was spatially-biased and was potentially having a negative effect on the neglected areas, by allowing these deprived areas to be masked by success elsewhere:

There's this illusion, I think, that Lowell is doing well but if you go to the neighbourhoods away from downtown, where all this stuff is taking place... it's as though time forgot them" (L1, *personal interview*)

All our deprivation is in the East. That's a particular challenge but we don't mention that too much! (B9, *personal interview*)

These quotes from the interviews supports findings from the literature on issues of social inclusion, that cities are becoming increasingly polarised with the rich neighbourhoods becoming richer and the poorer ones more deprived (as discussed in the literature review,

section 2.5.1 Social Inclusion and the Knowledge Economy; see Tallon, 2010, p.16). Interviewees in Lowell council discussed success in the city in terms of having renovated the downtown mills and replaced the elderly and low income populations with more affluent residents. When questioned where the previous residents had moved, their response was vague and lacked an awareness or acknowledgement that these populations had, presumably, merely been displaced. There was an underlying, unspoken notion that these populations had been removed from the downtown, replaced by more 'desirable' residents, and so the policy had been a success as it had changed the image, income and spending habits of those living in downtown Lowell. Interviewees in Bolton Council seemed to demonstrate more awareness of deep-rooted social problems, referring to "glaring disparities" (interviewee B8) within the city and acknowledging the complicated causes of deprivation and expressing frustration and concern that there is no 'quick fix'. These interviewees also expressed an awareness of the futility of displacing deprived populations:

You could knock Farnworth down and make it a suburb of Manchester and it would be highly attractive! But what do you do with the people?... people feel "who cares about me?" and then you start to get real unrest (B9, *personal interview*).

In both Lowell and Bolton it emerged that interviewees felt that, having endured economic and social hardship was, in some way, of benefit to their city:

...it's a poor town, not like Boston, we're struggling, we have a deficit so there's not a lot of resources but there's a lot of belief and wanting to change things (L15, *personal interview*)

'Sticking together' is an important part of community cohesion and if you are relying on your neighbour you are more likely to stick together (B12, *personal interview*).

It is hard to say to what extent this is true or whether it is a romantic notion of deprivation. It is interesting to consider the perception, however, that facing economic turbulence engenders a greater sense of community by instilling the sense that 'we're all in it together'. This leads to the question as to whether, as some areas of both cities become more affluent, this sense of city-wide community will be eroded. If a city can be

defined as being largely deprived, with some wealthy pockets, will it lose any sense of working class comradeship as it becomes a wealthier city with pockets of deprivation?

The dichotomy between wealthy and deprived populations prompted interviewees in Lowell, but not Bolton, to express scepticism towards the creative economy model of regeneration which the city is pursuing, with the argument expressed by academics, artists, community workers and local business owners that:

...there's now more artists and more art being produced than there are customers for the stuff. And so the artists are very worried that the City is now continuing to market Lowell as this artists space but that they're not doing anything to figure out how to help the artists (L1, *personal interview*).

Interviewees expressing these concerns enjoyed and engaged with the cultural offerings of their city but felt that continuing to expand the cultural industries would not be sustainable in the long-term, unless problems of deprivation were tackled and the population saw their disposable income grow. This implies that encouraging creativity and creative industries has its place within a smaller city, but that it might not be the saviour that it has seen to be in larger, more metropolitan cities: if the model does not fit the city and its population then it will not be sustainable and could bring forth further problems. As discussed earlier (see section 5.2.1 'Social Inclusion and the Knowledge Economy' of the literature review) this issue demonstrates the importance to distinguish between diversity and inequality when discussing the knowledge economy. These worries were not expressed in Bolton, but this could perhaps be because Lowell has focussed more heavily than Bolton on regeneration via the creative economy.

Both Lowell and Bolton must become more socially equitable if they are to progress further on the path towards becoming knowledge cities. Smaller cities with an industrial legacy still casting its shadow must build up their social fabric and social capital to produce and attract knowledge workers and knowledge industries. In the context of a small city with high social equity, the creative and knowledge economy can flourish in a way which is economically and culturally sustainable.

## **5.3 PROGRESS INDICATORS: TOWARDS A KNOWLEDGE CITY**

The extent to which a city has a strong foundation mix will determine its ability to engage with, and thrive within, the knowledge economy. Therefore, looking at the foundations individually, and considering how they interact with and support one another, can aid our understanding of a city's potential in becoming a knowledge city. This understanding can allow us to identify areas of need in a city and design and target policy with the specific intention of addressing a weakness in any of the foundations. Understanding a city's foundations can help us understand and address a city's knowledge economy assets, but such understanding does not outline the extent to which that city is engaged with the knowledge economy (i.e. to what extent it can be described as a knowledge city). To judge the extent to which a city is a knowledge city, two progress indicators are considered: development of human capital, and; the development of knowledge-based industries in the city.

### **5.3.1 DEVELOPMENT OF HUMAN CAPITAL**

There was concern among interviewees in both Lowell and Bolton that the human capital of their city was not adequately educated or qualified to enable the city to fully engage with the knowledge economy. Lowell interviewees, when commenting upon this, tended to argue that the school system was failing their young people:

... right now one of the things that's being held out as the saviour of Lowell is the university's research in nanotechnology, [but] there aren't any jobs that don't require at least a 2 year degree in some kind of life science, and most require 4 and the average kid in Lowell doesn't have that and isn't being adequately prepared to enter this university and take those sorts of courses (L1, *personal interview*).

In Bolton, it was more common for this issue to be ascribed to cultural problems, with interviewees referring to the challenges of low aspirations and a generational cycle of unemployment within families. Occasionally interviewees would refer to schools,

arguing that school education needs to be better prepare young people for the labour market, but this was discussed as one problem among a complex network of social forces:

They're trying to improve education but... it's not just the provision of the school, it's a culture now where you've got to regenerate that desire to learn (B9, *personal interview*).

There was apprehension, therefore, that pursuing a knowledge economy would not benefit the residents of the cities with employment, but rather that trained, educated and qualified knowledge workers would be brought in from elsewhere:

Nanotech, they've said it's going to bring a lot of jobs to the city, but what kind of jobs? Most of the wealthy jobs, people are going to come along with the company already occupying their jobs (L11, *personal interview*).

It was argued that the only jobs which would be suitable for the average Lowell or Bolton resident would be service work, supporting the knowledge workers and the knowledge industry through, for example, janitorial or waitressing jobs. This argument reflects concerns expressed in the literature that the knowledge economy only exacerbates the schism between the 'haves' and the 'have-nots' (as discussed in the literature review section 5.2.1 Social Inclusion and the Knowledge Economy; for example see Guth, 2005).

A more sceptical argument regarding the very concept of the knowledge economy, and therefore its potential contribution to regeneration efforts, was expressed by few interviewees, but such comments did emerge, especially among the interviewees at Bolton Council:

It's the latest buzz phrase - 'we're going to have a knowledge economy!' - well, bloody marvellous! But tell me what it is and how does it differ from anything else? (B9, *personal interview*).

This scepticism hints at an important debate regarding the very concept of the knowledge economy. To what extent is the knowledge economy something new, marking a radical departure from economic and industrial patterns of the past? A strand of academic debate

argues that the concept of the knowledge economy does not present anything new: that productivity, enhanced by strong human capital and technological advances, has always driven economic growth. Van Winden *et al.* refer to this debate in their 'Typologies of the Knowledge Economy' but dismiss this critique, arguing that:

...the role of knowledge (its generation, dissemination and use, codified and tacit) as a driver of growth has increased so significantly in the past few decades that it makes sense to speak of a knowledge-based economy and to study its specific spatial dimensions in more depth (Van Winden *et al.*, 2007, p. 528)

In general interviewees in this research bought into the concept of a knowledge economy, with notable scepticism only emerging from two interviewees in Bolton council. As the interviewee quoted above went on to say, 17% of Bolton's GDP still comes from industrial sectors, so to what extent is it a myth, in many, smaller cities at least, that there has been a radical shift away from traditional industries towards industries that are fundamentally different to those previous, using altogether new processes and knowledge, operating in ways that we have not seen before?

The majority of interviewees took for granted that there was a new knowledge economy and, as discussed above, would then express concern regarding the extent to which this new economy would be, by its very nature, socially exclusive. There was concern among many interviewees that in moving towards becoming a knowledge city, their home city would become more divided and divisive. However, there would often be contradictions in the way in which interviewees discussed the knowledge economy, reinforcing the possibility that the concept itself is shrouded in myth. For example, an interview conducted in Manchester, with a regional player, addressed the role Bolton could play in the knowledge economy:

It [Bolton] might be where you put your service centre or back office... [but] the reverse side of that is: are the skills there and there's a big question mark about that (B15, *personal interview*).

This interviewee is suggesting that Bolton could play a supportive role in the knowledge economy, not as a location for a company's headquarters but for behind the scenes

industrial activity. This interviewee then goes on to question how viable this would be, based on the human capital provision in Bolton. This is a contradictory statement, on the one hand arguing that Bolton is well placed to take fulfil the role of less skilled work that the knowledge economy will require, but on the other questioning whether Bolton's demography is skilled enough to engage with the knowledge economy on a high level.

A Boltonian business owner expressed the argument that Bolton's population is quite well-placed to fulfil this supportive role in the knowledge economy, in discussing the match between skills required and skills shown in his labour force:

The educational attainment of a typical Boltonian employee that we would target is still pretty low... We are looking generally for bright people who have got the right attitude... we can normally train the skills we need within the business, albeit we don't want to start teaching people to read, but most of the skills [we need] we can teach (B12, *personal interview*).

Research in both case study locations, therefore, raises fundamental questions regarding the nature of the knowledge economy and its manifestation in society, first explored in the literature review (see section 2.3 The Knowledge Economy and 2.5.1 Social Inclusion and the Knowledge Economy). Some interviewees questioned to what extent there is a knowledge economy, how it applies in different contexts according to scale and capacity, and what being a knowledge city actually means. Lowell and Bolton are both well-placed to play a supportive role in the knowledge economy for example by servicing the needs of the greater knowledge industries, in the bigger cities, of neighbouring Boston and Manchester. In this way the smaller cities would be engaged in the knowledge economy, networked in via their support of the knowledge city engines of their regions.

### **5.3.2 DEVELOPMENT OF (NEW) KNOWLEDGE INDUSTRIES**

Neither Lowell nor Bolton exhibit all the characteristics of knowledge cities, although they both have aspirations to become more engaged with new knowledge industries that are strong, to greater and lesser degrees, in their neighbours of Boston and Manchester. In this regard, interviewees in both case studies saw their city fulfilling a supportive role

next to their more metropolitan neighbour, and one aligned with the industries which enabled them to flourish in the Industrial Revolution.

...our focus here at Lowell is what we say nanomanufacturing... both historically and in terms of the type of research that we do... the focus on the manufacturing...is one that sort of fits well... if you think about the continuum from pure basic science and then commercial products we sort of see that as the helping to link the two together (L5, *personal interview*)

...we're targeting financial and professional services now and the back office. City centre can have the front office, the head office, the glossy bit where they bring all their directors and shareholders to, but all the work... we're trying to attract in Bolton (B9, *personal interview*)

In this way, the knowledge economy strategy expressed in interviews in both cities recognises that Lowell and Bolton are unlikely to become world leaders in the knowledge economy, that neither one of them is likely to become the next Silicon Valley. However, there was a sense in both case studies that interviewees felt their city needed engage more fully with the knowledge economy, perhaps further than the scale and demography of that city would allow:

Bolton needs to establish itself as a centre for *something* that's really innovative (B1, *personal interview*)

The quote above, taken from an interview with a Bolton academic, is reflective of a sentiment and fear expressed by many, particularly in Bolton. Globalisation was frequently referred to as a source of fear; India and China were seen as threats and, following on from this, interviewees would argue that their small city should try to recapture the success and prosperity it had in the Industrial Revolution. But, is the most logical regeneration policy for Bolton really that it establishes itself as a centre for “*something* [anything?] that's really innovative”?

In general it was only members of staff in Bolton Council, as discussed earlier, who questioned the notion of the knowledge economy and its applicability to their city. These interviewees recognised that the knowledge economy has, certainly in some regards, become a self-perpetuating falsehood:



It's quite en vogue at the minute for towns... if you look at any of the towns in England a lot are "we've got a cultural quarter, an innovation zone, a business district". It's the same and everyone's copying the same idea and hoping it'll work but each area is unique, it's got its own character and history and soon it's not going to work for some... whether it'll work for Bolton I don't know (B8, *personal interview*).

Although these interviewees recognised the myths of the knowledge economy, and the dangers of a 'carbon copy' regeneration policy approach to it, there was a disconnect between this knowledge and the policy they were implementing:

There's a lot of tensions, I think throughout regeneration but whatever company you work for, you've got to go with their vision, supposedly for the greater good (B8, *personal interview*).

As this quote illustrates, there was a sense in Bolton of paying 'lip service' to the notion of the knowledge economy, of formulating policies and implementing plans underpinned by the concept but without really understanding what it means and without believing that it is the right regeneration route to follow. There seems a danger that regeneration policy, across Britain in general, is being designed around the idea of the knowledge economy, because people believe that is what should be done. This notion then becomes self-perpetuating and it now seems that every local authority (and every region) in Britain has a framework for regeneration based on the knowledge economy.

This begs the question as to what extent it is viable for all local authorities to foresee their economic prosperity as lying in the knowledge economy. This query seems especially applicable to smaller towns and cities, such as Bolton, which have less knowledge assets and a weaker knowledge infrastructure, and which are located in very close proximity to metropolitan cities, such as Manchester, which are beginning to forge a role in the knowledge economy. On a regional and national level, it seems ill-conceived to have a number of local authorities basing their economic regeneration policy on the knowledge economy, because these local authorities then become competition to one another. A lack of coordination at a regional and national level is allowing carbon copy regeneration

strategies to emerge and not only does this seem short-sighted locally and regionally (with areas that should be complementing one another becoming competition for one another) but surely it restricts national prosperity. Instead of some local authorities becoming leaders in innovation and knowledge-intensive industries, all are vying to do so.

## **5.4 CONCLUSION**

This chapter set out to explore the knowledge city concept and its role in regeneration, focussing on smaller cities, which have often been overlooked in the literature (Bell and Jayne, 2006, p.2). This chapter has built upon Van Winden *et al.*'s typology of knowledge cities, in which the authors themselves call for more attention to be given to smaller cities. Using the case studies of Lowell and Bolton, this chapter has analysed what foundations a city requires in order to become a knowledge city and in what ways we can judge a city's progression on the path towards becoming a knowledge city. In doing so, this chapter is responding to a gap in the literature, by looking at smaller, more peripheral cities and how they can engage with the knowledge economy as a vehicle for urban regeneration. The implication of this is to make the knowledge city concept more understandable and realisable, by addressing what makes a knowledge city and how we can judge to what extent a city is a 'knowledge city'.

If we now refer back to the conceptual framework (Chapter 4, section 4.8; in particular figure 3, which illustrates the context of this research in terms of the knowledge economy and a spectrum of knowledge cities), this chapter enables us to identify where on the knowledge spectrum different cities fit, from 'aspiring knowledge city' to 'knowledge city'. Such a spectrum allows us to differentiate between cities in terms of their progression within the knowledge economy, which then allows us to make recommendations and target policy in meaningful ways. Rather than a 'one size fits all' approach to policy, by using the typology of knowledge cities together with the spectrum of knowledge cities we can identify the needs of different places. The spectrum of cities,

as presented by the conceptual framework, facilitates the judgement of where cities are in the knowledge economy and what they might need to develop further.

This chapter firstly explored Lowell and Bolton in terms of Van Winden's foundations of a knowledge city, discussing the provision of higher education in both cities. The research suggests that the knowledge base is more cohesive in Lowell, with a stronger relationship between the university and the community college in Lowell than in Bolton. Bolton's Council is sensitive to the need for greater unity between the educational institutions in the city, aiming to meet this need with plans for the Innovation Zone. In terms of their industrial structure, both cities have a traditional industrial heritage which stems from the role they both played in the industrial revolution. In this respect, too, Lowell seems to have progressed further than Bolton, by embracing its history and using its mills as a means of regeneration and civic pride. However, in this regard again, Bolton Council is aware of the need to take a more progressive approach, akin to that pursued by Lowell, as expressed in the Bolton Mills Action Framework which refers to Lowell as an example of best practice (Bolton Council, 2006, pp. 48-49). In terms of diversity, Lowell again displays more signs of progression than Bolton, with a greater sense of integration and celebration of diversity emerging from the American case study. However, both cities need to improve ethnic diversity in political circles to achieve greater political representation of all communities, thereby also encouraging greater social cohesion. In terms of scale, urban amenities and accessibility, both Lowell and Bolton are smaller cities which have the advantage of being in very close proximity to the large metropolitan cities of Boston and Manchester. Being in such close proximity to a metropolitan city, with good public transport links, is the key factor in enabling Lowell and Bolton to become knowledge cities. When applying the progress indicators of the development of human capital and the development of (new) knowledge industries to Lowell and Bolton, the present research found that interviewees did not see their city, or its workforce, as being geared up to meet the needs of the knowledge economy and be labelled knowledge cities in their own right. Lowell and Bolton are aspiring knowledge cities and although efforts of regeneration in Lowell demonstrate more imagination and progress, both cities are at the beginning of the journey towards becoming knowledge

## **CHAPTER SIX**

# **UNIVERSITIES AND THEIR PARTNERS: ISSUES OF URBAN GOVERNANCE**

### **6.1 INTRODUCTION**

There is increasing recognition that the capacity of a *place* to engage a wide range of stakeholders in collaborative endeavour is crucial to its competitiveness (Wenban-Smith in Cars *et al.*, 2002, pp.198-9)

The means by which planning operates has moved from, in the 1970s, heavily bureaucratic processes, through a market-orientated approach in the 1980s and, increasingly in recent decades, towards a more partnership-based, collaborative approach. As Wenban-Smith argues above, it is now commonly accepted that for a town, city or region to be competitive in the global economy, that place needs to be home to a number of individual networks and agency partnerships which are focused on economic development and regeneration. As outlined in the literature review (section 2.5.3 'From Urban Government to Urban Governance'), there has been a move away from the traditional, rigid structure of government towards more fluid processes of governance (see Booth, 2005; Carley, 2000; Kearns and Paddison, 2000). Inevitably, with an approach to spatial planning based on collaboration, local stakeholders are becoming increasingly involved in shaping local decision-making. This move towards a partnership-focused way of working has coincided with increased expectations on Higher Education Institutions that they become increasingly involved in their local area and in local and regional development. The OECD describes such an approach:

The partnerships, which are in most cases at the early stages, are often bottom-up initiatives with limited support from central governments. The early stages are characterised by numerous small scale and short term projects championed by key individuals (OECD, 2007, p. 13)

The previous chapter addressed the knowledge city concept, exploring van Winden *et al.*'s typology of knowledge cities in relation to smaller cities, in particular the case studies of Lowell and Bolton. The focus of this chapter will be on assessing the role of universities, working in partnership with other institutions, in influencing the urban

regeneration of their home cities via greater engagement with the knowledge economy. Processes of local governance, requiring a greater role from local agencies such as universities, have become increasingly important in shaping the socio-economic fortunes of a place (Benneworth *et al.*, 2006). As outlined in the literature review (see section 2.3 'The Knowledge Economy', specifically sub-section 2.3.3 'From Urban Government to Urban Governance', and; section 2.4 'Higher Education', specifically sub-section 2.4.2 'Regional Development'), a knowledge economy, with its emphasis on the level of innovation and enterprise a place can offer, demands a greater role from the academic and private sector in shaping the fortunes of a place. As Beall and Fox argue (2009, pp.79-80), it is the relationships between institutional actors which influences the economic productivity of a city. A 'triple-helix' relationship between public sector agencies, private sector companies and universities is increasingly regarded as the means towards regeneration and an increase in the social and economic fortunes of a city (Etzkowitz *et al.*, 2000). Inevitably, therefore, this has altered the way in which universities are perceived, the role they play in relation to other institutions in their locality and the perceptions of academic and managerial staff within universities as to their roles and obligations (these issues, relating to internal integration, will be explored in Chapter Seven).

This chapter will therefore address the issues surrounding the role of higher education, and their city partnerships, in urban regeneration, with reference to data generated from the two case studies of this research, Lowell and Bolton. Interviews in these case studies were carried out with staff and students at the universities of Lowell and Bolton and with staff from other institutions in the cities; those institutions which work in partnership with the universities to further local urban regeneration. The aim of this chapter is to go some way towards unpicking the ways in which universities work with other city partners to drive regeneration as well as addressing the benefits and challenges which arise. This chapter will address the issue of partnerships in terms of who the partners are, why they would want to form partnerships with other organisations and what issues this exposes including issues of leadership, progress, power relations and the role of individuals as well as institutions. These issues, concerning the context of partnership working, have

often been overlooked in the literature addressing partnerships and collaboration (Innes and Booher, 2010, p.41).

This chapter will begin with a discussion of what is meant by the term 'partnership' and how the concept has become increasingly important in urban regeneration and governance. The discussion will then move on to addressing the role of Higher Education in local and regional partnerships by firstly tackling issues of engagement (the 'why' questions): which partners are identified as being desirable in the collaborative process and why are they prioritised; what motivates partners to engage, and; issues of culture and expectations of the involved institutions, specifically focussed on universities. The second part of the chapter will move on to address the operation of partnerships (the 'how' questions), firstly analysing the role of leadership before moving on to look at the idea of progress in a partnership: how progress can be defined and the dangers, and indeed the misconceptions, surrounding the idea of 'talking-shops'. The section will then address the notion of 'partnership fatigue', especially the danger that the sheer number of partnerships in operation can exhaust agencies and their staff. The chapter will address power relations within partnerships and the danger for institutions, universities in particular, to be viewed not as partners but as resources. Conflicting perceptions and interests, at the spatial level will be discussed before the section will conclude by looking at the role of institutions as opposed to individuals within partnerships: the extent to which it is indeed individual relationships, rather than institutional ones, which keep partnerships running, and the implications of this. Concluding the chapter by addressing the role of individuals, as opposed to institutions, in partnership working provides the foundations for Chapter 7 to address the ways in which higher education's role in partnerships and urban regeneration has impacted upon the internal operation of universities.

To begin this discussion, it is important to outline what we mean by the term 'partnership' and how it has been defined in terms of this research.

## **6.2 WHAT IS A PARTNERSHIP?**

During the last two decades, the concept of partnership and partnership working has become increasingly prevalent in the theory and practice of urban regeneration and processes of national, regional and local governance. The concept of partnership working has emerged from collaborative planning theory, first championed by Habermas (1981) and subsequently developed by Patsy Healey. Healey defines collaborative planning as a process, whereby “collective concerns about co-existence in shared spaces” come together in an attempt to reach a consensus. In terms of setting the context within which partnerships operate, it is interesting to note Healey’s definition of consensus:

...by ‘consensus’, I had in mind some kind of shared appreciation of the parameters of a problem situation, the values and ways of understanding at stake, the distributive consequences and how to address them, and a recognition that decisions reached were legitimately arrived at, at least by those involved in collaborative processes. I did not imagine a consensus that wiped out conflicts or neutralised power relations (Healey, 2006, p. 320)

As Healey acknowledges, a consensus between partners does not eradicate difference, and indeed recognising, and working with, difference is an essential component of partnership. Organisations from different sectors are inevitably going to have different agendas and modes of working, and so a good partnership allows these differences to co-exist and works towards shared objectives despite them: “essentially, public and private partnerships are bridges of trust based on similar objectives but mindful of differences in roles” (Blakely and Bradshaw, 2002, p. 352). As discussed in the literature review (section 2.3.3 ‘From Urban Government to Urban Governance’) successfully co-ordinating these actors is an inevitable problem in partnership-working aimed at urban regeneration (Tallon, 2010, p.7). Trust underpins a strong partnership, enabling partnership members to speak freely and engage fully. With trust comes a mutual understanding and reciprocity that is essential in the smooth running of partnerships; without it, partnership members feel inhibited and will be less willing to engage and commit fully, as a lack of trust breeds suspicion, which in turn encourages members to be more guarded with their information and opinions.

The theory of partnership working parallels with the 'joined-up' style of governing that New Labour have espoused from 1997 onwards, arguing that working towards regeneration and social inclusion involves tackling cross-cutting and complex issues which can only be sufficiently addressed by agencies working together:

In one important respect the present Labour government is a clear champion of the 'partnership' approach in that it argues that many of the social and economic problems of local areas cannot be solved by agencies working in isolation from one another (Diamond and Liddle, 2005, p.105).

This focus on 'joined-up' working, and its congruence with partnership working, differs from the approach taken to urban regeneration under the Conservative governments of the years previous, which was more hierarchical and market-led. Partnerships and networks differ from market-based and hierarchical relationships. Market governing is defined by relationships borne out of haggling, deal-making and contracts; hierarchical relationships are the products of bureaucracy, formality and employment. Partnership working differs from these forms of governing, based as it is on ideas of collaboration, reciprocity and mutual benefits. In this way, partnerships have much in common with networks which are, likewise, focussed on co-operation and mutual understanding and reciprocity. However, partnerships tend to be more formal than networks and operate at an institutional, rather than individual level:

In comparison to networking, which is generally based on an individual set of relationships, partnerships focus on organisational relationships based on formal agreements within clearly defined boundaries. Partnerships normally deliver programmes through a range of member partners that may include public, private and community sectors... Such partnerships provide the basis for collaborative action, bringing stakeholders together for a common purpose (Williams, 2003, pp.14-15).

Some authors appear to see the concepts of networks and partnerships as so similar as to be interchangeable. For example Bevir argues that "a network is a non-hierarchical, collaborative structure that encompasses various organisations" (Bevir, 2009, p. 121). Likewise, Rhodes (in Pierre, 2000) argues that networks are characterised by four factors:



interdependence between organisations; continuing interactions between members (based on a need to share resources and negotiate shared purposes); interactions based on mutual trust and regulated by rules agreed by the participants, and; a degree of autonomy from the state. These characteristics make Rhodes' definition of networks sound very similar to partnerships. However, the present research would not define networks in such a way and draws a distinction between networks and partnerships in line with that made by Williams, above: networks operate at the individual level; partnerships at the institutional level (Williams, 2003).

There is no one definition of a partnership (Healey *et al.* in Cars *et al.*, 2002, p. 19). For the purposes of this research, the concept of partnership working is understood as being essentially underpinned by:

...the belief that it ensures *greater co-ordination* of existing provision and that it facilitates a *sharing of knowledge* between different agencies, which allows them to have a greater positive impact on a neighbourhood... than they would if they had worked separately (Diamond and Liddle, 2005, p. 97).

This definition can be expanded upon, with the acknowledgement that partnerships can have the potential to change the policies or culture of or between different agencies, which is especially relevant in this research, focussing as it is on the role of Higher Education in urban regeneration, which has such a different working culture to that of the private and public sector. It is also important to recognise that partnership working is often seen as a means towards understanding and addressing multi-faceted socio-economic problems which cut across single agencies and which, therefore, are best tackled by organisation working together (*ibid.*; see also Williams, 2003, p.15). This is also especially important in terms of this research, looking as it is at urban regeneration, an umbrella term which incorporates social inclusion, economic development, spatial planning, sustainable development and so much more: "regeneration projects are, inevitably, a complex web of quite different interest groups" (Diamond and Liddle, 2005, p. 4).

Before moving on to explore some of the issues involved in engaging stakeholders in a partnership, we shall first look at two examples of university partnerships from the case studies of UMass Lowell and Bolton University.

## **6.3 EXAMPLES OF PARTNERSHIPS IN THE CASE STUDIES**

### **6.3.1 LOWELL AFFORDABLE HOUSING SUBCOMMITTEE**

Set up by Lowell City Manager, Bernard F. Lynch, as part of the 'Partnership for Change: Action Plan to End Homelessness in the City of Lowell' 10 year plan. This was established in 2007 in response to a Federal Government request that communities across the US create 10 year plans to end homelessness.

#### **Institutional Members (and number of representatives):**

Higher Education	UMass Lowell academic staff (3, including Chair) UMass Lowell student (1)
Public Sector	City of Lowell (2) MA Parole Board (1) Lowell Housing Authority (1) Northern Middlesex Council of Governments (1)
Private Sector	Gateway Center Corporation (1)
Voluntary and Community Sector	Coalition for a Better Acre (2) Merrimack Valley Project (1) Lowell Transitional Living Center (2) Community Teamwork Inc. (2) Bridgewell (1) Lowell House, Inc. (1)

### **6.3.2 ARTBOTICS (LOWELL)**

Artbotics is a form of collaboration between UMass Lowell (the departments of Computer Science and Art), Lowell High School and the city's Revolving Museum. The Revolving Museum opened in Boston in 1988, working primarily to engage Boston's youth in art, before moving to Lowell in 2002, with the mission statement:

The Revolving Museum is an evolutionary laboratory of creative expression for people of all backgrounds, ages, and abilities who seek to experience the transformative power of art. Through public art, exhibitions, and educational programs we promote artistic exploration and appreciation, encourage community participation and growth, and provide opportunities for individual empowerment and collective change ([www.revolvingmuseum.org/about.html](http://www.revolvingmuseum.org/about.html)).

The Artbotics partnership was set up to teach students about computer science and robotics by creating interactive, public exhibits, and is available to both UMass Lowell and Lowell Public High School students (taking the form of an undergraduate course open to UMass Lowell students, an after-school workshop for high school students and an 8-week summer programme piloted by high school graduates and UMass Lowell students). The students work in the laboratories at the Revolving Museum, learn about computer science and robotics and then have their work displayed at the museum and at public art events throughout the city.

The partnership between the Revolving Museum and UMass Lowell goes beyond Artbotics, for example with the Founder and Director of the Revolving Museum working as a Creative Consultant for UMass Lowell and with two members of UMass Lowell staff sitting on the board at the Revolving Museum.

### 6.3.4 BOLTON VISION

Bolton Vision is Bolton's Local Strategic Partnership (LSP). LSPs, first discussed in the literature review (Chapter 3, section 3.3.1 on UK policy), are non-statutory partnerships encouraged by the Labour Government as a means of bringing together private and public organisations to enhance regeneration and economic development.

#### **Institutional Members:**

Higher Education	Bolton Community College Bolton University
Public Sector	Bolton Council Bolton Hospitals NHS Trust Bolton Primary Care Trust Greater Manchester Police Job Centre Plus Greater Manchester Probation Service
Private Sector	Greater Manchester Chamber
Voluntary and Community Sector	Bolton Community and Voluntary Services Bolton Community Homes Bolton Council of Mosques Church Leaders' Forum

### 6.3.3 BOLTON WIDE (BOLTON WEST INDUSTRIAL AND COMMERCIAL DEVELOPMENT ENTERPRISE)

Bolton Wide is a public/private sector partnership whose vision is to enhance investment, performance and achievement within the west Bolton M61 corridor. There is a cluster of sites along the M61 in Bolton for new industrial and commercial development.

Although this partnership was discussed by two interviewees, it does not seem to be a strong and active partnership. Interviewees at Bolton University did not comment on the

partnership, very little detail about the partnership could be found and its website (<http://www.boltonwide.co.uk>) is not active. This in itself is indicative of the difference in partnership working in the two case studies of Lowell and Bolton, suggesting that partnership working in Bolton is at a less advanced stage.

## **6.4 ISSUES OF ENGAGEMENT**

This section of the thesis will analyse and discuss issues surrounding the engagement of actors in a partnership, beginning with a section dedicated to how partners are identified and the challenges involved in attempting to include *all* suitable members of a partnership. The section will then move on to an examination of issues of motivation and incentives, crucial in eliciting the participation of stakeholders in a partnership, before ending the section with an analysis of cultural issues and managing expectations.

### **6.4.1 IDENTIFYING AND ENGAGING ALL PARTNERS**

Strong, effective partnerships are built on the meaningful engagement of a full range of key regional and local agencies and organizations. In order for partnerships to develop their strategic capacity, they need to devise plans and programmes that truly integrate the perspectives, resources and activities of the public, private and third sectors (Carley *et al.*, 2000, p. 49)

The first step in partnership working is to identify the prospective members and then to elicit their engagement and commitment. The definition of a partnership member can be compared to that of a stakeholder: they have knowledge of, and an interest in, the partnership and they can bring something 'to the table' (Diamond and Liddle, 2005, p. 81). Identifying the stakeholders is a key stage in any form of collaborative, partnership working (Healey, 1997, p. 268). A good partnership, one which will be able to maintain itself, continue to operate and yield results, needs to strike a balance between including all relevant members and being operational and productive: "partnerships suffer tensions between the need to be inclusive to partner organizations and the need for efficient, streamlined decision and management processes" (Carley *et al.*, 2000, p. vi). One means of overcoming this tension is to have a partnership made up of primary and secondary members:

Being in a senior position allows actors to harness tangible (finance, staff, premises, etc.) and intangible (knowledge, information, stakeholder management, capacity to lobby, etc.) resources. Secondary stakeholders will have an indirect or arms-length role (Diamond and Liddle, 2005, p. 81).

Having a partnership composed of primary and secondary members means that a core group of primary stakeholders keep the partnership moving forward, with secondary stakeholders kept 'in the loop' and are able to contribute more fully to the group when relevant. However, the danger with operating a partnership with primary and secondary members is that the secondary members face the potential of being excluded from discussion and decision-making and may come to feel like a resource, not a partner. The danger is that the partnership may become a vehicle for the powerful, elite primary stakeholders to legitimise decisions which favour them and their member organisations.

#### **6.4.2 MOTIVATIONS AND INCENTIVES**

Partners, depending on their organization and sector, will have different motivations for engaging in a partnership and, in engaging, will respond to different incentives. For a partnership to operate smoothly, for partners to stay engaged and for outcomes to be yielded, partners must be able to see in what ways they will benefit from committing to that partnership. Mutual reciprocity is crucial in forming a partnership and encouraging members to engage (Oliver, 1990). For some organizations, for example in the private sector, engaging in an urban regeneration partnership will be a means of demonstrating their corporate social agenda, contributing to environmental or social responsibilities. To some extent, this motivation is concerned with image: it is the organizations way of influencing their community relations and demonstrating a social and / or environmental conscience. To other, smaller organizations, engaging in a partnership can be a means of increasing their prestige and profile, strengthening their local role and networks. Voluntary groups may likewise be motivated to join a partnership to enhance their profile and status and to build more allies as a means of furthering their cause. Another incentive for voluntary groups can be the potential to access resources that other, larger and more powerful, partners hold. For the public sector and local government, engaging in a partnership is most often a way of furthering their agenda, in the case of urban regeneration in terms of the economic and social development of their locality. However,

another incentive for local authorities is that engaging in a local partnership is a means of keeping 'in the loop' with other organizations, as this quote from an interview with Lowell City Council demonstrates: "...the partnerships between the university and business... we need to be getting involved - to know what's going on" (L12, *personal interview*).

Recognising and responding to the differing motivations of partnership members is an important leadership responsibility. For a partnership to be strong and successful, the leadership needs to identify the incentives that will draw desired members into the group, and must deliver on these incentives to ensure that the partnership members remain engaged and committed, as acknowledged by in this interview with staff in Lowell's City Council: "...the trouble with a partnership is you need a facilitator for a really good partnership, because... unless it's in your interest to do something, you're not going to stay engaged" (L13, *personal interview*). This finding is supported in the literature, for example Innes and Booher's work suggests that for partnerships to have long-term stability and success, incentive structures must be built in to the structure of the collaboration, to both engage the stakeholders and crucially, as this work also found, to retain their commitment in the face of so many competing demands (Innes and Booher, 2010, pp.90-92). The role and responsibilities of leadership will be discussed further in the next part of the chapter, as part of an analysis of the operation of partnerships.

### **6.4.3 CULTURE AND EXPECTATIONS**

Bringing different organisations, from different sectors, together, partnerships often face difficulties in terms of clashing organisational cultures. This was evident in both case studies for this research, for example as illustrated by this Boltonian business owner: "I was on the university board for about 6 years which was extremely interesting... I found it very testing, I don't think like that at all, their accounts are upside down!" (B14, *personal interview*). Later in the interview, he went on to say "...[relations with the university are] extremely difficult, the fact that if we get them a job to do and say "we need this by the first of January", they're almost talking about "which year?"" (B14, *personal interview*). To some extent, this reflects Andersson's categorisation of

universities in terms of whether they are traditional or entrepreneurial. Traditional universities are prime creators of knowledge, slow-moving and resistant to change. Entrepreneurial universities are fluid, pro-active and more geared up to engage with business (Andersson *et al.*, 2010, pp.153-154). In terms of partnerships in both Lowell and Bolton, interviewees raised a disconnect between the way academia and business operate, with the academic world perceived as operating at a much slower pace and with more inefficiencies. If we refer back to Andersson's work, we can categorise the working nature of both UMass Lowell and Bolton University as that of traditional universities, even though they do not have the prestige associated with such institutions and would aim to be entrepreneurial in nature (*ibid.*). It seems likely that this traditional means of working can be ascribed to the long history of both institutions, albeit under different titles.

However it is worth noting that, in the quote above, the interviewee acknowledges how interesting he found working with the different organisational culture of the university. One benefit of partnership working is that it brings together organisations that operate in different ways, giving the opportunity for different organisations to learn about the culture and practices of different sectors and thereby breaking down barriers for future collaboration. Large organisations can become complacent in their way of working, so engaging in a partnership can show different ways of operating and has the potential to change organisational culture and working practice (Diamond and Liddle, 2005, p. 97). In fact, the extent to which a partnership can survive and work despite differing organisational cultures can be a test of that partnership's strength: if the member organisations are able to accommodate the different working cultures of other members, and perhaps change their culture accordingly, this in itself is a positive outcome of partnership working:

Differing organisation cultures, which often clash in the early days of partnership, can be a determinant of the success or otherwise of a partnership. A major task in the early days of partnership is to break down these cultural barriers and mutual suspicions (Carley *et al.*, 2000, p. 22)



Local Authorities often hold most of the power and resources in regeneration partnerships, and so the way they work with other institutions can be key in the formation and smooth-running of the partnership. The extent to which the local authority can adapt its culture and mode of operation for the purposes of the partnership can be crucial in success:

Local councils in particular have been said to be paternalistic, bureaucratic, power-hungry and controlling... The emergence of successful partnership working is very often conditional on a change of attitudes and practices within the local authority, which can trigger change in other partner institutions (Carley *et al.*, 2000, p. 22).

Likewise, the culture and working-style of Higher Education Institutions is very different to that of institutions in other sectors (as highlighted in the quote above from the Bolton business owner), and this, together with the institution's ability to adapt in the context of partnership-working, can impinge on the success of partnerships. Made up of disparate departments, there is often a disconnect in universities both within and between departments, as well as between departments and the senior administration. Organisations within the private and public sector are often much more hierarchical compared to universities, where individual academics and the departments themselves often operate with some degree of independence. As Greenwood argues (2007), universities are composed of a mixed, sometimes even contradictory set of activities and aims compared to private corporations, motivated by profitability. This raises questions as to how a university as a whole can be a member of a partnership. When the senior administration engages in a partnership, how can this effectively be communicated to other departments? When a member of academic staff or an individual department is part of a partnership, how do they communicate their involvement to senior administration and other departments, and, indeed, how can they encourage senior administration or other departments to lend their support? This represents a problem of vertical integration within universities in regards to their partnership role in urban regeneration:

Vertical integration ensures that bottom-up and top-down initiatives form a coherent whole, so that all are pulling in the same direction rather than at cross-purposes (Carley *et al.*, 2000, p. 53).

The issue of internal integration within universities will be explored in more depth in Chapter 7.

## **6.5 OPERATION OF PARTNERSHIPS**

Having addressed the issues concerned with engaging stakeholders in a partnership in the preceding section, the thesis will now move on to explore the operation of partnerships. Beginning with a discussion around issues of leadership, the section will move on to analyse a common criticism of partnerships – that they merely represent ‘talking-shops’ in which progress and accomplishment are minimal. This will lead on to addressing a second criticism, which has been labelled ‘partnership fatigue’ and refers to the problems associated increasing numbers of partnerships. There will then be an analysis of power relations within partnerships and specifically a problem which emerged in the research pertaining to the particular role of higher education, with the potential for universities to be a resource, rather than an equal partner. A linked problem will then be examined, in a section which addresses the potential spatial mismatch of areas of interest between universities and other stakeholders in urban regeneration partnerships. The section will end, leading to the chapter conclusion, with a discussion over the extent to which it is particular individuals, rather than the institutions they work for, which influence the success or failure of a partnership and what implications this holds. This section will include examples of key individuals from the case studies of Bolton and Lowell.

### **6.5.1 LEADERSHIP**

To be creative, as regeneration demands, requires leaders who not only are themselves creative and have technical expertise, social and organisation skills, and the ability to ‘sell’ the message, but also provide inspirational motivation (Diamond and Liddle, 2005, p. 85)

To lead a partnership, and to do so with success, requires vision, commitment and skill. Part of the leader’s role is to identify members and, as discussed above, to draw them into the partnership by recognising what would motivate them and to keep them engaged by ensuring that these motivations are fulfilled. When bringing together different, and sometimes opposing, members, this is a demanding challenge: “arguably, managing and communicating with diverse and contradictory stakeholders, now and in the future, are two of the most crucial skills to success in bringing about regeneration of deprived locales” (Diamond and Liddle, 2005, p. 90).

The Chair of the Lowell Affordable Housing Subcommittee (an academic, appointed to the role of Chair by the City Manager; see section 6.3.1) discussed this issue, in regards to engaging a voluntary sector member who felt cynical that the city council was genuinely committed to addressing the problem of homelessness in the city. The Chair met this problem by proposing to the member that engaging with the partnership was the only way to make themselves heard by the council, and that by failing to engage they would be locking themselves out of the debate and, by default, enabling the council to inadequately respond to the problem of homelessness in the city. This encouraged the participant to engage in the partnership for some time, but after a short while the participant stopped attending meetings. The Chair had no authority in or over the council and so, although he could get the partnership members to the table, he could not force the council to listen to the demands coming from the voluntary sector and so it seems likely that maintaining their engagement represented an on-going issue. Keeping stakeholders interested and engaged in a partnership is a key challenge which leadership must address: participants need to feel they are benefiting from continuing to commit to a partnership and so it is important that they see benefits from their involvement before their patience and energy is depleted (Boddy and Parkinson, 2004, p. 357).

When considering the leadership of a partnership, there is an important question concerning independence and the extent to which the leader should be drawn from the most powerful organisation or be entirely independent. The notion of having a partnership leader has the potential itself to instil a power imbalance in the group: “the very fact that the process of stakeholding needs to be managed creates imbalance between those who are managing and those being managed. It implies a hierarchy and indicates inequality” (Diamond and Liddle, 2005, p. 83). Despite the power imbalance that the concept of leadership in a partnership conveys, strong leadership is necessary to engage reluctant members, keep the agenda moving and to aid communication both within the partnership and between the partnership and the outside world (Carley *et al.*, 2000, p. vi). Just as it is not viable to conceive of a partnership without leadership, it is nonsensical to suggest that the leader of a partnership should be entirely neutral: what would motivate the leader of a partnership to take on such a role if they did not have knowledge and

opinions concerning the issue at hand? However, to have a leader from the most powerful organisation in the partnership potentially nullifies the sense of forming a partnership in the first place. Having the most powerful member as leader of a partnership enables that member to use their power and position to be the most dominant, to direct discussion and debate and to shape outcomes in their favour. In such an instance, members may feel that the partnership is merely a vehicle for legitimising decisions that have already been made, that it is only 'paying lipservice' to their voices. However, the concern with having a leader who is not from the most powerful organisation in the partnership is that their authority will be 'false' and their ability to act will be limited, as seen in the example from the Lowell Housing Sub-Committee discussed above. The concern with having a leader who is not from the most powerful organisation in the partnership (that they do not have any ultimate authority and only a limited ability to act, as in the example from the Lowell Homelessness Subcommittee) is outweighed by the need to retain as much power-neutrality as possible:

... collaborative leadership involves getting something started and then encouraging, rather than controlling, building capacity among others, and initiating networks (Innes and Booher, 2010, p.92).

### **6.5.2 TALKING-SHOPS**

Running through the literature on partnerships, is a theme concerning the potential and danger for partnerships to become 'talking shops' whereby the members meet and engage in discussions but do not take action or drive progress forward. As the concept of partnerships has become more politically popular, there has been a rise in the extent to which "'partnerships' are seen as the panacea for a variety of problems and are presented as offering *the solution*" (Diamond and Liddle, 2005, p. 111).

This theme reoccurred within interviews for this research. Some interviewees implied that it was the nature of some member institutions which instilled inertia in the partnerships they engaged in:

For all the meetings I attended I can't say that a single thing was achieved, it was a question of reading reports "these are the mills in the area" and I would say "and? What are we doing with them?"; "well, it's difficult to do anything with them". "These are the problems with transport" "well, what shall we do?" "oh well we can't do this, we can't do that". I've found that wherever there's a suggestion, "let's do such-and-such", there's an awful lot of people, and it tends to be the ones from the council, that can find lots and lots of reasons why things can't be done. And I don't think they're being deliberately obstructive, it's just the way of thinking... (B1, *personal interview*).

As well as the culture within individual member institutions, the role of leadership is crucial in furthering the momentum of a partnership: "At all levels of partnership, strong, competent leadership... drives forward the regeneration agenda, thus ensuring that the partnership is more than a 'talking shop'" (Carley *et al.*, 2000, p. vi).

However, although a number of interviewees lamented the tendency of partnership working to encourage 'talking shops', an equal number promoted the benefits that come from simply forming a partnership and getting different institutions, who would not normally meet and work together, to come together to discuss issues which interest them all. For example, in a meeting with staff from Lowell City Council, the interviewees expressed their frustration that the community college were not engaging in partnership working as strongly as other institutions in the city; these interviewees saw the solution to this problem as lying within the partnerships themselves: "So the thing is to get a bunch of people in the room!" and "you just have to get the people in the room" (L13, *personal interview*). This assertion is supported by Innes and Booher's work, which acknowledges the role of face-to-face dialogue and informal contact between partnership members (Innes and Booher, 2010, p.85; p.98). By "getting people in the room" partnership members come to understand their partner organisations (their priorities, culture and ways of working) but also their stakeholders as individuals, which can create a bond between members and encourage openness and greater dialogue, as recognised by this UMass Lowell student:

You have to organise one-one-one if you really wanna build relationships... once people get to know you and you have a relationship with them, if you ask them to do something they're more likely to do it (L11, *personal interview*).

### **6.5.3 PARTNERSHIP FATIGUE**

Wenban-Smith discusses anecdotal evidence of increasing 'partnership fatigue' (in Cars *et al.*, 2002, p.198). He attributes this to a number of factors including disillusionment stemming from the number of partnerships which "are sometimes little more than marriages of convenience", partnerships which operate exclusively (including a limited group of participants who sit on so many partnerships that they become the "usual suspects") and excessive costs.

Another cause of partnership fatigue, which was not explored by Wenban-Smith but which did emerge in this research, is the very large number of partnerships which exist and the complexity of attempting to understand each and every one: their role; their membership, and; their processes of accountability:

Business Link, [that's just] another central government agency that's never been effective because it's never been stable enough to become so. It changes so often! It's now run by the NWDA and they haven't a clue what they're doing! There's no interface. In a town like Bolton you've got 10 different quangos all delivering business support falling over one another (B9, *personal interview*).

This interviewee expresses frustration with partnerships that, to some extent, can be attributed to the way in which central government has managed 'joined-up working', with a large number of partnerships and a focus on indicators:

...the instability created by new initiatives and the 'target' culture has had the unintended consequences of making joint working more challenging than might have been expected by its advocates in government (Diamond and Liddle, 2005, p. 105).

However, whilst the interviewees comments can be taken as a criticism of the way in which central government has attempted to manage partnerships and urban regeneration, they also tap into a much wider issue with partnerships in general. Some critics see processes of governance, including partnerships, as undemocratic, by giving power and weight to an unelected few and causing such complexity that it becomes impossible to navigate responsibility and accountability:

Perhaps the main criticism of networks [and partnerships], however, is that they undermine democratic values, such as accountability. The sheer institutional complexity of networks [and partnerships] obscures who is accountable to whom for what (Bevir, 2009, p. 141).

#### **6.5.4 POWER RELATIONS: UNIVERSITY AS RESOURCE, NOT PARTNER**

There is an assumption that partnership working facilitates a level of equality, enabling different voices to be heard and including various organisations in decision-making, but “status, hierarchy and power differences remain and may undermine the initiative if they are not challenged or acknowledged” (Diamond and Liddle, 2005, p. 109). Partnerships may therefore be perceived as power-neutral formations which enable all stakeholders to have a say, but in fact many features of partnerships working can pose a challenge to this ‘fairness’. As highlighted in the literature review (section 2.3.3 ‘From Urban Government to Urban Governance’), there are inevitable difficulties associated with collaborative working and for partnerships to be run smoothly these must be overcome. Firstly, although partnerships can represent shared power, it can also be the case that this power is still only shared between select groups and so only the powerful stakeholders are included (Healey, 2006, p. 225). In this way, there is a danger for institutions and individuals who have always had their voice heard to continue to have their voice heard, and those who have been excluded from public debate and decision-making, to continue to be excluded in these processes:

Power differentials around the table can interfere with wise decisions, if not managed within the dialogue (Innes and Booher, 2010, p.85).

A partnership itself is not going to be a power-neutral zone, as different organisations from different sectors are working together. These organisations will all have their own agendas, varying budgets and differing abilities to influence local politics and the other organisations involved in the partnership: “some ‘formal’ and ‘established’ partners have a dominant role while others have weak and vague roles” (Cars in Cars *et al.*, 2002, p. 146). The organisations might be united in their interest in the issues at stake in the partnership, but with their own agendas (and different levels of power) each partner may



see different priorities within those issues and may also see different ways of achieving the aims of the partnership.

There is therefore the potential for some organisations to use the partnership as a means of dominating other members, as demonstrated by the quote from a manager at the University of Bolton:

And now we're talking more intensively about collaboration there are starting to emerge issues now about the Council wanting to influence where we might locate certain activities and they're wanting to locate certain activities within our campus so they produce a lot of detailed discussions because we have certain interests we want to protect and so do they. A good example is a proposal at the moment to create a town centre swimming pool and leisure complex that they want to locate on our land with some potential sports science facilities attached to it. Now, there are two sets of interests there, us - in terms of academic plus leisure for our students theirs in terms of leisure for the broader community: can you make the two things work together? (B7, *personal interview*)

This notion of the university as resource, rather than partner, also emerged in Lowell. Interviewees from other institutions in the city of Lowell made comments which implied that they regarded the university not as a place primarily concerned with the education of students, but as an asset to serve the city: "...what is the university doing? How can we plug each and every department into helping the city, helping a local non-profit, helping a neighbourhood group?" (L14, *personal interview*) and "every department, there's a thousand ways that UML could help the city" (L15, *personal interview*).

#### **6.5.5 SPATIAL MISMATCH**

The spatial dimensions of regeneration partnerships can cause complications and conflict, especially in regards to the kind of partnerships this research is exploring, involving Higher Education Institutions. The partnerships operating in Lowell and Bolton were local-level urban regeneration partnerships, often with the local authority at the centre. This local focus was sometimes at odds with the mission of the universities.

At the time this research was being conducted, the mission of the University of Massachusetts Lowell was as follows:

The mission of UMass Lowell is to provide to students an affordable education of high quality and to focus some of its scholarship and public service on assisting sustainable regional economic and social development in the nation and the world.

It is interesting to note that the mission refers to the nation and the world, but not the region. This implies that UMass Lowell, like many modern universities, has a national and international focus above a regional one. Of course, this makes the focus of the university misaligned with that of local economic development and regeneration, concerned with the immediate urban environment of the university and the wider region of Massachusetts. However, at the time of writing up this research, the UML mission had been changed to one which was much more orientated towards the region, as opposed to the nation or the globe:

The mission of the University of Massachusetts Lowell is to enhance the intellectual, personal and cultural development of its students through excellent, affordable educational programs. The University seeks to meet the needs of the Commonwealth today and into the future and supports the development of sustainable technologies and communities through its teaching, research, scholarship and engagement ([www.uml.edu/about/profile/default.html](http://www.uml.edu/about/profile/default.html)).

The mission of the University of Bolton is less clear, as the university has a long 'ethos' rather than a short mission statement ([www.bolton.ac.uk/AboutUs/OurEthos.aspx](http://www.bolton.ac.uk/AboutUs/OurEthos.aspx)). However, the 'ethos' is headed with a one-sentence statement which, for the purposes of this research, will be interpreted as its mission:

The University of Bolton is a public resource for knowledge and learning, working with and on behalf of people and organisations to solve practical problems (*ibid.*)

This statement does not have a spatial focus, and nor does the extended 'ethos', which implies that the university does not want to limit its spatial scope. This implication was reinforced by data from an interview with a University of Bolton manager:

It's just an accident of history that... [the university's] located in Bolton – all being well, we want to stay and work in Bolton but there is that tendency sometimes, a

slight proprietorial air that can come into discussions: “this is our university” from parts of the council, whereas from our point of view, yes, we regard Bolton as our home but we have other constituencies we have to serve. That’s one of the main sources of tension (B7, *personal interview*)

As discussed in the literature review (section 2.2.3 ‘Globalisation and Higher Education’) many universities have now become globally-focused (Delanty, 2003). To acquire greater prestige and funding, universities aim for national prestige and world-class status and so there is an inevitable tension when universities with such ambition are engaging in local regeneration partnerships. When a university has ambitions to become more nationally and internationally significant, they will be concerned that committing too heavily to local regeneration initiatives will undermine their national and international profile.

However, regions such as Manchester and Massachusetts are already home to universities which are world-class (Harvard University) or are far along the path to becoming so (Manchester University). Given the history, resources and status which universities such as Harvard and Manchester University already have, it is unrealistic for UMass Lowell and the University of Bolton to vie for a similar role and position. It would be more viable for these smaller universities to carve out a position for themselves based on responding to local needs.

#### **6.5.6 INSTITUTIONS OR INDIVIDUALS: PARTNERSHIPS OR NETWORKS?**

The interviews for this research made it apparent that it is the role of individuals, rather than their institutions, which is the key to a successful partnership, as this quote from a Lowell interviewee testifies:

There are certain Professors at the university that have had a lot of effect and a lot of impact on the community and they’re very passionate about what they do...I think the individuals have much more impact compared to the university as a whole, but those individuals continue to keep university-community partnerships on the radar screen (L11, *personal interview*).

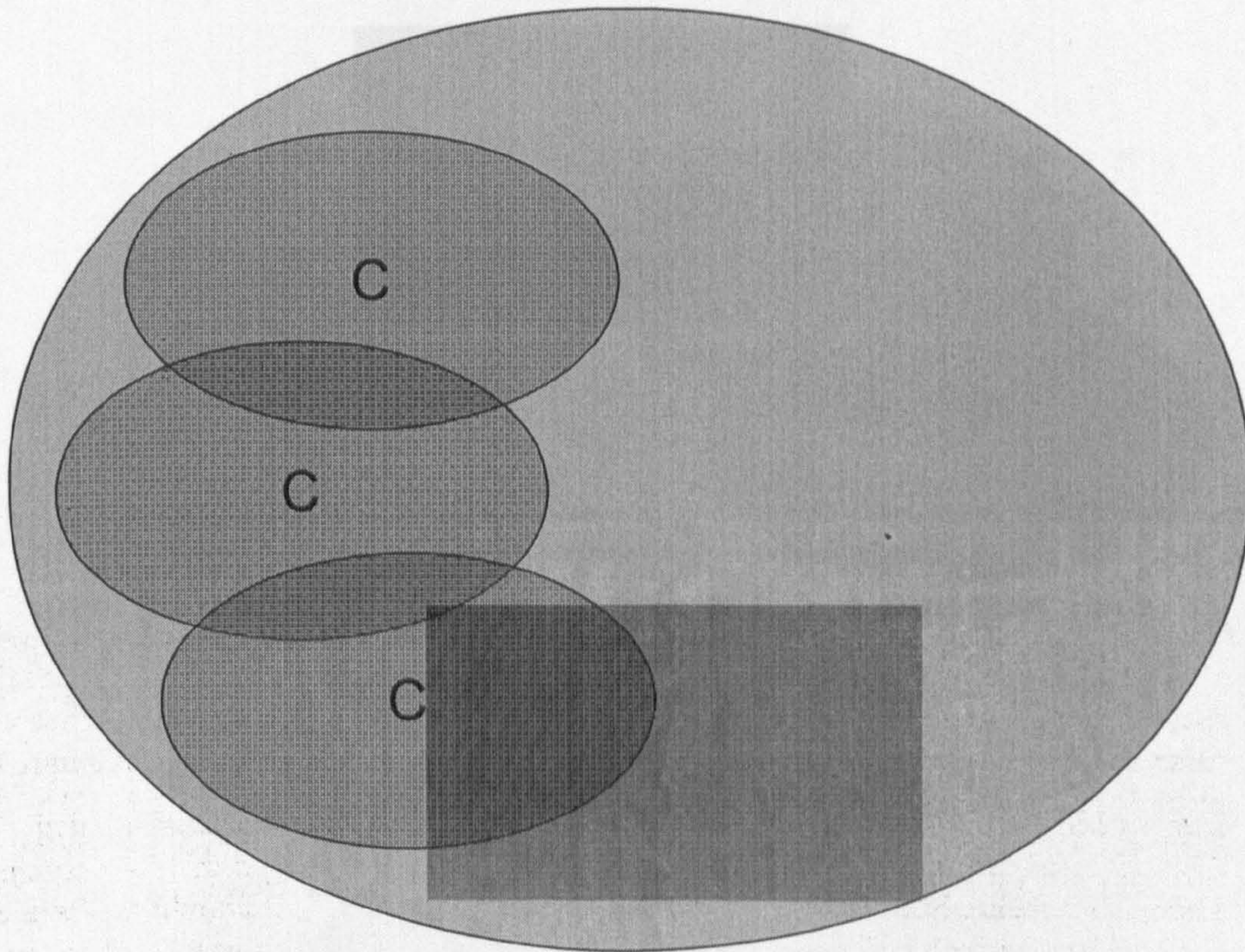
Likewise, in Bolton it was individuals, rather than institutions, which were credited with engaging proactively with other partners. In two separate interviews with the private sector, the respondents referred to a particular member of staff at the University of Bolton, who they credited with turning the university's focus around and engaging in partnerships with business. These interviewees argued that before this member of staff joined the university it was not "switched on to business *at all*", but that since employing this member of staff, who had previously worked in the private sector himself, the university was becoming much more proactive in engaging with business. These findings regarding the importance of individuals within partnerships is supported by the work of Innes and Booher, first explored in the literature review, that an informal bond within a partnership builds social capital within the group and can strengthen the partnership as a whole (Innes and Booher, 2010, p.98).

It is interesting, at this point, to return to Williams' definition of partnerships as distinct from networks:

In comparison to networking, which is generally based on an individual set of relationships, partnerships focus on organisational relationships based on formal agreements within clearly defined boundaries (Williams, 2003, pp.14-15)

The data from this research suggests that within successful partnerships, exists networks based on the roles and relationships of individuals. The relationship between networks and partnerships is not distinct, but rather is interwoven: a good partnership cannot exist without strong networks operating within it. It seems that, within partnerships, many networks can co-exist and that these networks can be separated into two types (as shown on figure 6). In figure 6: A Model of Network-Partnership Interdependency 'A', the largest shape, represents the partnership itself; 'B', the shape at the centre of the model, represents the primary network, which is made up of the most engaged and influential members of the partnership, and; the shapes labelled 'C' are the secondary networks, made up of less engaged and influential members. As the model shows, 'B' (the primary network) is at the core of the partnership and is the network that keeps the partnership functioning and moving forward, whereas the 'C' networks play a more supportive role.

The relationships between 'B' and 'C' can overlap, with some of the primary stakeholders, from network 'B', also engaging in some of the secondary networks ('C').



A

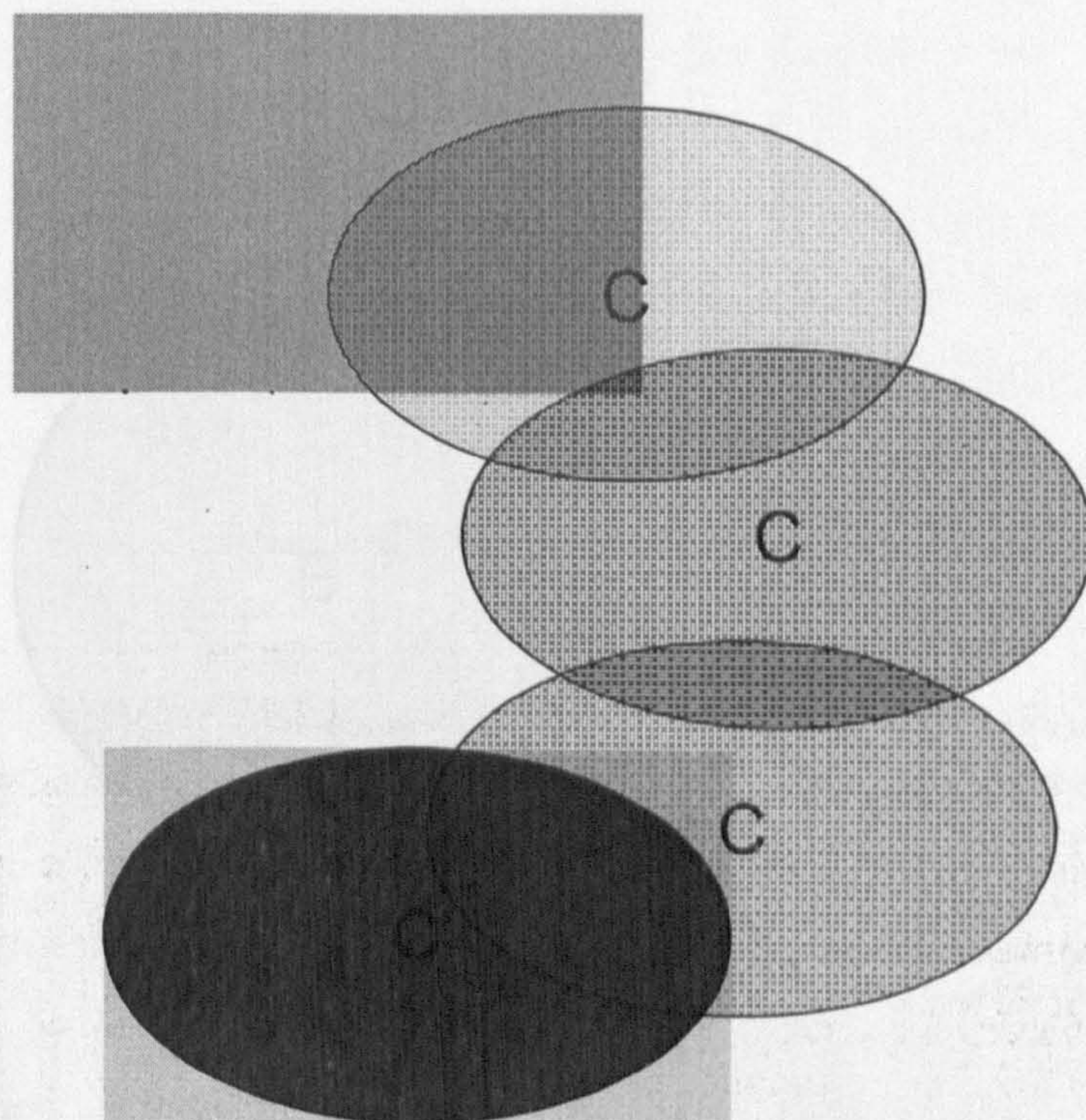
**A:** the partnership itself

**B:** the primary network, composed of primary stakeholders in the partnership

**C:** other, secondary networks, which can be overlapping and composed of both primary and secondary stakeholders, or just secondary stakeholders

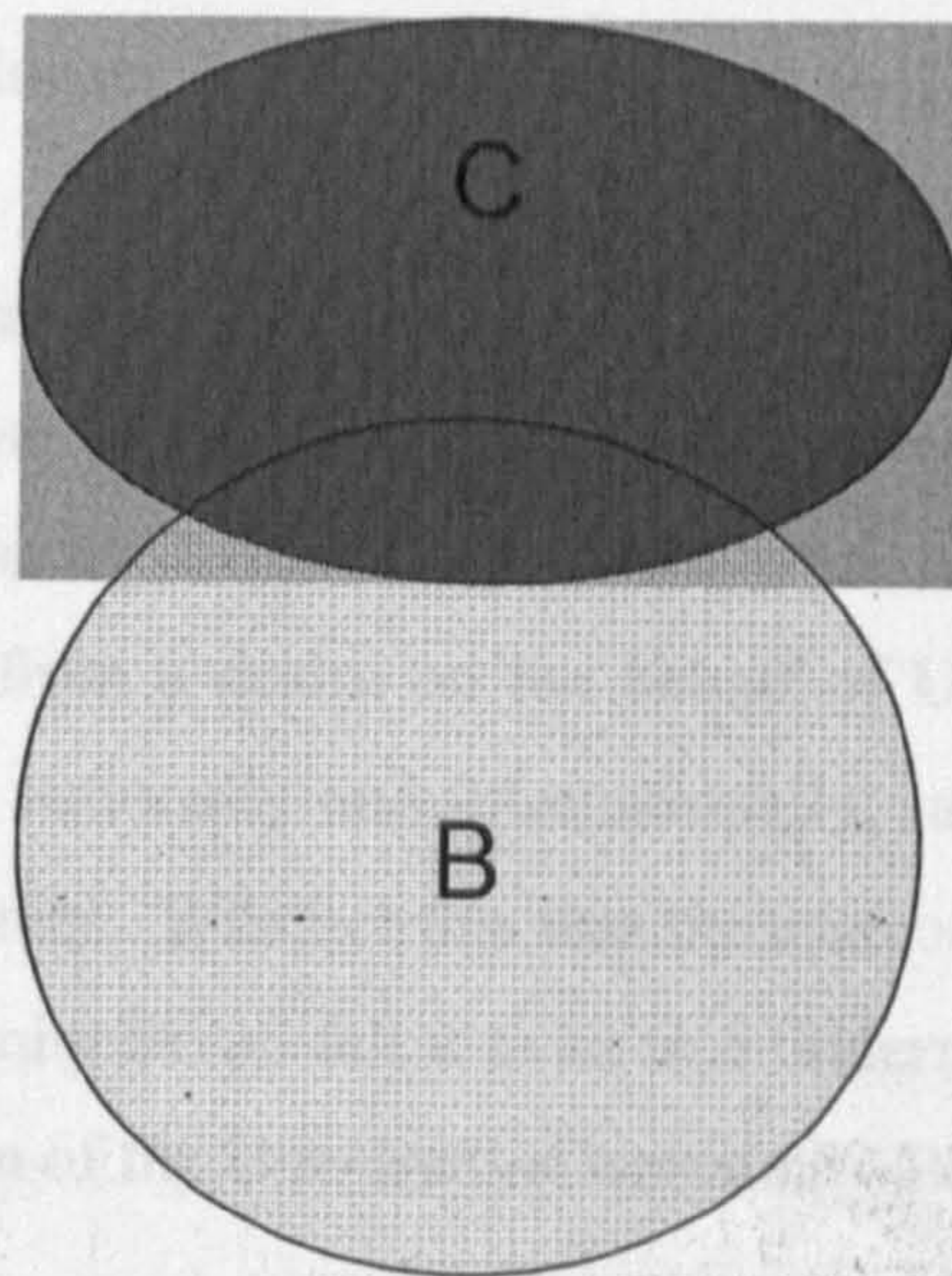
The reliance of partnerships on key individuals, and on individual networks, represents problems in terms of the continuity of partnerships: what happens when key people move on? There is the potential here for a downward spiral of partnership attendance: when key people move on the partnership faces the potential of losing momentum and status; if this happens, more and more members will disengage and the partnership will eventually

Figure 6. A Model of Network-Partnership Interdependency



grind to a halt. This demonstrates the extent to which external changes, outside of the control of the partnership, can be massively influential on its success, momentum and continuation. For example, organisational restructuring can result in individuals who were key in a partnership being moved to a job which does not allow them to participate in that partnership any longer.

**Figure 6: A Model of Network-Partnership Interdependency**



grind to a halt. This demonstrates the extent to which external changes, outside of the control of the partnership, can be massively influential on its success, momentum and continuation. For example, organisational restructuring can result in individuals who were key in a partnership, being moved to a post which does not allow them to participate in that partnership any longer. This was the case in UMass Lowell at the time of conducting this research. The Provost of the university, who had sat on the University-Community Board and was seen by members of the community as a positive and active contributor to the city, was being replaced. Anecdotal evidence implied that many of those sitting on the University-Community Board were suspicious of this restructuring and felt that it stemmed from a desire on the behalf of UML management to raise the profile of UMass Lowell nationally and internationally, rather than continuing with the focus on the local community. Whether this was the case or not, the fact that the majority of the University-Community Board felt it to be true undermined relations and threatened the successful continuation of the University-Community Board.

#### **Individual Profile: Bolton**

*Mollie Temple CBE, Former Vice Chancellor of the University of Bolton*

Born in Leeds, Temple worked in secondary education for some years as a teacher of English before joining the new Leeds Polytechnic in 1971 as a lecturer in communications and social science. Her career at Leeds Polytechnic and Leeds Metropolitan University spanned two decades.



In 1993 Mollie moved to Sunderland University as Pro Vice-Chancellor, Academic Quality and Development, before being appointed Principal of Bolton Institute of Higher Education in 1999. Temple was instrumental in the former Bolton Institute obtaining the University title in 2004, and became the first Vice-Chancellor of the University. Temple was awarded a CBE in June 2006.



“Nobody but Mollie could have got us the University title... She was amazing, she was strong-willed, she got the systems right, the staffing right, the strategy of the whole place” (B1, *personal interview*)

### **Individual Profile: Lowell**

*Dr. William Hogan, Former Chancellor of UMass Lowell*

Hogan worked at AVCO Corporation until 1963 when he left to teach mechanical engineering at what was then called Lowell Technological Institute. At AVCO, Hogan directed a group of engineers responsible for the design, construction and evaluation of wind tunnels used to simulate space-vehicle re-entry into the earth's atmosphere for the purpose of heat-shield material evaluation.



Hogan was appointed head of the Department of Mechanical Engineering in 1966, acting dean of engineering in 1971, and in 1973 was appointed the first dean of the newly organized College of Engineering at Lowell Tech. The institute merged with Lowell State College in 1975 to become the University of Lowell, and Hogan was appointed first vice president for academic affairs of the newly formed university. Hogan served as president of the university from 1981 until 1991. When the school became part of the UMass system in 1991, Hogan was named chancellor. Hogan then stayed as Chancellor of UMass Lowell until he retired in 2007, after serving as the leader of the UMass Lowell campus for 25 years.

“...he [Hogan] was a visionary in the sense of understanding that this was an institution that constantly had to be dealing with change and constantly looking to the future and he was a persuasive advocate for this university being engaged in the communities in ways that some universities weren't and as a result you see the benefits of his leadership” (L25,

*personal interview)*

### **Individual Profile: Lowell**

#### *Professor Robert Farrant*

Before completing his graduate education, Professor Farrant worked for many years as a machinist and union business agent at the now closed American Bosch plant in Springfield, Massachusetts.



Now a professor with UMass Lowell's Regional Economic and Social Development department, he specializes in the areas of labor, technology, and urban and regional economic and social development issues.

Professor Farrant was repeatedly referred to by interviewees as championing UMass Lowell's civic engagement.

As well as a few key individuals playing a positive role in partnerships, likewise it can only take a few individuals, in key positions, to undermine partnerships. This was implied by an interviewee at the University of Massachusetts Lowell who had both a managerial and an academic role and felt that partnership working was not on the agenda of those more senior: "The one thing I've learnt on this job is how difficult change is... I've witnessed it at this campus, a small group of senior people fight change at every level and quite often win" (L9, *personal interview*).

## **6.6 CONCLUSION**

This chapter has addressed processes of governance within urban regeneration, examining the increased prevalence of partnerships and in particular the role of higher education within such partnerships. A number of challenges were explored, unpicking why and how partnerships are formed between large institutions, with a particular focus on the role of higher education.

First discussed in the literature review (in particular sections 2.3 and 2.4), the knowledge economy is engendering greater involvement from academia and the private sector in processes of urban governance. This chapter has unpicked some of the key issues connected to the role of universities and their urban regeneration partnerships, using primary data from the case studies. The chapter began by defining what is meant by 'partnership', exploring the importance of trust and mutual understanding and reciprocity in partnerships. There is no one definition of a partnership, but a healthy partnership is underpinned by a belief that greater cooperation and coordination, and the sharing of knowledge and resources, will enable greater achievement than the institutions would have been capable of when acting independently. Partnerships represent a means of responding to and managing complexity, especially relevant in issues of urban regeneration, which encompass spatial, social and economic challenges.

The chapter was then split into two halves. The first half explored issues of engagement: which stakeholders are engaged in partnerships and why; what motivates stakeholders to engage in partnerships and what incentives they respond to, and; issues regarding organisational cultures, especially focussed on universities. This section of the chapter demonstrated, through the use of primary data, the need for incentives in engaging partners, and the role of strong leadership in identifying the motivations of each stakeholder. Bringing together different organisations with different internal cultures (for example academia and the private sector) presents a key challenge in partnership working, but also an opportunity for institutional working and development.

The second half of the chapter addressed issues relating to the operation of partnerships: the role of leadership; how to judge progress and to what extent demonstrating progress is indeed relevant; problems regarding partnership fatigue; power relations within partnerships, and; the potential for a spatial mismatch in aims, especially pertinent to universities within a global marketplace. Stakeholders can tire of partnerships, especially in relation to the danger of partnerships being mere talking-shops and issues of partnership fatigue. However, within the evolution of a partnership there is a role for the talking-shop: different organisations discussing an issue in collaboration with one another often represents an achievement in itself. The danger emerges, however, when the partnership fails to progress beyond this stage and it is then that partnership fatigue (too many partnerships) becomes more pertinent, with stakeholders losing interest in a partnership if it fails to gain momentum. Power relations will be present in any partnership and here, again, leadership plays a crucial role. In both case studies, the notion of the university being used as a resource rather than an equal partner arose. This was especially significant in relation to spatial dimensions, with universities having a wider spatial target (increasingly so in a global marketplace) compared to their partners in local government. The chapter drew to a close with an examination of the role of individuals compared to institutions within partnership arrangements.

Referring back to the conceptual framework underpinning the present research (figures 4 and 5 in particular), it is important to recognise that a university can only contribute to a city's triple-helix and work in partnership with the private sector and local business to contribute to the development of a knowledge city (bringing with it urban regeneration) if there is some level of understanding of and commitment to this role within the institution itself. The partnerships-networks interdependency model helps illustrate that for a university to forge strong partnerships, and play a role in urban regeneration, it needs to have staff that establish and maintain strong networks. The following chapter will examine this issue further, by addressing the internal implications for universities themselves of the increasing role of higher education in partnerships and processes of urban regeneration.

## **CHAPTER SEVEN**

### **UNIVERSITIES AND INTERNAL INTEGRATION**

#### **7.1 INTRODUCTION**

The chapter will address the way in which partnership working, as explored in the previous chapter, has affected universities internally. As explored in the literature review (section 2.2 'Globalisation', specifically sub-section 2.2.3 'Globalisation and Higher Education'; section 2.3 'The Knowledge Economy', specifically sub-section 2.3.3 'From Urban Government to Urban Governance', and; section 2.4 'Higher Education', specifically sub-section 2.4.2 'Regional Development'), globalisation and the knowledge economy have impacted upon the perceived role of higher education and the expectations placed on universities in terms of the role they play in society and their immediate locality. This has altered the way in which the institutions operate internally and it is this which this chapter will explore. As Bebbington argues (2009, p.26) education is increasingly regarded as playing a fundamental economic role and, inevitably given their role in knowledge production, much of this responsibility is placed on universities.

This chapter will address the internal functioning of universities by focussing on the two case study institutions of UMass Lowell and the University of Bolton. The aim of this chapter, therefore, is to analyse the way in which a university's external role in urban regeneration partnerships impacts upon its internal functioning, and the extent to which there is internal consistency and integration regarding the emerging urban regeneration function of universities. To address these issues, this chapter will consider the role of students, processes of staff reward and punishment (via career advancement mechanisms), conflict, university missions and self-perception before concluding with a return to the issue of what it means to be a university today.

An institution must have some form of internal consistency to be able to succeed in its external environment:

If a group is to accomplish tasks that enable it to adapt to its external environment, it must be able to develop and maintain a set of internal relationships among its members (Schien, 2004, p. 111).

While Schien is referring to any kind of organisation, the principle he discusses can be directly related to Higher Education and its spatial surrounding. For a university to have success in the wider context of its locality and the world, it must have cohesion among its various (often disparate) departments and faculty. This internal consistency and integration is even more important when the university seeks to work in partnership with other organisations to contribute to the economic and social development of the city within which it resides.

Bolden *et al.* (2008) identified a range of organisational cultures particular to higher education, which are worth considering before this chapter proceeds. These four organisational cultures range include: the bureaucratic form (also known as new managerialism), which is traditionally associated with hierarchy and authority; collegiality, which privileges professional expertise above position; corporatism, and; strong institutional management and strategic planning that focuses on institutional change and enabling the university to interact with the external environment (Bolden *et al.*, 2008). Bolden argues that describing a university's culture is inherent with difficulty and all four cultures can co-exist in one institution, but that if so it is likely that one or more will be dominant. For the purposes of this research it is worth noting that an institution engaging with the knowledge economy and processes of urban regeneration would have a culture which fits the fourth description; that is one which is entrepreneurial and as such is constantly seeking and able to engage in its external environment.

This section will therefore focus on Higher Education itself and how universities internally manage their role in partnerships and urban regeneration. The chapter will begin by addressing the issue of internal integration within Higher Education with reference to the two universities of the case study locations: The University of

Massachusetts Lowell, and the University of Bolton. Processes of career advancement in the two universities will be examined in relation to issues of internal integration, with reference to the wider US and UK academic contexts. The chapter will then move on to the issue of 'battles' between faculty and departments, particularly in the Lowell case study, where more conflicts emerged during data collection. The discussion will then return to the university's missions, first addressed in the previous chapter on partnerships. This chapter will look at the university's missions in terms of the extent to which university interviewees could identify with the mission and unite behind it. Chapter 7 will end by returning to the debates surrounding the core function of a university today, what it means to be a university and what responsibilities the institutions are expected to fulfil. Such fundamental questions were first discussed in the thesis introduction and literature review, and to some extent, define higher education today, placed as it is under pressure to respond to so many different expectations and responsibilities.

## **7.2 STUDENTS**

The role of students tends to be overlooked in the literature on higher education, where they are discussed as a whole, in terms of their growing number and the impact of this upon universities. As highlighted in the literature review, students are discussed in terms of the phenomenon of 'massification' (see Bebbington, 2009, p.27), whereby increasingly large numbers of students are attending universities, prompting more and more competition between the institutions as they vie to attract the greatest number of these students.

However, this research found a distinct difference between the role of students in the US case study compared to the UK one. Students in UMass Lowell were much more engaged and active in the university, and the wider city, compared to their counterparts in Bolton University. Gaining access to students to interview for this research was much easier in Lowell and there was more reference in the American interviews to students being engaged in the civic life, usually in volunteering roles in organisations aimed at regeneration and social inclusion (for example, as discussed in Chapter 6 (section 6.3.1) on partnerships, a UMass Lowell student sits on the Homelessness Subcommittee). This

was attributed, by a UMass Lowell student who also had an active volunteer role in the community, to the close relationship shared by the university and the city (L11, *personal interview*). This interviewee argued that as the university has increased its participation in city partnerships, the profile of the university within the city has grown and this, in turn, has encouraged more young people in the city to attend UMass Lowell (over other institutions in the state) and more students attending the university to take a civic interest and engage in terms of local partnerships or in a volunteer capacity.

The greater engagement of the US students compared to the UK ones could partly be attributed to the greater civic role played by UMass Lowell compared to Bolton University. However, it also seems likely that the culture of the two case studies plays an important role, with more civic engagement in Lowell encouraged, somewhat paradoxically, by the more individualistic nature of American society. With less state support and welfare provision in the US, more demands are placed on the voluntary and community sector and there is more need for socially-minded citizens not just to help themselves but also to help one another and those less fortunate.

### **7.3 STAFF REWARD AND PUNISHMENT: PROCESSES OF CAREER ADVANCEMENT**

An institution's underlying assumptions are revealed in its reward and punishment culture: the criteria for attributing rewards and punishments, and ways in which such these are realised, exposes an institutions demands and priorities (Schien, 2000, p. 129). An institution's system of career advancement can be regarded as its main articulation of reward and punishment. This seems especially relevant in Higher Education which, for example, in general lacks the 'benefits and bonuses' system often present in the private sector.

As illustrated by Schien (2000), organisations have three dimensions of career advancement:

1. Lateral movement from one task to another
2. Vertical movement from one rank to another



### 3. Inclusionary movement from outsider to insider

These dimensions of career advancement are clearly present in Higher Education systems, but they manifest in different ways in the US and UK. In both systems, the first dimension would be achieved by a faculty member moving from one task to another in a way which would be beneficial to their career and with the aim of moving on to achieving the second and third dimension. In the US practice of Higher Education, the second and third dimensions of career advancement are most acutely represented by the system of tenure, whereby members of academic staff are awarded tenure, which instils in their position a sense of academic freedom and protection. The criteria for tenure within UMass Lowell was repeatedly referred to by interviewees as a disincentive for faculty engaging in external partnerships and contributing to wider social and economic development in their city. Achieving tenure at UMass Lowell, as in other US universities, is based primarily on an academic's research record and secondly on their teaching; community engagement, partnership working, contributing to the socio-economic fortunes of the surrounding city are not factors. Junior members of academic staff looking to advance in their career at the university were under pressure to excel in, firstly, their field of research and, secondly, their teaching responsibilities. This indirectly resulted in a disincentive being placed on community work as to engage in partnership working outside the university on urban regeneration would be a drain on their time, without offering them any reward or recognition within the university. This reward culture is sending a clear indication that research and teaching are the most important functions of a faculty member (and therefore of a university) and that there is no 'value' of, or motivation for, civic engagement, regardless of what mission statements might imply:

...you've got this thing [the university mission] saying we should be doing this activity yet you've got this whole other reward structure that's out of sync. (L1, *personal interview*)

I think a lot of it is aspirational, what you want to be, and what counts. If I was on tenure track I could be interested in all this stuff but... it's not really rewarded or incentivised in any formal way (L20, *personal interview*)

...fundamentally there's this question of the reward structure for the faculty is simply not built into American academia that you recognise or promote faculty for things that they do with the community (L9, *personal interview*)

In the UK, there is no system of tenure but the second and third dimensions of Schien's model of career advancement can nevertheless be identified. In UK universities, vertical movement from one rank to another comes in the form of promotion but can also be attributed to a change in contract for a faculty member. In the UK Higher Education system it is increasingly common for junior academic staff to be employed on fixed-term contracts and so being placed on a permanent, as opposed to fixed-term, represents vertical movement and, to some extent, the third dimension of inclusionary movement from outsider to insider (representing that a faculty member has achieved a degree of acceptance and commitment from their employing department). However, the third dimension of career advancement in UK Higher Education, being included and made an insider within one's academic department, is ultimately represented by a faculty member being awarded the title of Professor. The title of Professor is awarded to members of academic staff at the discretion of their university and department, usually based upon academic performance rather than regional engagement. The prioritisation of research and teaching above local engagement within the reward system of UK and US universities encourages staff to prioritise their activities accordingly, by articulating to staff that academic activity will contribute to the furthering of their career, but civic engagement will not. Likewise, academic performance (primarily research activities) have the potential to bring national and international recognition to the member of staff, their academic department and their university, which is a reward in itself and which encourages the bestowing of more rewards. Civic engagement, however, does not hold the promise of direct national and international recognition for a member of staff or their wider university unless it can be used as a means of research and publication.

#### **7.4 'BATTLES'**

A common theme running throughout the interviews with faculty at UMass Lowell was that of internal battles, centred on the issue of community engagement and the extent to which the university, its individual members of faculty and departments, should work

towards the economic and social development of the wider city. This tension was explored in an interview with an ex-Chancellor of the University who argued that, as a public institution, he had always regarded the university as having an obligation to work for the public good of the city and region, but referred to others within the institution who saw the university as having an obligation only to itself and its students. This interviewee, whilst working as Chancellor for UMass Lowell, described an internal battle he fought in creating an interdisciplinary department charged with tackling regional economic and social development in both a theoretical and practical sense:

It took ten years, twelve years to get that department: talk about resistance!... These people are so weak, they were frightened to death and they just caused real trouble.... Lots of resistance, again the Board and the president were no help to me whatsoever (L10, *personal interview*).

A senior manager at the university corroborated this sense of internal battling between staff, and resistance towards change, with regards to the direction and focus of the university: “the one thing I’ve learnt on this job is how difficult change is... I’ve witnessed it at this campus, a small group of senior people fight change at every level and quite often win” (L9, *personal interview*).

The umbrella organisation of the University of Massachusetts system, with its five campuses in five locations throughout the state, poses a particular set of challenges. Each campus fulfils a different mission and role according to the context within which it resides (as shown in table 5 in chapter 5, section 5.2.1). However, for the University of Massachusetts system to work, a degree of cohesion and unity is required: while each campus can recognise its distinct nature, it is important that each branch of the UMass system can recognise its parallels with the other campuses, otherwise its incentive for remaining in the UMass system may be compromised. From interview data, it appears there is a disconnect between the UMass flagship campus, Amherst, and the other four campuses with regards to their role in their locality and their obligation to a civic duty beyond teaching and research:

Each individual campus has its own culture and UMass Amherst is a marvellous place (excuse me while I close the door)... but it’s really not culturally engaged, it

doesn't really think that making the world around it a better place is really a priority. That is not at all to say that there aren't people within that institution that feel that way and do marvellous things... but as an institution it really hasn't been there (L20, *personal interview*)

The level of conflict observed at UMass Lowell, concerning the function and role of the institution, did not emerge in interviews within the University of Bolton. There were occasional hints of tension between departments or faculty but either there had not been the same level of battles within the institution as within UMass Lowell or interviewees chose not to comment on any conflicts. The absence of conflict within the University of Bolton could perhaps be attributed to the university's struggle to be attributed university status. In 1992 when polytechnics in Britain were brought into the university system and labelled as such, Bolton was not given this status. The institution then struggled until 2004 to be accepted and labelled as a university and it is interesting to consider the legacy that such a struggle might leave. Interviewees from within the University of Bolton were very 'on message' as to the mission and purpose of their university, with all interviewees referring to the university as a professional university, which could suggest that the struggle the institution went through to be accepted as a peer within the academic community has encouraged internal unity around the university's identity and role.

When interviewees did express animosity within the university, it did not tend to be levelled at the University of Bolton in particular, but was attributed to more general conflicts within British academia as a whole, as the quote below illustrates:

I've worked in a lot of different universities on fine art programmes, fine art always tends to be seen as valueless, sort of 'what's the point of it? We should be pushing sciences'. Art and design courses take up a lot of space and tuition time...I think they [at the University of Bolton] tolerate us and are actually curious about [us] (B3, *personal interview*).

A certain degree of conflict, like that described in the quote above, can be expected within any institution where individuals are working towards their own aims, the aims of their department and towards the aims of the institution as a whole. To some extent, university academics are in competition with one another, for example in terms of budget and resource allocation. Individual members of academic staff as well as academic

departments have a conception of what their role is, what their departments role is and, ultimately, what role their university (and Higher Education as a whole) should be fulfilling. At the same time, the managerial staff at a university will direct the university in a particular way and, in keeping with that, will want the university's departments and staff to assimilate with that direction.

When there is a large disconnect between the role that academic staff see for themselves and the university, compared to the role the managers see for the institution and its staff, these internal inconsistencies may cause unrest and prevent the institution from moving forward. However, such battles, if recognised and addressed, offer the potential to actually help an institution move forward. When universities are searching for a way to define themselves in a changing global market, internal debates about the role and purpose of the institution could help a university understand its role and formulate and articulate its identity with more strength. Challenges from staff could encourage an institution to re-examine itself and its functions and, potentially, sharpen or change direction.

## **7.5 MISSIONS**

The inconsistent priorities of the separate campuses in the UMass system are, to some extent, reflected by the five separate campus missions. A university's mission is, in theory, its driving-force, there to encourage greater internal consistency by demonstrating to staff the institution's vision and priorities and, therefore, encouraging staff to follow and promote such vision and priorities. At UMass Lowell, far more than at the University of Bolton, the institution's mission was dismissed and over-looked by staff who focussed on the more explicit path to tenure and academic success:

I think that [the UML mission] is probably a high-flying wish as opposed to a reality (L1, *personal interview*)

There's a lot of that at UMass... - "we wanna be great, we wanna be a leading university in the US", but... there's this tension between becoming more competitive on the one hand and serving that traditional mission on the other and I think those are growing pains (L20, *personal interview*)

In contrast to interviewees at UML, interviewees at the University of Bolton were very much 'on message' about the institution's mission. However, even for senior managerial staff it seems the mission was perceived as somewhat artificially constructed, perhaps to fit most neatly with the present system of HEIs in an attempt to secure their place in the academic landscape:

We're now calling ourselves a professional university and that emphasises the fact that our tradition has always been very vocationally related and employer related... and given that the government is trying to encourage employer-led learning and is talking about identifying universities in terms of, not just their research and teaching, but the extent to which they are business-facing, to use the jargon. We see ourselves as very much playing to that as a strength that business-facing, employer-engagement, the other cliché they use (B7, *personal interview*) [author's emphasis].

Many interviewees referred to the idea that the University of Bolton is a 'professional university' and expressed the notion that the university sees its main role and purpose as preparing local people for professional careers. These interviewees often make reference to the university's professional role without reference to the mission directly, which seemed to imply that they were 'on message' with the mission but also that, at least to some extent (and apparently more than their American counterparts) they accepted the role and the notion of a mission. The willingness of academics at the University of Bolton to be 'on message' regarding the University being a professional university reflects Bebbington's (2009) argument that with higher education becoming increasingly market-orientated universities are forced to become 'brands' in order to compete with other institutions (see section 2.4 'Higher Education', specifically sub-section 2.4.1 'Historical Context'). The American academic interviewees were much more sceptical about the very concept of a university mission, regarding it as lacking substance or meaning for individual departments or academics. In this way, the findings from UMass Lowell are aligned with this argument from Keohane:

How can something as pluralistic, as multi-faceted, as wondrously complex as a modern university have a clear-cut mission?... The robust rhetorical tone of such messages sits poorly with the inherent scepticism and stubborn individualism of members of a university (Keohane, 1993, p.101).

It seems plausible to suggest that the individualistic nature of American society, together with the inherently independent culture of academia, has undermined the perceived value of a university mission among academic staff in the United States. More research would need to be conducted on the role of mission in British Higher Education Institutions, but from this research it seems possible that in smaller, less prestigious universities the mission still has a function for academic staff. It is possible that the concept of a mission has more value here than elsewhere because these institutions are still trying to find their 'place' in the academic landscape of the country. This seems especially applicable to institutions such as the University of Bolton, which has only recently been awarded university status. For such an institution, a mission represents an attempt within the institution to carve a role and express a clear identity for itself.

## **7.6 THE CORE MEANING OF A UNIVERSITY**

The notion of university mission statements and the extent to which the role of a university is understood in different ways by different members of academic and managerial staff taps into the wider debate, first touched upon in the literature review (in section 2.4 'Higher Education') and running as a theme throughout this research, as to what it means to be a university. Many academics see Higher Education as only required to fulfil its teaching and research responsibilities, preparing students for the economic world and advancing knowledge, and regard a local focus as undermining for a university when some institutions have global prestige:

...many within universities retain a lack of interest or even disdain for the idea of regional engagement, preferring a model of indifference to locality and a global research orientation (Charles, 2003, p. 19).

Yet others argue that a university's role should extend much further than teaching and research, dismissing the idea that all institutions should bypass working with their local community with the aim of global status. For these academics, a university should be advancing society and preparing students to play an active civic, as well as economic, role:

The university is not a factory; we don't produce people to go into the labour market... one of the things I've tried to do in the last two or three years is say "look, academia has become a treadmill itself, both for professors – publish or perish, don't think outside the box, don't be creative – and for students who are told – take calculus, do this, do the other thing, here's a set issue, here's a curriculum, take some stupid blue book test and are expected to know something about the world (L9, *personal interview*).

This debate is concerned with the capacity and function of universities, raising questions such as the extent to which higher education should operate like a business, primarily motivated by economic criteria. Changes in the global economy have changed the way universities tend to be seen, with higher education increasingly regarded as serving an economic purpose (Bebbington, 2009). When some universities are 'global players' with incredible revenues and property portfolios, as well as a reputation for academic excellence and their choice of students and staff, others question the extent to which their institution should be pursuing such ambitions. Yet others within academia see universities as having a responsibility to their civic surroundings, arguing that only a few universities can have global status, and that the majority of institutions, who do not work on a global platform, should concern themselves with more local needs. The more visible universities are on the civic landscape, the bigger the role they are expected to play.

To some extent this debate around the different expectations of a university, even from within one such institution, can also be attributed to the peculiarity of the organisational structure of a university. As discussed earlier in this chapter, in the section on the operation of partnerships, a university is a set of distinct departments each with their own agenda and identity. University departments are set firmly within their own discipline, with their own language, whereas sharing a common language throughout an institution is regarded by some authors such as Schien (2004, p. 129) as a prerequisite for internal integration. An interviewee in UMass Lowell, a senior member of managerial staff, lamented the boundaries that existed between that university's individual departments, which he saw as outdated and hindering educational progress:

...the way in which universities are structured, which is basically still medieval, are in constant distinction to the way in which we are thinking about the way



knowledge is created and developed because it's not based on a discipline it's based on an interdisciplinary approach (L9, *personal interview*).

It is also interesting to note, from the UMass Lowell case study, the extent to which the Regional Economic and Social Development (RESO) department was a very vocal and prominent department in the university and in partnerships throughout the city. This department was inter-disciplinary, made up of economists, sociologists and historians, and had faced much resistance from other faculty and departments when it was created. However, the RESO department was repeatedly referred to as representing an example of how a university should pursue civic engagement, both within and outside its department. Of course the remit of the department, focussed as it is on economic and social development, lends itself to active engagement but it does not guarantee it. It seems possible that the interdisciplinary nature of the department had played a role in encouraging staff to aim to have an impact wider than academic work in their narrow discipline. Louis (1983) argues that one organisation can actually be a complex set of overlapping structures and this model would represent most Higher Education Institutions. However, it seems from research conducted here that the extent to which that organisation has internal cohesion and plays an active role externally could hinge on the nature and strength of the overlaps between the separate structures.

The role a university plays in its external environment depends also on the 'type' of university it is, where it sees its primary function and, to some extent, what it sees as its niche. For some universities, their prosperity, status, mission and faculty body will inevitably determine that their focus is not on the local and regional social and economic development of their area:

Harvard is great, Harvard is here, it's marvellous that they're here and they're interested in the World and that's great cos the World is important but the stuff that's going on here..! It's not that they're disinterested or indifferent but it's just not what they do. They're global experts, that's who they choose, that's what they want. The parochial stuff: "when I need something", right? (L20, *personal interview*).

However, for UMass Lowell and the University of Bolton, their focus is inevitably more local, responding to local economic and employment trends and focussing their student and staff recruitment on local populations. For such universities, also operating in areas with high pockets of deprivation, working in partnership with other local institutions to forward the socio-economic fortunes of their environment is logical institutional behaviour. In doing so, such universities can not only work to improve the environment within which they work, which would have obvious benefits, but they can also secure their reputation and position locally, making themselves an asset to their home city and becoming more and more familiar to local populations who may then feel more receptive to studying or working at the university. The universities are also acting in recognition of the fact that they are such different institutions to the more prestigious institutions such as Harvard and the University of Manchester and that trying to compete with such institutions would be fruitless. It is especially crucial in a global knowledge economy that universities distinguish themselves from one another and carve their own niche (Thorne, 1999, p.5).

## **7.7 CONCLUSION**

Following Chapter Six, addressing the role of higher education within urban partnerships, this chapter has focussed on the internal implications of this change in role for universities themselves. It is confusion here, over the core role of universities and where their responsibilities lie (to their students alone, in relation to education alone, or to the wider community?) that has an impact upon the degree of internal consistency regarding a university's role as a partner in urban regeneration.

This chapter began with a discussion of the role of students, detailing findings from the case study research that the students in UMass Lowell were more locally active and engaged than their peers in Bolton University, which is reflective of the greater partnership working in Lowell compared to Bolton overall. This difference in engagement could be attributed to cultural differences between the two case studies: with less state support in the US there is a greater perception of the need for socially-minded individuals to act locally.

The chapter then moved on to explore issues related to staff: reward and punishment in terms of career advancement, concluding that if universities seek to encourage external engagement this must be reflected in the way they reward staff. The discussion then addressed issues relating to conflict, which can be institutionally progressive as battles can encourage organisations to examine and define themselves. The chapter moved on to explore university missions, finding that Bolton University was more willing to engage in the idea of branding itself than UMass Lowell. Given Bolton University's newness as a university, this could be attributed to an internal perception that the institution must define itself and its place in the academic landscape of Britain.

Having explored these internal issues regarding students and staff, the chapter drew to a close by exploring what it means to be a university, and how institutions balance their teaching, research and civic role; their global aims and local role. Universities are one organisation made up of a complex set of overlapping structures (Louis, 1983), but

internal consistency and external power relies on the strength of these overlaps. For an institution to make an external impact, it must possess a degree of internal integration and consistency. This is especially challenging when applied to higher education, given the organisational structure of universities, with departments generally disconnected from one another and from central administration. For a university to play a role in civic partnerships and urban regeneration, the university's central administration needs to support key members of its staff in creating and maintaining successful local networks, so that the university can engage meaningfully in local partnerships.

In general, higher education does not encourage active civic engagement among its staff, reflected by its career progression system. Career progression in higher education rewards research, primarily (thereby communicating to academic staff that this is the primary function of a university), and then teaching (thereby communicated as the secondary function) but not civic engagement. A university's role in its locality is often referred to as its 'third task', but reward structures do not even reflect this. Instead, it appears that civic engagement is currently an 'optional task', only recognised and rewarded by universities and the academic community when it is tied to publication. If a university seeks to play a more active role in its locality, it must reward that activity among its staff, thus freeing them to pursue civic engagement.

## **CHAPTER EIGHT**

### **CONCLUSIONS**

This conclusions chapter will briefly summarise the thesis as a whole before moving on to address the individual objectives and the way in which the research responded to these, meeting the overall aim. Within this discussion there will be an exploration of the wider theoretical and policy implications, as well as the way in which the present research could be extended in the future.

#### **8.1 SUMMARY**

The central aim of this research was to analyse in what ways, and to what extent, universities can support smaller cities to exploit the knowledge economy as a means of achieving urban regeneration. The first literature review chapter set the context for the research with an exploration of theoretical literature on globalisation, the knowledge economy, higher education and social inclusion. The second literature review chapter outlined the policy context surrounding higher education's role in social and economic development, how this has changed over time and implications on universities themselves. The conceptual framework captured the focus of this research within its wider context: the role that higher education plays within partnerships which contribute to the creation of a knowledge city, with the intention of impacting processes of urban regeneration.

Smaller cities have received less attention in literature and research which addresses the knowledge economy and knowledge cities. This thesis has focussed on smaller post-industrial cities, in need of regeneration, and situated in close proximity to large, metropolitan cities that are experiencing success in the knowledge economy. Focussing on such cities, this thesis has explored how the knowledge city concept translates to smaller cities, the role of universities therein, and the relationship between the smaller city and its dominant neighbour, as well as the wider region.

These issues were examined using a case study approach, to enable a deep analysis of the issues. Lowell (Massachusetts, USA) and Bolton (in North West England) were selected as the two case study locations, with parallels between the two locations such as their shared history in the industrial revolution, problems with exclusion and deprivation, close proximity to large metropolitan cities (Boston, in the USA and Manchester, in the UK) and their being home to a university which has undergone many guises as an educational institution since its formation to meet the needs of the industrial revolution. Interviews were conducted with key players in these two locations, from within the university (both academia and management), the local government, the local private sector, and the wider community.

Findings from the case study investigation were then woven through the three discussion chapters. The first discussion chapter (Chapter 5) explored the concept of the knowledge economy at the city-level and as such was concerned with issues represented by figures 3 and 4 in the conceptual framework of this research (see Chapter 4, section 4.8 Conceptual Framework). Figure 3 shows the broad context for this research: a global knowledge economy within which there are some very successful knowledge cities, highly networked to one another and the knowledge economy, and other fledgling knowledge cities which are attempting to further their engagement in the new economy and network more actively with other cities. Figure 4 shows a successful knowledge city with a smaller, aspiring knowledge city in its shadow; we can see on the diagram that the knowledge city is deeply engaged with the knowledge economy whereas the aspiring knowledge city is less engaged. Chapter 5 explored these issues in-depth, addressing what it means to be a knowledge city and to what extent the case studies in this research could be described as such; how far along the path towards becoming a knowledge city the two case studies are. The chapter's main objective was to build upon an existing typology of knowledge cities (van Winden *et al.*, 2007). This chapter sought to firm up the knowledge city concept by furthering our understanding of what makes a knowledge city and what prerequisites must be in place for a smaller city to successfully engage with the knowledge economy. Chapter 5 answered van Winden's call to focus research and debate on the knowledge economy on smaller cities, assessing the extent to which being a

satellite city in very close proximity to a dominant metropolitan city can help or hinder the regeneration of the smaller city (van Winden *et al.*, 2007).

The thesis then focussed on an exploration of the relationship between cities and their universities, in Chapter 6. This chapter addressed issues of partnerships and urban governance, focussed on the role of higher education in such processes and as such was responding to the issues represented by figure 5 in the conceptual framework of this research (see Chapter 4, section 4.8 Conceptual Framework). Figures 3 and 4 of the conceptual framework represent the context of this research, and figure 5 illustrates the focus of the work. The figure represents an aspiring knowledge city (such as the case study locations of Lowell and Bolton) attempting to forge stronger links with the knowledge economy. Within the city we can see the processes whereby the city is attempting to become a knowledge city and influence urban regeneration: higher education, the private sector and local government working in partnerships to bring about the realisation of the knowledge city concept and thereby further urban regeneration in the city. Chapter 6 addresses the issues concerned with this process, in particular partnerships between higher education, local government and the private sector. With local governance becoming increasingly important in urban regeneration, non-governmental agencies are expected to play a more active role in their city and region. Combined with changes in the economy placing more emphasis on knowledge and education, there is an increased expectation that universities will contribute to local social and economic development. Chapter 6 addressed the external role of higher education in urban partnerships, looking at issues of leadership, differences in institutional culture, power relations and the role of individuals, rather than institutions, in partnerships and processes of urban regeneration.

The final discussion chapter moved on to explore the internal implications of their new role in urban regeneration for the universities themselves. This chapter addressed processes of career advancement and issues surrounding conflicts and the role played by university missions. Chapter 7 ended with an analysis of how the partnership role of universities has fuelled the debate regarding the core functions of higher education,

concluding with a discussion of the internal implications for these changes and this debate for universities themselves.

## **8.2 RESEARCH FINDINGS AND EVALUATION OF RESEARCH**

This discussion of the research findings and evaluation of the research shall take each objective and examine in what ways the thesis has responded to that objective, outlining the key findings whilst demonstrating the ways in which the research has succeeded and areas where it could be improved and built upon in future research.

Before discussing each objective individually, the table below summarises the way in which different sections of this thesis have responded to the research objectives and research questions.



OBJECTIVE	RESEARCH QUESTIONS	CHAPTER
<p>1: To explore the evolving role of higher education in governance and processes of urban regeneration, within a globalised knowledge economy</p>	<p>All (see below)</p>	<p>Chapter 1 Chapter 2 Chapter 8</p>
<p>2: To examine, using a case study approach, the spatial dimensions of the knowledge economy in relation to smaller cities, to further our understanding of what it means to be a knowledge city and the path cities take in becoming knowledge cities</p>	<ul style="list-style-type: none"> <li>● How can the concept of a knowledge city be understood in practicable terms?</li> <li>● How does a place become a knowledge city - what are the necessary prerequisites of becoming a 'Knowledge City'?</li> <li>● What role and function do universities fulfil within a Knowledge City?</li> <li>- In what ways do these roles and functions differ from the traditional roles and functions of universities?</li> <li>- What impact does this have on universities and their academic and managerial staff?</li> </ul>	<p>Chapter 2 (Section 2.3.2) Chapter 4 Chapter 5 Chapter 8</p>
<p>3: To explore the evolving role of higher education in processes of urban governance and urban regeneration, to analyse how and to what extent a university can promote urban regeneration through partnership working aimed at the exploitation of opportunities in the knowledge economy</p>	<ul style="list-style-type: none"> <li>● How can a university work with other urban partners to further regeneration?</li> <li>● To what extent should a university fulfil a civic role?</li> <li>● What impact does partnership working have on a university?</li> <li>- What are the challenges and benefits?</li> <li>- In what ways have universities had to adapt?</li> <li>- What has been the external change?</li> <li>- What has been the internal change?</li> </ul>	<p>Chapter 2 (sections 2.4.2-2.4.4) Chapter 6 Chapter 7 Chapter 8</p>
<p>4: To consider implications for the nature of regeneration policies, and the role of universities therein</p>	<p>All (see above)</p>	<p>Chapter 3 Chapter 5 Chapter 6 Chapter 7 Chapter 8</p>

### **8.2.1 OBJECTIVE ONE**

**To explore the evolving role of higher education in governance and processes of urban regeneration, within a globalised knowledge economy**

The issues at the heart of objective one are an underlying theme throughout the research as a whole: from the conceptual, theoretical and policy-based discussion of the literature review, to underpinning the methodological framework and then as a theme throughout all three discussion chapters.

Developments in science and technology have had a two-fold impact on the global knowledge economy, by bringing the world closer together (via improved communications technology and travel-related technology) and by becoming increasingly important in the economic competitiveness of nations, regions and cities. At the same time, processes of governance have overtaken structures of government with non-governmental sectors becoming increasingly active and important in the approach to urban regeneration. Policy circles, especially at the national and international level, have embraced the idea of the knowledge economy, placing the concept at the heart of the current approach to economic development. Higher education, as a non-governmental agency and playing a key role in knowledge production (regarded as increasingly important in a global knowledge economy) is therefore increasingly expected to contribute to processes of governance and urban regeneration. Higher education, as a non-governmental sector that also contributes to knowledge production, is increasingly perceived as a key constituent in current approaches to governance and regeneration.

The ways in which this role is realized, and the extent to which universities should partake in processes of governance and urban regeneration, depends upon the particular civic context and the institution itself. The research argues that in smaller cities, there is potentially more scope for higher education institutions to contribute to the economic and social well-being of their surrounding locality and so, in this context, universities should seek to play a more active role in urban regeneration partnerships. In larger cities, where there is a more complex web of higher education institutions (some of which will be

prestigious institutions with a global focus) there may be more obstacles in coordinating higher education's role in urban regeneration. However, in smaller cities the role of higher education in urban regeneration will be more straight-forward and as such, higher education institutions in smaller cities can play a greater role in processes of urban governance and shaping the direction of urban regeneration. Taking on such a role would be beneficial to the university itself (justifying and securing its position and funding) and to the city as a whole.

### **8.2.2 OBJECTIVE TWO**

**To examine, using a case study approach, the spatial dimensions of the knowledge economy in relation to smaller cities, to further our understanding of what it means to be a knowledge city and the path cities take in becoming knowledge cities**

Chapter 5, A Typology of Smaller Knowledge Cities, responded to the issues raised by objective two, unpicking the concept of a knowledge city in relation to smaller, post-industrial cities which are facing challenges and are in need of urban regeneration. The two case study locations of Lowell (in the US) and Bolton (in the UK) were explored as a means of furthering our understanding of how a city can generate engagement with the knowledge economy, what features make a city more or less able to become a knowledge city and how we can judge the extent to which cities can be accurately labeled as a knowledge city. The role higher education plays in a place becoming a knowledge city was explored. Throughout the chapter, the history, demography and geography of the case study locations were investigated as the knowledge city typology unfolded.

Having a traditional industrial heritage is commonly seen as an obstacle in the path of regeneration. However, so many of our cities have a heavy industrial past, and it is these cities which are often most in need of regeneration, so we can't dismiss them and their communities. Transformation and regeneration in a city with a traditional industrial heritage and structure is a more demanding process, requiring more imagination and tenacity. With Lowell's National Park, the city has refused to see its industrial history as a hindrance and instead is channelling its industrial heritage and landscape as a source of pride and a means of regeneration. It is also worth noting that in this respect spatial scale is important: in some ways, being a smaller city may make the transformation from old to new industry easier as transforming the industrial structure will be less challenging in a smaller city than in a large city.

This research concludes that smaller 'satellite' cities are well-placed in the new knowledge economy to have the 'best of both worlds', being in a position to benefit from a spill-over effect from their large metropolitan neighbour, as indicated by figure 4 in the conceptual framework (see Chapter 4, section 4.8 Conceptual Framework) which

represents the relationship between a successful knowledge city and a smaller, satellite city in its shadow. This process, however, is reliant on their being strong accessibility between the smaller city and its dominant neighbour, as having strong public transport links is largely what defines one satellite city being more able to engage with and benefit from positive spill-over benefits coming from its larger neighbour. This was evident from interviews in Lowell, where the city and its links with Boston were often discussed in comparison to the nearby city of Lawrence and its lack of connectivity with Boston. Lowell was often referred to as being further down the path of regeneration than Lawrence, with the city's rail link to Boston (as well as its university) regarded as a crucial factor in this. Internal accessibility ('walkability') also contributes to a well-connected civic base and, in smaller cities in particular, walkability is important in supporting a sense of cohesion and connectivity.

This research found that ethnic diversity in a population can be a factor in conflict or it can enhance the civic base of a city, dependent on governance and how well different groups are welcomed to, and integrated in the city. Lowell showed the entrepreneurial culture among ethnic groups in the US, whereas interviewees in Bolton appeared less comfortable with its ethnic diversity. In both case studies it was apparent that diversity needs to be represented in all sectors and levels of a city and its governance to encourage the development of a cohesive civic base and achieve social harmony, in turn supporting regeneration processes.

The chapter addressing the Knowledge City Typology raised the question as to whether a city can gain strength from periods of deprivation. Lowell has experienced decades of booms and busts and it appears from this research that the boom periods have proven to the city that it can be successful, instilling pride in the resident Lowell population and in the city's institutions and so, when busts come along, Lowell has proven to be more resilient, imaginative and determined in its regeneration efforts. The residents have lived through times when their city has flourished and so they have more pride in the city, the city has more confidence in itself and future regeneration efforts and partnerships come more easily. Likewise, chapter 5 also raised questions over the impact that 'working

class comradeship' can have on a city - if a city can be defined as being largely deprived, with some wealthy pockets, will it lose its sense of togetherness and community as it becomes a wealthier city with pockets of deprivation? More research is needed on this topic to comprehensively answer that question and consider, if so, what can be done to retain the sense of community as a city becomes regenerated and wealthier.

Chapter 5 extended an existing knowledge city typology, applying van Winden *et al.*'s typology of knowledge cities to smaller cities and exploring this application with the use of the two case study locations of Lowell and Bolton. The use of a typology allows for the identification of cities' strengths and weaknesses, and for the cities to be compared and contrasted in a way which allows for best practice to be shared. Assessing Lowell and Bolton in terms of the typology demonstrated that both cities are at the start of the knowledge city spectrum, aspiring knowledge cities with some way to go on the trajectory towards becoming knowledge cities. However, comparing and contrasting the two cities on the basis of the foundations of a knowledge city indicated that Lowell has a stronger base of foundations on which to build engagement with the knowledge economy.

The research suggests a number of areas of significance in relation to the knowledge city trajectory:

- With regard to the knowledge base, Lowell was judged to be further along the path in relation to the cohesion and strength of its knowledge base; there are indications that Bolton is pursuing a strategy to strengthen the cohesion of its knowledge base (with the planned 'Innovation Zone'), although it was unclear the extent to which this plan was supported by the University of Bolton.
- Although Lowell and Bolton have a similar industrial history and heritage, Lowell has embraced its heritage more readily and has used it in a more creative approach towards urban regeneration. Again, there are signs that Bolton Council is giving careful consideration to use of the city's mills in its approach to regeneration.
- In relation to diversity, this research has indicated that Lowell is more integrated and has been more successful in celebrating its diversity

- Lowell and Bolton were more similar in relation to scale and the exploitation of their respective geographical positions in relation to larger neighbour. For both cities, their close proximity to a larger metropolitan city offers the opportunity to 'piggy-back' the benefits of the larger city whilst offering the cheaper, quieter life of a smaller city. The strength of Manchester and Boston in the knowledge economy presents the potential for Bolton and Lowell to play a role which compliments and supports the economy of the larger city. Good public transport links, which both Lowell and Bolton have, are crucial in this regard.

This research has thus developed a typology which can indicate the current position of a smaller city and its university on the trajectory towards becoming a knowledge city. This typology furthers our understanding of what it means to be a knowledge city and the path cities take in becoming knowledge cities. The largely qualitative nature of the knowledge city typology allows for flexibility rather than detailing a rigid prescription for how a knowledge city should develop and how the concept should be understood. The typology enables the comparing and contrasting of cities without encouraging a 'carbon-copy' approach to the knowledge economy and urban regeneration. In this way, the typology highlights that Lowell has, in the past, taken a more proactive and imaginative approach to urban regeneration, for example by embracing its industrial heritage as a source of knowledge and education and a means of revitalisation via the establishment of the National Park. However, developments to the current position in both cities have been in part influenced by a range of factors, not least the role of higher education in processes of urban governance and urban regeneration. In relation to Lowell and Bolton, the roles the respective universities take in the future will be of major significance for the nature of the city's progress along the paths towards becoming knowledge cities.

### **8.2.3 OBJECTIVE THREE**

**To explore the evolving role of higher education in processes of urban governance and urban regeneration, to analyse how and to what extent a university can promote urban regeneration through partnership working aimed at the exploitation of opportunities in the knowledge economy**

Chapter 6 addressed the role of partnerships in processes of urban regeneration and in particular the part that higher education can play in these partnerships, within the broader context of urban governance. Chapter 6 was therefore concerned with issues raised by figure 5 in the conceptual framework (see section 4.8 Conceptual Framework) which represents the internal workings of a city seeking to develop its potential in the knowledge economy, via partnership working between its key civic institutions, as a means of furthering urban regeneration. Chapter 7 then moved the discussion on to address the internal implications for universities of higher education's increasing role in urban partnerships. These chapters therefore responded to objective three, by exploring the increasing role that universities play in urban governance processes within an aspiring knowledge city, in the context of a global knowledge economy. From this discussion, a number of themes have emerged which need particular consideration in the design and operation of partnerships.

#### *Power*

Partnerships were discussed in terms of their need to be inclusive of all relevant member organisations, and the inherent challenges this need poses. Partnerships need to be inclusive and representative, but they also need to be efficient and productive. To be inclusive and representative, a partnership needs to consist of all members who have are interested in, are impacted by and can have an influence upon the remit of the partnership. However, for a partnership to move forwards and take action (to be efficient and productive) the call for inclusivity needs to be carefully balanced against the size of the partnership. The more members a partnership has, the harder it is for that partnership to remain efficient. The research concluded that the use of primary and secondary



members does not prevent exclusivity in a partnership as primary members would hold greater power. In constructing a partnership an awareness of these issues is required to ensure that power relations are recognised and understood and that there is a balance between inclusivity and efficiency.

Choice of leadership is likewise entangled with issues of power and again needs careful consideration at the design stage of partnerships. In selecting a leader, the partnership needs someone who will not abuse their position to manipulate the partnership for their own (or their institutions) ends, but also someone who is in a powerful enough position to be able to bring influence and authority. All partnership members have an agenda and a vested interest in the direction and focus of that partnership (otherwise they would not be a member) and so selecting a neutral party to be leader can be problematic. In this respect, it is best to have a mechanism in place to encourage objectivity in the leadership of the partnership, for example by with a rotating leadership system, or a system of checks and balances built into the functioning of the leadership (for example with a leader and deputy from different institutions and sectors).

Power relations are an especially relevant issue when considering partnerships that include universities, with the risk that universities will increasingly be regarded as resources to the other partners. There is a growing perception that universities are a resource for the wider community, for example in the US EDA University Center Economic Development Programme, a partnership between the Federal government and academia that helps to make the resources of universities available to economic development communities. Although this research supports universities contributing to wider social and economic development and engaging in urban regeneration partnerships, this should not mean that higher education is reduced to that core function alone. The potential to be seen merely as a resource, and not as an equal partner, needs to be considered, and safe-guarded against, by universities when they are engaging in partnerships.

## *Difference*

Partnerships involve the bringing together of different institutions, with different histories, functions, modes of working, core values and agendas. This bringing together of different institutions poses challenges in terms of: incentives and motivations; cultural differences, and; differences in spatial targeting.

Different members will have different motivations for engaging with the partnership, they will be seeking diverse (potentially contradictory) outcomes and will respond to different incentives. Partnerships therefore need to unite their members by recognising and responding to the varying needs of their members, which may at times require compromise from both the partnership and its members. Incentives and motivations differ both between and within sectors and institutions and so to manage conflict between members it is important that each member outlines their incentives for engaging with the partnership at the outset so that they are understood by all.

Cultural differences between members organisations is an especially relevant issue in terms of partnerships which involve universities, as the institutional culture of higher education is so different from that of the private sector and local government. The organisational structure of universities differs from that of other institutions, with its disparate departments operating with some degree of independence from one another and the centre, and running to an academic calendar. Higher education also operates according to its own calendar, with the academic year including a long break in the summer and winter. This is especially the case in US universities, where academics still take a long summer vacation. The academic calendar makes universities very distinct compared to industry, not only impacting upon practical issues (such as coordinating the delivery of a project) but also reflecting the different culture of the two sectors. Although cultural differences such as these pose the potential to be a source of frustration, they also represent an opportunity for organisational learning and development, with partnerships enabling different institutions to witness and engage with different modes of operation which may, in turn, encourage positive changes in that institutions organisational culture.

There can be a spatial mismatch of missions, targets and influence within partnerships and processes of urban governance, especially those involving higher education. Local government is focussed on the immediate surrounding locale; higher education (and the private sector) has a wider focus, more interested in the region, the nation and the globe. Although these sectors may differ in their spatial focus, this does not mean that they are incompatible partners. However, when working in a partnership, different institutions in different sectors need to be aware of the differing spatial focus within that partnership so that they can recognise where their working together is appropriate and compatible and where it is not. This parallels the need to understand, at the outset, the motivations and incentives of all members within a partnership, encouraging a clarity that will foster good working practice and limit conflicts.

Throughout the discussion on partnerships, then, a number of dangers associated with partnership working emerged. Particular dangers were seen in relation to the potential inefficiencies of partnerships and the threat of partnership fatigue. The potential for partnerships to be inefficient was discussed in relation to the notion of partnerships as 'talking-shops' whereby members meet and discuss problems but decisions are left open, progress is not made and inefficiency breeds. However, as a few interviewees recognised, 'talking-shops' can actually bring benefits, for example by joining together individuals and institutions that would not normally communicate with one another. However, although 'talking shops' can fulfil a purpose within partnerships, this will only last for a limited time before members become frustrated with the inertia and lack of progress. For this reason, simply "getting people in the same room" should be encouraged for a certain period of time, but after that goals and targets need to be identified to instil some momentum in the partnership and retain members. As Innes and Booher argue, only genuine collaboration will encourage true change and long-lasting results (Innes and Booher, 2010, p.86).

Another potential danger of partnerships, which was identified by this research is that of partnership fatigue, especially in relation to the potential hazard that as the number of

partnerships increases, navigation of those partnerships and lines of accountability and transparency becomes more complex and confusing. Questions over accountability and transparency are especially relevant with partnerships involving higher education, as there is a lack of clarity over the extent to which universities are only accountable to their students or whether they also have obligations to meet the needs of the wider community. Where universities are seen as having obligations to wider society, in what ways is this accountability expressed and maintained?

The final key lesson from this section of the chapter on universities role in partnerships was that of the role, and importance, of individuals above the institutions that they work for, and indeed the partnerships as a whole. Within partnerships and institutions it is individuals driving progress, making an impact and instigating change. Without the drive, vision and dedication of key individuals, partnerships do not have a focus and will not gain momentum. For partnership working and processes of governance to have an impact on urban regeneration, individuals need to be empowered by the institutions that employ them to meaningfully engage in these processes.

Universities, like all institutions, direct their staff via a reward and punishment system in the form of the structuring of careers advancement. In this way, a university can reflect what it perceives as its core functions by rewarding staff who contribute to these functions with career progression, and punishing staff who neglect the core functions in favour of other activities by blocking their career advancement. In general, universities do not encourage active civic engagement among their staff in their career advancement structures, prioritising publication and teaching. This can be seen most acutely in the US system of tenure, but is also present in UK academia and is in line with national priorities set by funding streams, for example the UK's Research Assessment Exercise.

Internal 'battles' between management and academics over the extent to which a university should engage in its locality were most visible in the US case study, Lowell. These battles can be seen as part of a wider confusion as to what role a university plays and what it should see its core functions as. Viewed in this way, internal battles can be

constructive, if they encourage debate within the university as to the direction it should be taking.

This research concludes that university missions have a varying function and value according to the context of the particular university itself. Comparing the two case studies for this research, it seemed that the idea of a mission and identity played more of a role amongst academic staff at the University of Bolton compared to UMass Lowell. It seems likely that this can be attributed to the recent history of the institution in Bolton, which struggled to be accepted and labelled as a university, until it was ascribed this status in 2004, twelve years behind other ex-polytechnics in the country. A university identity and mission, therefore, will play more of a role and be more valuable for institutions which have a more recent history and are seeking to justify their position and secure their place within the academic and civic landscape. In institutions such as UMass Lowell, which have a more secure history, a university mission will serve less of a purpose as academic staff will feel less of a need to justify the position of themselves and the institution.

Following the discussion of university missions and identities, the chapter ended by examining the extent to which changes in the external context have altered the perception and reality of what it means to be a university. An increase in the expectation that higher education will play a greater role in social and economic development, within the context of a knowledge economy, has generated a debate over the extent to which a university is responsible purely for its academic research and teaching activities or whether higher education institutions have obligations to wider society and in particular the communities within which they are located. There is also a lack of clarity over what form a university's participation in its locality should take. The often disconnected nature of universities themselves, with individual departments operating with large degrees of independence from central administration, further confuses the debate.

#### **8.2.4 OBJECTIVE FOUR**

**To consider implications for the nature of regeneration policies, and the role of universities therein**

A city's size and scale must be taken into consideration when regeneration plans are being designed and proposed. From this research it seems that the smaller the city the less viable the creative economy is as a tool of tackling deprivation and harnessing regeneration. For a smaller, deprived city engaging with the creative economy and building up creative industries must only be one small part of a much wider plan for regeneration; otherwise it is an unsustainable path for a city that is lacking in a large, wealthy audience/customer-base.

The concept of the knowledge economy was accepted as a reality by the vast majority of interviewees in this research. The main source of scepticism regarding the very existence of a new, knowledge economy came from interviewees in Bolton council. This is an interesting and surprising finding as, in general, it is the policy arena (above academia) which has been the most keen to embrace the concept. From this research, we can conclude that those implementing (rather than designing) policy are more sceptical of the notion of the knowledge economy and its role in urban regeneration. This suggests a gap between policy design and implementation.

From this finding, it is recommended that those responsible for policy design engage in more consultation with those on the ground, in different locations, to design policy more appropriate for the needs and features of different contexts. A regional body responsible for co-ordinating different sectors of the economy in different localities according to the strengths of each location could be the most appropriate means of ensuring that policy is designed, and regeneration is directed, in a way which meets the needs and strengths of different places. This would limit the tendency, again discussed by Bolton Council interviewees, for a 'carbon copy' approach to regeneration which is resulting in all cities, of all sizes and with different strengths and weaknesses, being prescribed the same approach to regeneration. This regional body could also advise universities on their role

in local and regional development and could, via a process of consultation with the universities themselves and local government, coordinate higher education's engagement with social and economic development at the regional level. This would ensure that different universities are meeting the needs of the different areas in the region, complimenting one another rather than competing.

However, the national level also needs to encourage universities to value civic engagement activity among their academic staff. Current reward criteria in academia prioritises research and then teaching activities, for example with the UK's Research Assessment Exercise. Universities are increasingly expected to play a local and regional development role, but if their academic staff are not empowered and encouraged to contribute to processes of urban regeneration, research and teaching will continue to be prioritised. National policy and rhetoric sends out mixed messages to academic circles, with calls for universities to engage further in their localities not substantiated by support for individual academics to pursue such a role.

## **8.3 FINAL CONCLUSIONS**

This final section of the thesis will explore the contributions to knowledge made by this research, the ways in which the research could have been improved and will identify the opportunities this PhD presents for future research. The conclusions will end with a final discussion of the most pertinent issues raised by this research.

### **8.3.1 CONTRIBUTIONS TO KNOWLEDGE**

Overall, this thesis has simplified and synthesised very large concepts and their interaction. Analysing post-industrialism, the knowledge economy, knowledge cities, higher education and processes of urban regeneration by comparing and contrasting two case study locations, this thesis has grounded fluffy concepts in reality. The research has centred on the systematic comparative analysis of two case study locations, incorporating the use of international fieldwork and primary data collection and analysis.

More specifically, this thesis has developed our understanding of the knowledge city concept by exploring the paths cities take in becoming knowledge cities, with a particular focus on smaller urban areas. In this way, the thesis is responding to a gap in the literature, which, until now, has tended to refer to the knowledge city concept in an inaccessible way, presenting the concept as fluffy. This research has sought to establish what it means to be a knowledge city and how cities seek to become one as a means of regeneration. In doing so, this research seeks to offer guidance to cities which aspire to further their engagement in the knowledge economy but are unclear as to the best route in which to do so. By developing a knowledge city typology specifically focussed on smaller cities, this research responds to a gap in the literature and offers such cities a practical means of engaging with the knowledge economy as a vehicle for regeneration.

The thesis also offers a practical exploration of the issues at the heart of partnership working. There is a tendency among the existing literature to assume partnership working is always 'a good thing', an assumption which this research sought to explore.



Using primary data, this research explores some of the assumptions of partnership working and casts light on the day-to-day operation of partnerships. In doing so, the research offers guidance and support to institutions and individuals engaging, or seeking to engage, in partnership working especially in regards to urban regeneration initiatives but also in wider fields. As partnership working is becoming increasingly prevalent in urban regeneration, and in fact the public sector as a whole, this element of the research offers particular value.

Finally, with higher education facing increasing conflicting demands and pressures, this thesis examines how these are manifesting themselves internally and externally and suggests ways for the sector to move forward. By refusing to homogenise higher education, this research recognises the different roles played by the variety of higher education institutions in modern society and argues that for the sector to move forward in the 21<sup>st</sup> century and maintain its relevance in society, different institutions must play to their individual strengths and recognise the role that is most suitable for them to play in regards to their surrounding location.

### **8.3.2 WEAKNESSES**

The focus on qualitative data is a strength of this research, allowing as it did for the deep case study analysis comparing and contrasting two locations with similar histories as a means of developing our understanding of the knowledge city concept and unpicking issues at the heart of partnership working. However, it can be argued that some points in the thesis may have benefited from greater triangulation with quantitative data, which may have made the analysis more rigorous. For example, Chapter 5 which addresses the typology of knowledge cities, especially section 5.2 which focussed on the foundations of knowledge cities would have benefited from the incorporation of more quantitative data. The appropriateness of incorporating quantitative data into the research design was overlooked, partly due to the overall qualitative approach but also by Van Winden's reliance on qualitative data: as Van Winden's work was the foundation of the knowledge city typology chapter, his approach was followed but, in retrospect, this approach should

have been extended and developed, in much the same way that the typology was. Incorporating more quantitative data at some points in the thesis would not have altered the direction of the thesis or its findings, but would have strengthened the conclusions and recommendations.

The research also recognises that not all locations in the Western World are seeking further engagement with the knowledge economy and basing their regeneration efforts on such a path. However, given the focus of the research on the knowledge economy and knowledge cities as a means of regeneration, the thesis at times perhaps overlooks the areas in Europe in particular which are still engaging with production and manufacturing as the foundation of their economy, rejecting the notion that the knowledge economy is the new economy. One unintended weakness of the research seems to be that it homogenises the Western economy and at times presents a sweeping view in which the knowledge economy is presented as a concept embraced by all.

### **8.3.3 FUTURE RESEARCH**

It would be interesting to develop the research with this final flaw of the thesis in mind and incorporate into the case study comparison a location in the Western World which has rejected the knowledge city concept as a means of regeneration and is continuing to focus its economic efforts of traditional industries such as manufacturing and production. It would also be interesting to develop the research by extending the case study analysis to include a new economy such as China, which has recently rapidly developed from a agricultural, local economy to a capitalist model based on both traditional large-scale production and manufacturing as well as the knowledge economy and new technologies. Analysing the role of higher education and partnership working in both such case studies would develop our understanding of the role of universities globally and how different institutions can best adapt to their localities. Future research could also address these issues in the rural, rather than urban, context for example with a focus on networked universities and remote learning.

Developing the knowledge city typology with these different economic and social models in mind would generate greater understanding as to the operation of the economy globally and the impact of these different economic models on urban regeneration processes as well as the role of higher education.

#### **8.3.4 FINAL THOUGHTS**

The present research has demonstrated the need to consider and understand spatial, social and economic context when designing and implementing approaches to the knowledge economy and urban regeneration.

The typology of knowledge cities extended by this research provides a framework in which to explore the particular context of a city, which in turn enables an identification of where that city is in terms of becoming a knowledge city and in what ways it might most suitably and successfully engage with the knowledge economy. The typology allows us to explore places within their context, drawing out their strengths and weaknesses regarding the global knowledge economy and therefore enabling us to design and target policy more appropriately. As Andersson *et al.* argue:

Policies should be framed in recognition of the need for multiple and inherently diverse and complementary institutions engaged in higher education, research and innovation. Each university must be able to foster its specific governance model (Andersson *et al.*, 2010, p.160).

Ultimately, the core issue at the heart of this research is the way in which universities perceive themselves and their primary functions, and their place within a city, a region, a country, and globally. How a university perceives itself and higher education as a whole impacts upon the direction that the university takes and the extent to which it is outward-looking to the community at large, or merely to the academic community. For a university to determine its core function and place within its locality, the institutions must stop looking only at the academic context within which they operate (what other universities are doing, how their institution compares) and be more responsive to the

particular history of their institution and the wider civic context. Universities such as UMass Lowell and the University of Bolton were founded, in their original institutional forms, to meet the social and economic needs of their surroundings and these institutions should not forget their original purpose. There is an increasing tendency for universities to seek to measure their success globally; this research suggests that, whilst such measures are not without importance, universities should not ignore the local in their pursuit of the global.

## **BIBLIOGRAPHY**

Allison, J. and Keane, J. (1999) 'The Intersection of the Learning Region and Local and Regional Economic Development: Analysing the Role of Higher Education' *Regional Studies* Vol.33, No. 9, pp.896-902

Amin, A. and Roberts, J. (Eds.) (2008) *Community, Economic Creativity, and Organization* Oxford University Press: Wiltshire

Amin, A. (1999) *An Institutional Perspective on Regional Economic Development* Blackwell: London

Amin, A. and Thrift, N. (Eds.) (1994) *Globalization, Institutions and Regional Development in Europe* Oxford University Press: Oxford

Amin, A and Thrift, N (1994) 'Living in the global' in Amin, A. and Thrift, N. (Eds.) *Globalization, Institutions and Regional Development in Europe* Oxford University Press: Oxford

Amin A and Thrift, N (1995) 'Globalisation, institutional "thickness" and the local economy' in Healey, P., Cameron, S., Davoudi, S., Graham, S. and Madani-Pour, A. (Eds.) *Managing Cities: the New Urban Context* John Wiley: Chichester

Andersson, T., Curley, H. And Formica, P. (2010) *Knowledge-Driven Entrepreneurship: the key to social and economic transformation* Springer Science+Business Media, LLC: New York

Askling, B., Henkel, M. and Kehm, B. (2001) 'Concepts of Knowledge and their Organisation in Universities' *European Journal of Education* Vol.36, No.3, pp.341-350

Atkinson, R. D. and Andes, S. (2008) *The 2008 State New Economy Index: Benchmarking Economic Transformation in the States* The Information Technology and Innovation Foundation and the Kauffman Foundation: Washington

Atkinson, R.D., Court, R.H. and Ward, J.M. (1999) *The 1999 State New Economy Index* Progressive Policy Institute Technology and New Economy Project: Washington

Audretsch, D. and Thurik, R. (2000) 'Capitalism and Democracy in the 21st Century: from the managed to the entrepreneurial economy' *Journal of Evolutionary Economics* Vol.10, No.1/2, pp.17-34

Bank of Boston (1997) *The Impact of Innovation* Bank of Boston: Boston

Barnett, R. (Ed.) (2005) *Reshaping the University: new relationships between research, scholarship and teaching* Open University Press: Berkshire

Baum, H. S. (2000) 'Fantasies and Realities in University-Community Partnerships' *Journal of Planning Education and Research* Vol. 20, No. 2, pp.234-246

Beall, J. and Fox, S. (2009) *Cities and Development* Routledge: London

Beaverstock, J., Smith, R. and Taylor, P. (2000) 'World-City Network: a new metageography?' *Annals of the Association of American Geographers* Vol.90, Issue 1, pp.123-134

Bebbington, D. (2009) *Diversity in Higher Education: leadership, responsibilities and challenges: final report* Leadership Foundation for Higher Education: London

Bell, D. and Jayne, M. (Eds.) (2006) *Small Cities: urban experience beyond the metropolis* Routledge: Abingdon

Benneworth, P., Charles, D. and Madanipour, A. (2006) 'Tying Down the 'Global' in the Competitive Knowledge Economy: the interactions between universities and cities' Newcastle University Seminar Paper *The Embedded University*: ESRC, SURF and PREST

Bevir, M. (2009) *Key Concepts in Governance* Sage: London

Bhalla, A. and Lapeyre, F. (1997) 'Social exclusion: towards an analytical and operational framework' *Development and Change* Vol.28, No.3, pp.413-433

Blackmore, J. (2001) 'Universities in Crisis? Knowledge economies, emancipatory pedagogies and the critical intellectual' *Educational Theory* Vol.51, No.3, pp. 353-370

Blair, T. in DRI (1998) *Our Competitive Future: building the knowledge-driven economy* White Paper, Department of Trade and Industry: London

Blakely, E. J. and Bradshaw, T. K. (2002) *Planning Local Economic Development* Sage: Thousand Oaks California

Bligh, D.A. (1990) *Higher Education* Cassell: London

Boddy, M. and Parkinson, M. (Eds.) (2004) *City Matters: competitiveness, cohesion and urban governance* Policy Press: Bristol

Boekema, F. Morgan, K., Bakkers, S. and Rutten, R. (Eds.) (2000) *Knowledge, Innovation and Economic Growth: the theory and practice of learning regions* Edward Elgar: Cheltenham

Bolton Council (2006) *Bolton Mills Action Framework 2006* (provided by interviewees at Bolton Council)

- Bolden, R., Petrov, G. and Gosling, J. (2008) *Developing Collective Leadership in Higher Education: final report* Leadership Foundation for Higher Education: London
- Booth, P. (2005) 'Partnerships and Networks: the governance of urban regeneration of Britain' *Policy and Practice* Vol.20, pp.257-269
- Boucher, G., Conway, C. and Van der Meer, E. (2003) 'Tiers of Engagement by Universities in their Region's Development' *Regional Studies* Vol. 37, No.9, pp.887–897
- Brine, J. (2001) 'Education, social exclusion and the supranational state' *International Journal of Inclusive Education* Vol. 5, No.2/3, pp.119-131
- Brown, P. and Lauder, H. (2003) *Globalisation and the Knowledge Economy: Some Observations on Recent Trends in Employment, Education and the Labour Market* Working Series: Paper 43
- Bryman, A. (2008) *Social Research Methods* Oxford University Press: Oxford
- Bryman, A. (2004) *Social Research Methods* Oxford University Press: Oxford
- Carley, M. (2000) 'Urban Partnerships, Governance and the Regeneration of Britain's Cities' *International Planning Studies* Vol. 5, No. 3, 273-297
- Cars, G., Healey, P., Madanipour, A. and Magalhães, C. (Eds.) (2002) *Urban Governance, Institutional Capacity and Social Milieux* Ashgate: Hampshire
- Cars, G. in Cars, G. *et al.* (Eds.) (2002) *Urban Governance, Institutional Capacity and Social Milieux* Ashgate: Hampshire
- Castells, M. *Information Technology, Globalization and Social Development* UNRISD Discussion Paper No. 114, September 1999



Charles, D., Bradley, D., Chatterton, P., Coombes, M. and Gillespie, A. (1999) *Core Cities: Key Centres for Regeneration Synthesis Report* A report for the Core Cities Group: CURDS, University of Newcastle upon Tyne

Charles, D. (2003) 'Universities and Territorial Development: reshaping the regional role of UK universities' *Local Economy* Vol.18, No.1, pp.7-20

Coaffee, J. and Healey, P. (2003) "My Voice: My Place": tracking transformations in urban governance' *Urban Studies* Vol.40, No.10, pp.1979-1999

Cohendet, P. and Simon, L. (2008) 'Knowledge-Intensive Firms, Communities and Creative Cities' in Amin, A. and Roberts, J. (Eds.) *Community, Economic Creativity, and Organization* Oxford University Press: Wiltshire

Cooke, P. and Leydesdor, L. (2006) 'Regional Development in the Knowledge Based Economy: The Construction of Advantage' *Journal of Technology Transfer* Vol.31, No., pp.5-15

Cooke, P. and Piccaluga, A. (Eds.) (2006) *Regional Development in the Knowledge Economy* Oxon: Routledge

Cooke, P., Davies, C. and Wilson, R. (2002) 'Innovation Advantages of Cities: From Knowledge to Equity in Five Basic Steps' *European Planning Studies* Vol.10, No.2, pp.233-250

Crisis in the Cotton Industry (1952) BBC film available at [www.bbc.co.uk/nationonfilm/topics/textiles/background\\_clip\\_commentary.shtml](http://www.bbc.co.uk/nationonfilm/topics/textiles/background_clip_commentary.shtml) (last accessed on 27.09.09)

Davies, J. (2003) 'Partnerships versus Regimes: why regime theory cannot explain urban coalitions in the UK' *Journal of Urban Affairs* Vol. 25, No. 3, pp.253-269

Dearing, R. (1997) 'Higher Education in the Learning Society: Report of the National Committee of Enquiry into Higher Education' available at [www.leeds.ac.uk/educol/ncihe/](http://www.leeds.ac.uk/educol/ncihe/) (last accessed 27.09.09)

Delanty, G. (2003) 'Ideologies of the Knowledge Society and the Cultural Contradictions of Higher Education' *Policy Futures in Education* Vol.1, No.1, pp.71-82

Delanty, G. (2001) *Challenging Knowledge: the university in the knowledge society* Buckingham : Society for Research into Higher Education and Open University Press

Department for Business, Innovation and Skills (2009) *Higher Ambitions: the future of universities in a knowledge economy* available at [www.bis.gov.uk/assets/BISCore/corporate/docs/H/09-1447-higher-ambitions](http://www.bis.gov.uk/assets/BISCore/corporate/docs/H/09-1447-higher-ambitions) (last accessed 15.06.10)

Diamond, J. (Ed.) (2010) *Urban Regeneration Management* Routledge: London

Diamond, J. and Liddle, J. (2005) *Management of Regeneration: choices, challenges and dilemmas* Routledge: London

Drucker, J. and Goldstein, H. (2006) 'The Economic Development Impacts of Universities on Regions: Do Size and Distance Matter?' *Economic Development Quarterly* Vol.20, No.1, pp.22-43

DTI 'Our Competitive Future: building the knowledge-driven economy' *UK Government White Paper* December 1998

Duranton, G. and Puga, D. (2000) 'Diversity and Specialisation in Cities: Why, Where and When Does it Matter?' *Urban Studies* Vol. 37, No. 3, pp.533–555

Etzkowitz, H., Webster, A., Gebhardt, C. and Terra, B. R. C. (2000) 'The Future of the University and the University of the Future: evolution of ivory tower to entrepreneurial paradigm' *Research Policy* Vol.29, pp.313–330

Etzkowitz, H. and Leydesdorff, L. (2000) 'The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university–industry–government relations' *Research Policy* Vol.29, No.2, pp.109-123

European Commission (2003) *Choosing to Grow: knowledge, innovation and jobs in a cohesive society* Report to the Spring European Council, 21 March 2003 on the Lisbon strategy of economic, social and environmental renewal European Communities COM(2003) 5

Flick, U. (2007) *Managing Quality in Qualitative Research* Sage Publications: London

Florida, R. (2005) *Cities and the Creative Class* Routledge: New York

Florida, R. (1995) 'Toward the Learning Region' *Futures* Vol.27, No.5, pp.527-536

Farrant, R., Pyle, J. L. and Lazonick, W. (Eds.) (2001) *Approaches to Sustainable Development: The Public University in the Regional Economy* University of Massachusetts Press: Amherst, Massachusetts

Farrant, R. (2001) 'Pulling Together in Lowell: The University and the Regional Development Process' *European Planning Studies* Vol. 9, No. 5, pp.613-628

Friedmann, J. and Wolff, G. (1982) 'World city formation: an agenda for research and action' *International Journal of Urban and Regional Research* Vol.6, No.3, pp.309-344

Gellert (1993) *Higher Education in Europe* Kingsley: London

Gilbert, N. (2003) *Researching Social Life* Sage: London

Gittell, R. and Flynn, P. M (1995) *The Lowell high-tech success story: what went wrong* New England Economic Review March-April, pp.57-60

Glasson, J. (2003) 'The Widening Local and Regional Development Impacts of Modern Universities – A Tale of Two Cities (and North–South Perspectives)' *Local Economy* Vol.18, No.1, pp.21–37

Goddard, J., Chatterton, P. (1999) 'Regional Development Agencies and the Knowledge Economy: Harnessing the Potential of Universities' *Environment and Planning C Government and Policy* Vol.17, pp. 685-699

Goddard, J. (1997) *Universities and Regional Development: an overview* CURDS, University of Newcastle

Goldstein, H. and Drucker, J. (2007) 'Assessing the Regional Economic Development Impacts of Universities: a review of current approaches' *International Regional Science Review* Vol.30, No.1, pp.20-46

Goldstein, H. and Drucker, J. (2006) 'The Economic Development Impacts of Universities on Regions: Do Size and Distance Matter?' *Economic Development Quarterly* Vol.20, No.1, pp.22-43

Gray, H. (Ed.) (1999) *Universities and the Creation of Wealth* Society for Research into Higher Education and Open University Press: Buckingham

Greenwood, D. (2007) *Introduction to Action Research: social research for social change* Sage: London

Greenwood, D. J. 'Who Are the Real 'Problem Owners'? On the social embeddedness of universities' in Harding, A. *et al.* (Eds.) (2007) *Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy* Ashgate: Hampshire

Gunasekara, C. (2006) 'Reframing the Role of Universities in the Development of Regional Innovation Systems' *Journal of Technology Transfer* Vol.31, pp.101–113

Guth, M. (2005) 'Innovation, Social Inclusion and Coherent Regional Development: A New Diamond for a Socially Inclusive Innovation Policy in Regions' *European Planning Studies* Vol.13, No.2, pp.333-348

Habermas, J. (1981) *The Theory of Communicative Action* Beacon Press: London

Hagen, R. (2002) 'Globalisation, University Transformation and Economic Regeneration: a UK case study of public/private-sector partnership' *The International Journal of Public Sector Management* Vol.15, No.3, pp.204-218

Hall, P. (2004) 'The Global City' *Urban Planning Overseas* 2004, Issue 04

Harding, A., Scott, A., Laske, S. and Burtscher, C. (Eds.) (2007) *Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy* Ashgate: Hampshire

Healey, P. (2006) *Collaborative Planning: shaping places in fragmented societies* Palgrave Macmillan: Hampshire

Healey, P. *et al.* in Cars, G. *et al.* (Eds.) (2002) *Urban Governance, Institutional Capacity and Social Milieux* Ashgate: Hampshire

Healey, P., Cameron, S., Davoudi, S., Graham, S. and Madani-Pour, A. (Eds.) (1995) *Managing Cities: the New Urban Context* John Wiley: Chichester

Henderson, V. (1997) 'Medium size cities' *Regional Science and Urban Economics* Vol. 27, pp.583-612

HM Treasury (2007) *Review of sub-national economic development and regeneration*  
HM Treasury: London

Holloway, W. and Jefferson, T. (2000) *Doing Qualitative Research Differently: free association, narrative and interview* Sage: London

Innes, J. and Booher, D. (2010) *Planning with Complexity: an introduction to collaborative rationality for public policy* Oxon: Abingdon

Innes, M. in Gilbert, N. (2003) *Researching Social Life* Sage: London

Jones, P. and Evans, J. (2008) *Urban Regeneration in the UK* Sage: London

Kearns, A. and Paddison, R. (2000) 'New Challenges for Urban Governance' *Urban Studies* Vol. 37, No.5, pp.845-850

Keohane, N. O. (1993) 'The Mission of the Research University' *Daedalus* Vol. 122 pp.101-125

Knox, P. and Taylor, P. (Eds.) (1995) *World Cities in a World-System* Cambridge University Press: Cambridge

Lambert, R. (2003) *Lambert Review of Business-University Collaboration* HM Treasury: London

Lawless, P. (1994) 'Partnerships in Urban Regeneration in the UK: the Sheffield Central Area study' *Urban Studies* Vol. 31, No.8 pp.1303-1324

Leahy, P. et al. (2003) *Engines of Economic Growth: the economic impact of Boston's eight research universities on the metropolitan Boston area* Appleseed: New York

LeGates, R.T. and Robinson, G. (1998) 'Institutionalizing University-Community Partnerships' *Journal of Planning Education and Research* Vol. 17, No. 4, pp.312-322

Lorenz, E., Johnson, B. and Lundvall, B.A. (2002) 'Why all this fuss about codified and tacit knowledge?' *Industrial and Corporate Change* Vol.11, No. 2, pp. 245-262

Louis, M. R. 'Organizations as Culture-Bearing Milieux' in Pondy, L. R., Frost, P. J., Morgan, G. and Dandridge, T. C. (Eds.) (1983) *Organisational Symbolism* JAI Press: Greenwich

Lundvall, B. A. (1996) 'The Social Dimension of the Learning Economy' *DRUID WORKING PAPER* No. 96-1

Manchester City Council (2009) *Manchester Economic Factsheet* available at [www.manchester.gov.uk/downloads/file/9244/i4\\_manchester\\_economic\\_factsheet\\_january\\_2009](http://www.manchester.gov.uk/downloads/file/9244/i4_manchester_economic_factsheet_january_2009) (last accessed on 27.09.09)

Manchester City Council (2008) *Manchester Factsheet* available at [www.manchester.gov.uk/site/scripts/download\\_info.php?downloadID=364andfileID=7579](http://www.manchester.gov.uk/site/scripts/download_info.php?downloadID=364andfileID=7579) (last accessed on 27.09.09)

Marginson, S. and Considine, M. (2000) *The enterprise university : power, governance, and reinvention in Australia* Cambridge University Press: Cambridge

MassInc (2007) *The State of the American Dream* MassInc: Boston, MA

Miles, S. (2005) 'Understanding the Cultural 'Case': Class, Identity and the Regeneration of NewcastleGateshead' *Sociology* Vol.39, Issue 5, pp.1019–1028

Miller, I. and Wild, C. (2007) *A & G Murray and the Cotton Mills of Ancoats* Oxford Archaeology North: Lancaster

LeGates, R.T. and Robinson, G. (1998) 'Institutionalizing University-Community Partnerships' *Journal of Planning Education and Research* Vol. 17, No. 4, pp.312-322

Lorenz, E., Johnson, B. and Lundvall, B.A. (2002) 'Why all this fuss about codified and tacit knowledge?' *Industrial and Corporate Change* Vol.11, No. 2, pp. 245-262

Louis, M. R. 'Organizations as Culture-Bearing Milieux' in Pondy, L. R., Frost, P. J., Morgan, G. and Dandridge, T. C. (Eds.) (1983) *Organisational Symbolism* JAI Press: Greenwich

Lundvall, B. A. (1996) 'The Social Dimension of the Learning Economy' *DRUID WORKING PAPER* No. 96-1

Manchester City Council (2009) *Manchester Economic Factsheet* available at [www.manchester.gov.uk/downloads/file/9244/i4\\_manchester\\_economic\\_factsheet\\_january\\_2009](http://www.manchester.gov.uk/downloads/file/9244/i4_manchester_economic_factsheet_january_2009) (last accessed on 27.09.09)

Manchester City Council (2008) *Manchester Factsheet* available at [www.manchester.gov.uk/site/scripts/download\\_info.php?downloadID=364andfileID=7579](http://www.manchester.gov.uk/site/scripts/download_info.php?downloadID=364andfileID=7579) (last accessed on 27.09.09)

Marginson, S. and Considine, M. (2000) *The enterprise university : power, governance, and reinvention in Australia* Cambridge University Press: Cambridge

MassInc (2007) *The State of the American Dream* MassInc: Boston, MA

Miles, S. (2005) 'Understanding the Cultural 'Case': Class, Identity and the Regeneration of NewcastleGateshead' *Sociology* Vol.39, Issue 5, pp.1019–1028

Miller, I. and Wild, C. (2007) *A & G Murray and the Cotton Mills of Ancoats* Oxford Archaeology North: Lancaster



Morgan, K. (1997) 'The Learning Region: Institutions, Innovation and Regional Renewal' *Regional Studies* Vol.31, No.5, pp.491- 503

Mossberger, K. and Stoker, G. (2001) 'The Evolution of Urban Regime Theory: the challenge of conceptualization' *Urban Affairs Review* Vol. 36, No. 6, pp.810-835

Naidoo, R. 'Universities in the Marketplace: the distortion of teaching and research' in Barnett, R. (Ed.) (2005) *Reshaping the University: new relationships between research, scholarship and teaching* Open University Press: Berkshire

Naidoo, R. (2000) 'The 'Third Way' to Widening Participation and Maintaining Quality in Higher Education: lessons from the United Kingdom' *Journal of Educational Enquiry* Vol.1, No.2, pp.24-38

Newman, J. H. and Turner, F. M. (1996) *The Idea of a University* Yale University Press, New Haven

NWDA (2006) *Regional Economic Strategy* available at [www.nwda.co.uk](http://www.nwda.co.uk)

OECD (2007) *Higher Education and the Regions: globally competitive, locally engaged* OECD: Paris

Ohmae, K. (1993) 'The Rise of the Region State' *Foreign Affairs* Vol. 72, No. 2, pp.78-87

Pears, I. (2010) 'Universities are not Businesses' in *Times Higher Education Supplement* 1<sup>st</sup> April 2010

Perry, B. and Harloe, M. 'External Engagements and Internal Transformations: universities, localities and regional development' in Harding, A. *et al.* (Eds.) (2007)

*Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy*  
Ashgate: Hampshire

Peters, G. and Pierre, J. (2001) 'Developments in intergovernmental relations: towards multi-level governance' *Policy and Politics* Vol. 29, No. 2, pp.131-135

Peters, G. and Pierre, J. (1998) 'Governance Without Government? Rethinking Public Administration' *Journal of Public Administration Research and Theory* Vol. 8, No. 2, pp.223-243

Peters, M. A. and Olssen, M. "Useful Knowledge': redefining research and teaching in the learning economy' in Barnett, R. (Ed.) (2005) *Reshaping the University: new relationships between research, scholarship and teaching* Open University Press: Berkshire

Pierre, J. (Ed.) (2000) *Debating Governance* Oxford University Press: Oxford

Pondy, L. R., Frost, P. J., Morgan, G. and Dandridge, T. C. (Eds.) (1983) *Organisational Symbolism* JAI Press: Greenwich

Rau in Gellert, C. (1993) *Higher Education in Europe* Kingsley: London

Rhodes, R.A.W. in Pierre, J. (2000) *Debating Governance* Oxford University Press: Oxford

Robbins, L. (1963) *Higher education: government statement on the Report of the Committee under the chairmanship of Lord Robbins 1961-63* H.M.S.O., London

Robinson, J. (2002) Global and World Cities: a view from off the map *International Journal of Urban and Regional Research* Vol. 26, Issue 3, pp.531-554

Russo, A.P., Van den Berg, L. and Lavanga, M. (2007) Toward a Sustainable Relationship between City and University: a stakeholdership approach *Journal of Planning Education and Research* Vol.27, No.2, pp.199-216

Ryan, G. and Bernard, H. (2003) 'Techniques to Identify Themes' *Field Methods* Vol.15, No.1, pp.85-109

Sassen, S. (2006) *Cities in a World Economy* Pine Forge Press: London

Sassen, S. (1991) *The Global City: New York, London, Tokyo* Princeton University Press: Princeton

Schien, E. H. (2004) *Organizational culture and leadership* Jossey-Bass: San Francisco, CA

Schienstock, G. (2004) *Embracing the Knowledge Economy: the dynamic transformation of the Finnish Innovation System* Edward Elgar

Schienstock, G. (1999) *Social Exclusion in the Learning Economy* Presented at the European Socio-Economic Research Conference Centre de Conférences Albert Borschette Brussels, 28-30 April 1999

Scott, A. and Harding, A. 'Introduction: Universities, 'relevance' and scale' in Harding, A. *et al.* (Eds.) (2007) *Bright Satanic Mills: Universities, Regional Development and the Knowledge Economy* Ashgate: Hampshire

Slaughter, S. and Leslie, L. (1997) *Academic capitalism : politics, policies, and the entrepreneurial university* Johns Hopkins University Press: Baltimore

Storper, M. and Venables, A. (2004) 'Buzz: face-to-face contact and the urban economy' *Journal of Economic Geography* Vol. 4, No.4, pp.351-370

Tallon, A. (2010) *Urban Regeneration in the UK* Routledge: Abingdon

Thorens, J. (1996) 'Role and Mission of the University at the Dawn of the 21st Century' *Higher Education Policy* Vol.9, No.4, pp.267-75

Thorne, M. (Ed.) (1999) *Universities in the Future* Department for Trade and Industry, Office of Science and Technology: London

Thurow, L. C. (2000) 'Globalization: The Product of a Knowledge-Based Economy' *The ANNALS of the American Academy of Political and Social Science* Vol. 570, No. 1, pp.19-31

Tornatzky, L.G., Waugaman, P.G. and Denis O. Gray, D.O. (2002) *Innovation U.: New University Roles in a Knowledge Economy* Southern Technology Council and Southern Growth Policies Board

Van Winden, W., Van den Berg, L. and Pol, P. (2007) 'European Cities in the Knowledge Economy: towards a typology' *Urban Studies* Vol. 44, No. 3, pp. 525–549.

Van Winden, W. (2001) The End of Social Exclusion? On Information Technology Policy as a Key to Social Inclusion in Large European Cities *Regional Studies* Vol.35, No.9, pp.861–877

Wenban-Smith in Cars *et al.* (2002) *Urban Governance, Institutional Capacity and Social Milieux* Ashgate: Hampshire

Williams, G. (2003) *The enterprising city centre: Manchester's development challenge* Routledge: London

Williams, G. (1997) 'The Market Route to Mass Higher Education: British experience 1979-1996' *Higher Education Policy* Vol.10, No.3/4, pp. 275-289

[www.aplu.org/NetCommunity/Page.aspx?pid=183](http://www.aplu.org/NetCommunity/Page.aspx?pid=183) *US Association of Public and Land Grant Universities*

[www.bbc.co.uk/nationonfilm/topics/textiles/background\\_rise.shtml](http://www.bbc.co.uk/nationonfilm/topics/textiles/background_rise.shtml) *History of cotton industry in UK*

[www.bbc.co.uk/nationonfilm/topics/textiles/background\\_decline.shtml](http://www.bbc.co.uk/nationonfilm/topics/textiles/background_decline.shtml) *History of cotton industry in UK*

[www.bis.gov.uk/news/topstories/2010/may/bis-partnerships](http://www.bis.gov.uk/news/topstories/2010/may/bis-partnerships) *Change in UK Government May 2010*

[www.Bolton.org.uk/history](http://www.Bolton.org.uk/history) *History of Bolton*

[www.Bolton.ac.uk](http://www.Bolton.ac.uk) *The University of Bolton*

[www.bolton.ac.uk/AboutUs/OurEthos.aspx](http://www.bolton.ac.uk/AboutUs/OurEthos.aspx) *The University of Bolton*

[www.Bolton-life.com/boltonborough.asp](http://www.Bolton-life.com/boltonborough.asp) *Bolton historic information*

[www.boltonrevisited.org.uk](http://www.boltonrevisited.org.uk) *Bolton historic information*

[www.Bolton-life.com/boltonborough.asp](http://www.Bolton-life.com/boltonborough.asp) *Bolton historic information*

[www.Bolton.org.uk/history](http://www.Bolton.org.uk/history) *Bolton historic information*

[www.cumbria.ac.uk/aboutus/theuniversity.aspx](http://www.cumbria.ac.uk/aboutus/theuniversity.aspx) *Cumbria University*

[www.eda.gov/AboutEDA/Mission.xml](http://www.eda.gov/AboutEDA/Mission.xml) *US Economic Development Agency*

[www.hud.gov/library/bookshelf12/hudmission.cfm](http://www.hud.gov/library/bookshelf12/hudmission.cfm) *US Housing and Urban Development*

[www.oup.org/aboutoup.asp](http://www.oup.org/aboutoup.asp) *US Office of University Partnerships*

[www.revolvingmuseum.org/about](http://www.revolvingmuseum.org/about) *Lowell Revolving Museum*

[www.stats.gov.uk](http://www.stats.gov.uk) *UK Census statistics UK*

[www.uclan.ac.uk/information/uclan/index.php](http://www.uclan.ac.uk/information/uclan/index.php) *University of Central Lancashire*

[www.uml.edu](http://www.uml.edu) *University of Massachusetts Lowell*

[www.uml.edu/about/profile/default.html](http://www.uml.edu/about/profile/default.html) *University of Massachusetts Lowell*

[www.wvu.edu/~exten/about/land.htm#what](http://www.wvu.edu/~exten/about/land.htm#what) *History of Land Grant Universities in US*

Yin, R. (2009) *Case Study Research: design and methods* Sage Publications: London

**CASE STUDY SELECTION PROCESS**

To analyse the issues involved in the urban regeneration of smaller cities, a careful case study selection process will be undertaken to enable the most robust identification of cities most suitable for the investigation of the research questions, allowing for further generalisations to be made from the findings. Having conducted an in-depth literature review of the Knowledge Economy and its spatial manifestations across cities in Europe and North America, a framework of criteria has been established to best identify potential locations for case study analysis. Such a framework enables the locations to be judged on their suitability in terms of this research, with the aim of ensuring that the most appropriate cities will become the case study locations.

The industrial heritage of the case studies is an important criterion: cities with an industrial 'hangover' are sought, ones which have experienced economic and industrial success in the first Industrial Revolution. Likewise the current economic and industrial context of the cities is a factor in case study selection, within the context of a global marketplace the case study locations will be those cities which are making attempts to regenerate via engagement in the knowledge economy. This is where a distinction is being drawn between the three case study locations, as one will be used as a benchmark against which to compare the other two and so that location will be experiencing more success in the knowledge economy than the other cities: it will have already undergone a process of regeneration via the knowledge economy. For the purposes of this research, this location will be one which has experienced problems of social exclusion and will have, to a large extent, overcome these by engaging in the knowledge economy. In this way, the research can draw conclusions as to the ways in which the benchmark city has been able to use the knowledge economy to tackle problems of inequality and deprivation, which can then be applied to the two other case study locations.

The two other case study locations will be cities which are currently facing challenges, with problems of social exclusion and a diverse community, in terms of economic base and ethnic origin. These factors are important in the search for case study locations as cities fitting these criteria, with a prosperous industrial history, yet which are today facing

problems of social and economic exclusion and thus are attempting to regenerate via engagement in the global knowledge economy are those facing the greatest challenges in terms of regeneration.

The problems these cities face in regeneration seem to be compounded when they are smaller cities (with less human capital and a less diverse industry base) which are not central players in the economy of their country or even region. Therefore the choice of case study location is to be narrowed further: all three case study locations will be smaller cities, which are a 'satellite' rather than a central player, in their region. As the role of a university within a partnership approach to urban regeneration is to be examined, it is crucial to select a case study location where a partnership approach to regeneration appeared to be taken with the local Higher Education Institution seemingly actively involved.

### **CASE STUDY CONTENDERS**

Desk-based research was conducted to generate a comprehensive knowledge of a number of cities in Western Europe and North America with the aim of then selecting three case study locations which will form the basis of the research. It was decided that the focus would be on cities in Europe and North America as these continents experienced processes of industrialisation at roughly the same time in history and they are generally perceived to be at the same point in development. A shared history is important for purposes of comparison.

This section of the chapter will outline the findings from the desk-based research into the potential case study locations, before selecting which cities, based on this work, will be most appropriate and informative as the final case study locations. The potential case study locations will be described using consistent criteria, to enable initial comparisons in order to elicit which cities would be most appropriate for the research.



**POTENTIAL LOCATIONS**

This section will briefly describe the eight potential case study locations, referring to their geography and demography, their industrial heritage and current industrial features, levels of deprivation, and higher education provision. The eight cities being considered for case study analysis are: Cumbria (focussing on Carlisle); Preston; Bolton; Manchester; Pittsburgh; Boston; Lowell, and; Tampere.

**CUMBRIA**

The British county of Cumbria, in the far North West of England (see map ??), is a largely rural area with a population of approximately 496,900 (*Mid-Year Population Estimates, 2007, ONS*). Cumbria is made up of six districts: Allerdale, Barrow, Carlisle, Copeland, Eden and South Lakeland. Cumbria's largest settlement, and only city, is Carlisle, which has a population of 100,739; 99,846 of whom are white (2001 Census). Carlisle's ethnic homogeneity is reflective of Cumbria's population as a whole, as the county is one of Britain's least ethnically diverse areas, with over 99% of the population being white (2001 Census - [www.stats.gov.uk](http://www.stats.gov.uk)). Cumbria's small ethnic population is comprised of a low number of Black, Indian and Chinese populations (each representing 0.1% of the county's overall population). However, there are indications that this is changing rapidly, with Cumbria's ethnic minority population growing at twice the rate of England's average (2001 Census).

According to the Indices of Deprivation 2007 Cumbria's deprivation level has fallen, compared to other parts of Britain, in recent years. However, the county faces challenges contributing to social exclusion, for example with the district of Eden the most deprived in terms of 'geographical barriers' in the whole of mainland England. (Cumbria County Council Indices of Deprivation Briefing 2007 from <http://www.cumbriaobservatory.org.uk/AboutCumbria/deprivation/ID.asp>). There are also signs that deprivation and inequality in Cumbria have worsened since the 2007 Indices of Deprivation, with the number of Job Seekers Allowance claimants rising by

3,048 over the year June 2008-2009  
(<http://www.cumbriaobservatory.org.uk/AboutCumbria/economy/unemployment.asp>).

However, it is worth noting that this is during a time of recession, and it seems Cumbria is faring better than many parts of the UK at this time, with the national JSA claimant rate rising 86% (compared to Cumbria's 64%) (ibid.). However, there are certainly pockets of deep deprivation in Cumbria, with 12 wards in Barrow, Carlisle and West Cumbria falling within the 10% most deprived nationally (<http://www.cumbriaobservatory.org.uk/AboutCumbria/AboutCumbria.asp>).

Cumbria has a history as a thriving centre for traditional industry and was home to many cotton mills and stone quarries as well as gunpowder manufacturing, iron making, textiles and ship building ([www.visitcumbria.com/industry.htm](http://www.visitcumbria.com/industry.htm)). Today, some manufacturing industries remain, although the majority of Cumbria's current industry is focussed on services, with an emphasis also on tourism and the public sector. The majority of Cumbria's workforce is employed in the service industry, making up 67.5% of the total workforce, with the second largest proportion of Cumbria's workforce still employed in manufacturing. At 18.1% Cumbria has a higher proportion of its workforce in manufacturing than the North West region (at 14.8%) and the UK as a whole (at 12.7%) ([www.cumbriaobservatory.org.uk/AboutCumbria/economy/economy.asp](http://www.cumbriaobservatory.org.uk/AboutCumbria/economy/economy.asp)). Its specialisms lie in nuclear, naval building and specialist engineering ([www.cumbria.gov.uk/business/cumbrianeconomy/cumbrianeconomy.asp](http://www.cumbria.gov.uk/business/cumbrianeconomy/cumbrianeconomy.asp)).

On 1<sup>st</sup> August 2007, The University of Cumbria was formed from an amalgamation of St. Martin's College, Cumbria Institute of the Arts and the Cumbrian campuses of the University of Central Lancashire. Cumbria University is a networked university, with campuses in Carlisle, Newton, Rigg, Penrith, Ambleside and Lancaster as well as strong links with four Further Education colleges in the county (Lakes College, Furness College, Carlisle College and Kendal College) ([www.cumbria.ac.uk/aboutus/theuniversity.aspx](http://www.cumbria.ac.uk/aboutus/theuniversity.aspx)).

Given the networked nature of higher education provision in Cumbria, it would be very interesting to use the county as a case study location. The networked approach to higher

education is increasingly being used within the context of the networked knowledge economy, and exploring this further would undoubtedly elicit noteworthy findings in regards to the role of higher education in regeneration via the knowledge economy. However, within the context of this research, Cumbria does not satisfactorily fit the framework of analysis, the research would need to focus in on Carlisle and its campus as a means of exploring the knowledge city concept. Although Carlisle is a city, it is situated within a highly rural context with over 50% of Cumbria's population living in rural communities (<http://www.cumbriaobservatory.org.uk/AboutCumbria/AboutCumbria.asp>). It is not appropriate to chose Carlisle as a case study, as the rural context of Cumbria may distract from the urban focus of the research.

### PRESTON

Preston, with a population of 130,000, is based in the Lancashire county of England's North West. Granted city status in 2002, Preston City Council has a vision of the city becoming the region's third city, after Manchester and Liverpool. The city has a relatively ethnically diverse population, with approximately 15% of the city's demography made up of people from ethnic groups. 82.3% of the city's population is White British, with the second largest ethnic group being Indian (8.3%), followed by the Pakistani population (2.4%) (2001 Census).

Preston has a mixed economic base, with a large economy (the largest in Lancashire and the 11<sup>th</sup> largest in the North West) and signs of a knowledge economy sector (Local Futures, 2008, p.5). Between 1998 and 2006, employment in the knowledge economy rose by 31.7%, three times the national average rise of 10.2%, with employment in the knowledge economy accounting for one quarter of the district's total employment in 2006 (Local Futures, 2008, p.7). Despite this rise, however, Preston still has below average shares of resident knowledge-workers, with Britain's national average indexed at 100, Preston scores 94.4 for its knowledge worker score (Local Futures, 2008, p.9).

Preston faces social and economic challenges, with unemployment above the national rate at 2.7% in September 2008, with the highest level of long-term unemployment in Lancashire (Local Futures, 2008, p.7). In the 2007 Index of Multiple Deprivation, Preston ranked 48<sup>th</sup> out of a total of 354 local areas across the nation (with the area ranked 1<sup>st</sup> having the highest level of deprivation) (Local Futures, 2008, p.9).

Preston's history changed dramatically in the Industrial Revolution, when the city was transformed from a small market town into a large industrial settlement by the rapidly growing cotton industry. As the traditional industries have declined, Preston's economy is now largely based on the defence industry, with the location of British Aeronautical Engineering systems' Military Aircraft headquarters based in nearby Warton. Preston's economy is now also based on nuclear processing, retail, the financial sector and education.

In 1992 the University of Central Lancashire was granted university status, but the institution's roots go back to 1828 when it was founded as the 'Institution for the Diffusion of Knowledge'. Approximately 70% of the university's student body comes from the North West region, the university employs 3,000 people and with an annual turnover of £120 million, and its annual indirect contribution to the region calculated at £300 million, it is a key driver of the city's economy ([www.uclan.ac.uk/information/uclan/index.php](http://www.uclan.ac.uk/information/uclan/index.php)). As well as UCLan, Preston is home to a number of Further Education colleges, including Preston College and Cardinal Newman College.

Much like Cumbria and Carlisle, the rural nature of Preston's surroundings impinge on its potential as a case study location within this research. This research is urban in its focus, addressing as it is the concept of a knowledge city, and although Preston is a city the surrounding county of Lancashire is very rural in its features. The rural nature of Preston's surroundings may distort the research findings if the other case study locations are situated in regions which display more urban features.

**PITTSBURGH**

Pittsburgh is the second largest city in the North American state of Pennsylvania. Pittsburgh is home to approximately 334,563 residents. The city's population is primarily white (68%), with the second largest ethnic group being Black/African-American (27%), followed by a smaller Asian population (3%) and people of two or more ethnic origin (2%) (US Census 2000). Pittsburgh seems to have a shrinking population, with the 2007 Census estimates implying that the population is now more accurately measured at approximately 311,218. As well as a shrinking population, it seems that deprivation in Pittsburgh has also declined. In 1990, 75,172 people were defined as living below the poverty line in Pittsburgh, but in 2000 this number has fallen to 63,866 representing a fall of 15% (City of Pittsburgh, 2000, p.3).

With an industry traditionally rooted in oil (in the second half of the twentieth century), Pittsburgh expanded in the twentieth century into other traditional industries such as steel production, shipbuilding and coal mining, earning itself the nickname of "the steel city". By 1911, Pittsburgh produced between one-third and one-half of all US steel. In recent decades, Pittsburgh has attempted to modernise its industrial base, with technological jobs growing at twice the rate of other jobs in the city, faring quite well in the knowledge economy and boasting "...this technological explosion is dispersed – it is reaching parts of the state that are not normally considered tech centres" (McNulty, 1999, 170). The result of this success has been that technological jobs are growing at twice the rate of all other jobs in the state, and wages in Pennsylvania's technological companies are generally 50% higher than wages in the state's other industries (McNulty, 1999). Pittsburgh's economy is now also based on healthcare, education and financial services.

The city is home to many Higher Education Institutions, the most famous of which are Carnegie Mellon University and the University of Pittsburgh. As well as these 'world-class' universities, Pittsburgh has six other Higher Education Institutions in the city and a number more in the wider region. Penn State is possibly the most active of the city's universities in terms of civic engagement, establishing local business links and working

for the economic development of the region: “[Penn State University has]... very self-consciously taken on the mission of fostering economic and social development as an integral theme” (Tornatzky et al, 2002, 2).

Many feature of the city of Pittsburgh would therefore make it a suitable fit for case study analysis. Pittsburgh is a post-industrial city, experiencing problems of economic decline and social exclusion. Pittsburgh has a fairly diverse population in terms of ethnicity. Pennsylvania State University actively engages with its locality and so exploring this relationship would be fruitful for this research. However, as well as Pennsylvania State, Pittsburgh is home to seven further higher education institutions in the city itself and exploring this network may be too complex as to yield deep and meaningful results. This is reflective of a wider problem with Pittsburgh: its population, at 334,563, may be a little large for this research to successfully navigate and explore. A smaller city would be more manageable and would facilitate a deeper exploration of the issues at the heart of this research.

**ACADEMIC INTERVIEWS**

1. Role
2. Industrial history of Lowell
3. Impact of industrial heritage today
4. What is employment in Lowell?
5. Role of arts in revitalisation of Lowell
6. Role of science and tech in revitalisation of Lowell
7. Is the population of Lowell ready for knowledge economy?
8. Role of UMass in Lowell
  - a. Currently
  - b. What more?
9. What is experience of immigrant groups in Lowell?
  - a. In UML?
  - b. Differs from group to group?
10. “The mission of UMass Lowell is to provide to students an affordable education of high quality and to focus some of its scholarship and public service on assisting sustainable regional economic and social development in the nation and the world”
  - a. How so?
  - b. How not?
11. Downtown Lowell?
12. Relationship Lowell & Boston?
13. Lowell’s economic dev – what more can it do to progress?
14. Lowell as knowledge city?
15. Vision of Lowell in a decade?

**UMASS MANAGERS INTERVIEWS**

1. Background and role
  - a. Priorities
2. Role of UMass in Lowell
  - a. Community engagement?
3. Student body
4. Viability of science and technology economy
5. Viability of arts economy
6. UML mission

**“The mission of UMass Lowell is to provide to students an affordable education of high quality and to focus some of its scholarship and public service on assisting sustainable regional economic and social development in the nation and the world”**

7. Lessons for other unis
8. Vision of Lowell in a decade?



**STUDENT INTERVIEW**

1. Background
2. Experience of academic department
3. Experience of UMass Lowell
4. Impressions of Lowell
5. Experiences working with communities in Lowell
  - a. Challenges they face
  - b. Integration?
  - c. What more could be done – work with comm's & help them improve lives?
6. Partnership working in Lowell
7. Contribution of UMass Lowell to city
  - a. Individuals or institution
8. Knowledge economy in Lowell
9. Vision of Lowell in a decade?

**LOWELL COUNCIL INTERVIEWS**

1. Role & priorities
2. Local Community / employment
3. City / ethnicity
4. City Policies
5. University
  - a. To city
  - b. As partner
6. Local Business
  - a. As partner
7. Creative Economy model
8. Knowledge Economy
  - a. In city
  - b. In region
9. City / region relationship
  - a. Lowell / Boston
10. Vision of Lowell in a decade?

**BUSINESS INTERVIEWS**

1. Interviewee background
2. Role in city?
3. Perception of Lowell Council
4. Relationship with Lowell Council?
5. Perception of University
  - a. Role it plays in city
  - b. Individuals or institution?
6. Relationship with University?
  - a. Challenges
  - b. Benefits
7. Decline in traditional industry / rise of knowledge economy
8. Skill level of Lowell workforce
9. Lowell in 5-10 years?

**ARTIST INTERVIEWS**

1. Artist experience of Lowell
2. City support?
3. Role of UMass Lowell
  - a. More to do?
4. Role of arts in Lowell?
5. Viability of creative industry as regeneration tool?
6. Response business community?
7. Response local community?
8. Vision of Lowell in a decade?

**REGIONAL INTERVIEWS**

1. Background and role
2. Region and Boston
  - a. Knowledge economy
  - b. Higher education
  - c. Social exclusion / deprivation
3. Lowell
  - a. History
  - b. Current industry / economy
  - c. Knowledge economy
  - d. Place in region
4. UMass System & UMass Lowell in particular
5. Lowell in a decade?

**ACADEMIC INTERVIEWS**

1. Role
2. Industrial history of Bolton
3. Impact of industrial heritage today
4. What is employment in Bolton?
5. Role of arts in revitalisation of Bolton
6. Role of science and tech in revitalisation of Bolton
7. Is the population of Bolton ready for knowledge economy?
8. Role of University of Bolton
  - a. Currently
  - b. What more?
9. What is experience of immigrant groups in Bolton?
  - a. In Bolton University?
  - b. Differs from group to group?
10. University mission
11. City centre Bolton
12. Relationship Bolton and Manchester
13. Bolton's economic dev – what more can it do to progress?
14. Bolton as knowledge city?
15. Vision of Bolton in a decade?

**UNIVERSITY OF BOLTON MANAGERS INTERVIEWS**

1. Background and role
  - a. Priorities
2. Role of University in Bolton
  - a. Community engagement?
3. Student body
4. Viability of science and technology economy
5. Viability of arts economy
6. Bolton mission
7. Lessons for other unis
8. Vision of Bolton in a decade?

**BOLTON COUNCIL INTERVIEWS**

1. Role & priorities
2. Local Community / employment
3. City / ethnicity
4. City Policies
5. University
  - a. To city
  - b. As partner
6. Local Business
  - a. As partner
7. Creative Economy model
8. Knowledge Economy
  - a. In city
  - b. In region
9. City / region relationship
  - a. Bolton / Manchester
10. Vision of Bolton in a decade?



**BUSINESS INTERVIEWS**

1. Interviewee background
2. Role in city?
3. Perception of Bolton Council
4. Relationship with Bolton Council?
5. Perception of University
  - a. Role it plays in city
  - b. Individuals or institution?
6. Relationship with University?
  - a. Challenges
  - b. Benefits
7. Decline in traditional industry / rise of knowledge economy
8. Skill level of Bolton workforce
9. Bolton in 5-10 years?

**REGIONAL INTERVIEWS**

1. Role of Bolton in the wider region?
  - a. RE Manchester
  - b. RE other 'satellite' cities
2. RE political role and nature in the region
3. Impact of geography – proximity to Manchester
4. Image of Bolton in wider region?
5. Perception of Bolton Council?
  - a. Leadership
6. Perception of University of Bolton (its impact on the city)?
7. Extent of partnership working in Bolton?
8. Bolton in 5-10 years?