Studying complex places: change and continuity in York and Dijon

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Abstract
This study considers the methodological implications of a critical realist and complex systems perspective to social phenomena in general, and to cities and urban regions in particular. Using three broad methodological approaches, namely the use of official statistics, visual sources and group interviews with children, different representations of York and Dijon are produced. Through an integrated and reflexive analysis of the findings, an argument is developed to show that an emergent pattern of change and continuity since the 1970s is common to both places. This is then related to the desired and projected changes to the cities voiced by the children, who, it is argued, are active agents shaping the present and future trajectories of their respective city.
Studying Complex Places:
Change and Continuity in York and Dijon

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PhD. Thesis

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2004

- 1 SEP 2005
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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>Insée</td>
<td>Institut National de la Statistique et des Études Économiques</td>
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<td>SAS</td>
<td>Small Area Statistics</td>
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<tr>
<td>EDs</td>
<td>Enumeration Districts</td>
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<tr>
<td>COMADI</td>
<td>Communauté de l'Agglomération Dijonnaise</td>
</tr>
<tr>
<td>CBD</td>
<td>Central Business District</td>
</tr>
<tr>
<td>ZAP</td>
<td>Zone d'Activités Professionnelles – see List of French words for details</td>
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List of French Words Used
Where there is no one English word to adequately translate a French one, the French word is used in this thesis and appears in italics in the text.

Census and Administrative Geography

*L'aire urbaine* A particular collection of communes (see below) which are connected to the 'pôle urbain' - which in this case is akin to Dijon city centre - due to the fact that at least 40% of the commune population lives or works in the 'pôle urbain'. It is therefore an important area since it provides a picture/measure of the area which is residually and/or economically significant to the city's qualitative character. See Appendix B for a spatial image of what this entails.

*Arrondissement* An administrative zone that is a sub-division of the 'département'.

*Canton* Administrative zone that is a sub-division of 'l'arrondissement.' See Appendix B for a spatial image of what this entails.

*Commune* The smallest administrative subdivision, officially created in 1789 which also makes it the oldest administrative subdivision. Each commune has its own mairie. See Appendix B for an example illustration of what this entails spatially.

*Département* Administrative zone created in 1871. There are 100 départements in France (4 of which are overseas). Each département belongs to only one 'région'. Dijon is located in the département of 'la Côte d'Or' which itself is located in the Burgundy (Bourgogne) region. See Appendix B for a spatial image of what this entails.

*IRIS* Smallest urban zone set up in 2000 allowing for micro-analyses of urban zones which consist of 1,800–5000 residents. See Appendix B for a spatial image of what this entails.

*Unité urbaine* This term was officially registered by INSEE in the 1950s and refers to any urban region in which a) the population is over 2000 persons and b) the built environment is compact and continuous, i.e. there are 'no gaps' (in the form of agricultural land, forest or woodland, etc.) of more than 200 meters between built units. See Appendix B for a spatial image of what this entails.
Introduction: Defining the Problematic

What are the methodological implications of a critical realist and complex systems approach to the social world? What challenges does this approach entail? What advantages does it offer? To what extent is it possible to provide adequate empirical representations of the multi-dimensional, multi-causal and nonlinear phenomena implied in such an approach? In what ways can causal processes be accessed whilst also taking into account time and space? These are the general questions underpinning this thesis.

More specifically, this is a study about the methodological challenge involved in studying cities and urban regions as complex places. The project began as an almost entirely empirical description about urban change in York and Dijon since the mid 1970s. In addition, I was curious about how local schoolchildren perceived their urban environment. However, it has resulted in a theoretically, methodologically and empirically driven argument about studying complex social phenomena. The problematic is, therefore, reflexively derived from the entire research process. It comes out of a constant iterative and interpretive exercise that involved moving to-and-fro between numerous things that have shaped my thinking. Among these, of course, are many readings, most notably within the fields of urban studies, the (new) social studies of children and childhood, and especially complexity theory. These are juxtaposed with my own philosophical perspective on the social world that is

---

1 'Complexity' and 'complex systems perspective' are used interchangeably to refer to the study of complex systems. Likewise, the term 'complex systems' is used synonymously with the term 'complex adaptive systems' since it is assumed that all complex systems are also adaptive systems. It is worth noting that I do not differentiate between algorithmic, aggregate, or deterministic complexity as some authors do (see, for example, Manson 2001) since my view is that these perspectives are essentially still dealing with the same sorts of systems but are emphasising a particular aspect intrinsic to them.
strongly influenced by critical realism and complexity theory. Formal and informal discussions with supervisors, colleagues and friends have also played a part in moulding this final product. More importantly, however, the thesis argument stems from the quantitative and qualitative data collected for the research itself. Conversely, since this thesis is an exposition of the entire research process, the reader will also gradually gain insight into the ways in which, and the reasons why, the synthesis of these various elements has resulted in this problematic.

The study is a direct response to the fact that whilst there is growing body of research relating to cities as complex systems (see, for example, Allen 1997; Batty and Longley 1994; Byrne 1998b, 2001; Dendrinos 1996; Wilson 2000), methodologically there are still many problems yet to be resolved. Many of the methodological difficulties revolve around the issue of how to produce representations of urban space that capture the multiple, multidimensional micro-macro interactions from which the urban emerges. One of the responses has been that research has tended to split the urban off from the people who live in it. By this, I mean that the focus either remains on a macro-level perspective on urban change, typically using aggregate socio-economic and spatial data, or on a micro-level by exploring people's views about their local environment. Alternatively, using multi-agent computer simulation techniques, researchers have explored causal processes through experimenting with various hypothetical and theoretical models (which may or may not be based on empirical data). The problem with each of these approaches is that they do not adequately account for the emergent effects of multi-level and nonlinear interactions between people and their local urban spaces, nor do they adequately consider the

2 Vis-à-vis these areas, it is worth mentioning the key works that have significantly influenced my thinking. It should be noted that although they are grouped here in terms of the areas of study, many works are broader than this grouping implies and is part of the reason the ideas are integrated here in this research. In thinking about cities and urban regions, Lefebvre's (1974/2003) The Production of Space has undoubtedly been the key source of influence. With regards to specifically considering cities as complex systems, the key works are: Cities and Regions as Self-Organizing Systems (Allen 1997), Understanding the Urban (Byrne 2001), Cities as Spatial Chaotic Attractors (Dendrinos 1996), Exploring Environmental Change (Lemon 1999). With regards complexity theory, key sources are: Complexity Theory and the Social Sciences (Byrne 1998b), The Collapse of Chaos (Cohen and Stewart 1994), The Origins of Order (Kauffman 1993), Evolution, Complexity and Order (Khalil and Boulding 1996), Chaos Theory in the Social Sciences (Kiel and Elliott 1996), Exploring Complexity (Nicolis and Prigogine 1989), and From Being to Becoming (Prigogine 1980). In thinking about children and childhood, key influences are: Theorizing Childhood (James et al. 1998a), The Problem of Generations (Mannheim 1928/1984), and Childhood as a Social Phenomenon (Qvortrup 1991). Important works that have shaped my critical realist outlook include: Critical Realism (Archer et al. 1998), The Possibility of Naturalism (Bhaskar 1979), and Realism and Social Science (Sayer 2000).
importance of human agency in shaping those interactions. Whilst this research does not claim to resolve these methodological difficulties, it contributes to the work in this area by specifically trying to address them. Therefore, it is concerned with the methodological project of developing an understanding of cause and agency, which is grounded in the empirical representations of the real urban world.

The study focuses specifically on the cities of York (in England) and Dijon (in France) (see Figure 1 and Figure 2) and explores the ways in which these places have changed since the 1970s. Therefore, one aim of the research is to develop a description of change and continuity in these cities. Another is purely exploratory

---

3 Broadly speaking, the notion of agency used throughout this study is strongly influenced by critical realism which seeks to conceptualise ‘the human agent as someone who is both partly formed by their sociality, but also has the capacity partly to transform their society’ (Archer 2002:11). In addition, Bourdieu’s dialectical habitus-field model is a strong influence. That is, agents contribute to the structures and systems from which the urban emerges ‘at every stage within the limits of the structural constraints which affect their acts of construction both from without, through determinants connected with their position in the objective structures, and from within, through the mental structures – the categories of professional understanding – which organize their perception and appreciation of the social world’ (Bourdieu 1988:xiv). I also follow Emirbayer and Mische’s (1998:963) argument that agency is ‘a temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment).’

4 Note that any quotes taken from French authors in this thesis are my own translations of their work.
inasmuch it seeks to raise questions about why the cities have changed in the ways suggested by the descriptions, whilst also asking about the ways in which they may continue to change in the future.

Furthermore, the research aims to understand York and Dijon as cities in themselves, which have all the general characteristics known about cities, yet also acknowledges that each city is unique. Thus, it considers each place as more than the sum of its parts, yet also recognizes that its specific components – i.e. the geography, the history, the local people, young and old, etc. – generate the specificity that makes each place different to any other. The study assumes that the urban is multi-dimensional and that any empirical representation of the urban must try to capture these multiple dimensions. Moreover, it perceives each city as a product of human agency whilst also trying to find ways in which to account for the different levels of individual and collective agency that help to shape each place.

More specifically still, this study is concerned with the notion of children as present and future agents shaping city trajectories. This sets it apart from most research about cities, and from all research that explores cities as complex systems. Here, all children are assumed to be social agents constantly shaping the social world around them whether or not their role is socially or politically constructed as such by themselves or others. Individually and collectively, children are considered to be agents who are constantly ‘being and becoming’ (Prigogine 1980) shaped by and

---

5 The notion of ‘representation’ as it is used throughout this study assumes the position that however accurate or valid a representation might be, it is never understood to be the object of that representation. Furthermore, following Bourdieu, (1988) this research assumes that no social phenomenon can be fully revealed by the social discourse which surrounds it. In turn, no single representation is fully commensurate with the totality of the social phenomenon of that representation. The extent to which a representation is valid depends both on the extent to which it is judged (at the very least by the researcher, the person who commissioned the research (who may or may not be the researcher), the research informants themselves and anyone reading the written work about the research) to represent that object and the extent to which it meets the requirements of a specific application (Bateson 1984; Bryman 2001). In the case of this study, the specific application of each representation is to provide a general understanding of change and continuity.

6 In this study I adopt UNICEF’s (1996) definition of ‘children’ as those aged fifteen and under. That said, I use this definition broadly as I also support James’ (1998:62) view that chronological age is not necessarily the best way of defining what a child is or what a child can do because the concept of ‘childhood’ is so dependent upon the cultural context in which it is embedded and varies greatly across time and space. ‘Childhood’ on the other hand is viewed as a permanent structural category which defines both a social group and a stage in the human life-course. How childhood is constructed has direct implications upon the daily present and future lives of children. See Chapter 3 for more details of the assumptions to both ‘children’ and ‘childhood’ that are adopted here.
shaping the present and future urban world. ‘Childhood’ on the other hand, is considered to be a permanent (although also changing) social structural category (Qvortrup 1991). As Epstein and Axtell (1996:172) note, ‘[a] notable property of social organizations – from ant colonies to the Supreme Court – is that their memberships change while important elements of their structure do not.’ That said, childhood is also taken to be subject to social constructions which – like the role of children – as politically, historically, morally situated within time and space (James et al. 1998a).

My main reasons for approaching children in this research (as opposed to adults) were fourfold. Firstly, I was simply curious about the ways in which children perceive the city in which they live. There is very little work in this area and I simply wanted to learn more about it. Secondly, my view was that children were the most appropriate social actors to approach for this particular study. As well as wanting to understand the past trajectories of York and Dijon, I was interested in developing ideas about their future trajectories. I assumed that knowledge of the past city might influence the ways in which the future city was perceived. Whilst I recognised that cities are historical phenomena, I was more interested in developing imaginary snapshots of the future city, which were to be based as much as possible on present snapshots of each place. Thirdly, I assumed that children were important agents to ask about a place’s future because children are always the ‘latest model of human being’ (Rushkoff 1997:2). As reflective and articulate agents who are simultaneously being and becoming in a world that is also changing, I believed that children – potentially at least – had important things to say about their experiences of the urban world around them. Fourthly, I wanted to take a political and ethical stance to the social research that I conducted and ‘give voice’ to a group of people who are often neglected both in social science and in society more generally.

For these reasons, and indeed because of the findings of this research, I assume that children and childhood(s) need to be included in explorations concerned with the (generative) ‘power geometries’ (Massey 1993a) of cities and urban regions and the related issues of future urban change. This perspective on child agency, as well as the

---

7 I support Freire’s (1970) argument that even the most oppressed and seemingly powerless individuals in society actively participate in shaping the social world around them, although they may not consciously know it or are perceived by others in this way.
view that children can inform social research that does not solely consider children’s lifeworlds, is new and provides an important substantive element of this thesis.

There are several themes that are have interacted constantly, to a greater or lesser extent, during the entire research process. I will discuss each of these in Part I of the thesis. However, one issue that warrants immediate attention because it has knock-on effects upon all that hereby follows is the idea of representation, or more accurately, on the possibility of producing valid and meaningful re-presentations (Byrne 2001) of cities. In other words, if I am to study the cities of York and Dijon, in what ways might I adequately produce accurate representations of change and continuity in these places, which are valid both at the level of cause and meaning, and which also account for reflexive human agency and action?

**Stories about cities**

One of the ways that I have attempted to address the cities of York and Dijon in this research is by asking a question that Beauregard (1995:59) raises: ‘If the city could speak, what would it say to us?’ In the same way, throughout this research, I have asked, ‘If York and Dijon could speak, what would they say to us?’ What stories might they tell us? What advice might they give us? What sorts of things might these places want us to know or not to know? Moreover, I have combined Beauregard’s position with Short et al. line of thinking, which is that:

> Cities, like all environments, are texts in which are inscribed values, beliefs and the exercise and struggle of power [...] But if a city is a text, it is written as well as read, (re)constructed as well as (re)interpreted, and (re)produced as well as consumed. (Short et al. 1993:208)

Perhaps, then, if York and Dijon could speak, they would read us the texts which are inscribed within them? Perhaps they would tell us about the multitude of texts that are inscribed, produced by, and produce one another? Perhaps these cities would speak to us about texts which exist as layers over, under, and between each other; texts which exist as networks and as systems also (Lefèbvre 1974/2003:142-143)? These texts can be understood as the outcome of past actions but they can also be the
very things which permit ‘fresh actions to occur, while suggesting others and prohibiting yet others’ (Lefèbvre 1974/2003:73).

Hence, extending Beauregard’s and Short et al.’s position further for my purposes here, I ask: What sorts of texts are York and Dijon? What stories are inscribed in these two cities? What social and spatial changes have occurred? How might these places change in the future? Who writes these stories? In other words, which agents or which mechanisms produce the city text(s)? Through what medium would the stories be told? Would the cities speak to us through oral story telling, fictional narratives, visual media such as paintings, sculptures, architecture, etc.?

In addition, I ask questions relating specifically to how children read and write the city in which they live. For example, what stories do children tell about the cities in which they live? What do children living in these places know about these stories? What things might we learn about though listening to children’s accounts of these places? How do children construct these city stories? How do they access them? Who tells the stories? How do children react to them? What do children like or dislike about them? Do children have a say in which stories they get told? Do children have a say in the way the city story develops? What city texts do children learn to read? How do children (re)construct, (re)interpret and (re)produce the texts that tell the stories of these cities? What stories do they want to write about the city? Moreover, ‘if a city is a text’, what are the implications of the children’s city texts? How, as present and future agents of the city, do children’s city stories affect the dynamics and trajectories of the city?

Importantly, however, whilst it is a useful thought exercise to think about the city as a speaking entity or as a text, Beauregard is quick to point out that:

> The city, of course, cannot tell us of its problems or its prospects, its successes or its failures. The city is not a speaking subject. Rather, it is the object of our discussions. We speak for the city; it is spoken about. We say what is good and what is bad, what should be done, when, and by whom. The city is represented; it does not represent itself. (Beauregard 1995:60)

Whilst this is the case, it is important to note that representations about cities always tell us something about human agency; at the very least, they tell us about the agency
involved the production of the representation itself. This is because cities are necessarily produced by people. Conversely, whether the form of representation is an academic text, a literary novel, an image, a statistical summary or a personal account, the representation is, if you like, the city’s ‘voice’ through which human agents are (knowingly and/or unknowingly) telling us something about the city and the mechanisms which re-produce, change and maintain it.

Hence, for the purpose of this research, I have deliberately concentrated my efforts of developing representations of York and Dijon, which capture a) macro-level social change, b) physical spatial change, and c) local people’s reflections about change in these cities. In order to develop macro-level representations of social change, I have relied upon the use of official statistics; for representations of physical spatial change, I have used various visual sources such as old and new photographs and postcards, maps and other available images; and for representations regarding local people’s reflections about the urban world around, I have used group interviews with children. The goal of each representation is to elucidate a fundamental aspect of the urban whilst also engaging with the multi-level interactions from which it emerges.

It is worth also noting that although this work concentrates on the methodological challenge of studying cities and urban regions from a critical realist and complex systems perspective, and specifically upon York and Dijon and the local schoolchildren interviewed for the study, the philosophy of this exploration is also relevant to other fields of study. As Reed and Harvey write,

Science’s cumulative laying up of knowledge ... proceeds by progressively stripping away layer after nested layer of reality. With each new advance, science probes deeper into nature and uncovers even more fundamental layers of physical reality. [...] Moreover, whether we are talking about the world of matter or the world of social systems, this ontological nesting of irreducible layers seems to apply with equal force.

(Reed and Harvey 1996:299)

In its small way, this research is part of that scientific project. A note now about the organisation of the thesis.
The Structure of the Thesis

The thesis is divided into three main parts, which group together ten chapters; three chapters form Parts I and II and four form Part III.

As noted, a general question underpinning this thesis relates to the methodological implications of studying a social thing from a critical realist and complex systems perspective. However, in order to begin answering this question, I first need to explain what this approach entails and describe the object of study, which is effectively the task of Part I. Chapter 1 sets out the conceptual framework with which I approach the research. It outlines the metatheoretical schema and the critical realist epistemological position adopted. A brief overview of what a ‘complexity’ stance involves is also presented before summarising the implications that the combination of these conceptual angles has upon how I approach cities and urban regions here.

Chapter 2 provides further details about what it means to consider a social thing as a complex system, and specifically what it means to understand York and Dijon as complex places. It has two main goals. The first is to explain the notion of city space informing the research. It does this by summing up the background issues drawn from extant urban research and literature that inform the notion of the ‘city’ in this investigation. The second is to break down the barrier that complexity terminology can sometimes cause. Therefore, it explains the meaning behind a series of ideas that are at the heart of complexity theory and which also influence this research, namely, the notions of ‘nested and multi-levelled systems’, ‘autonomous agents’, ‘self-organisation and emergence’ and ‘trajectories, phase-shifts and attractors.’

Chapter 3 explicates the object of study, which drives the methodological approach undertaken. Here, I introduce the idea of people in the city, specifically by explaining the critical realist and complex systems approach to children in the city as it used in this research. The chapter argues that children are not only active social agents who participate in the knowledge construction and daily experience of ‘childhood’, but that they are also agents of the wider social world in which children and childhood are embedded. This is done by briefly discussing ways in which children participate in systems from which the city emerges, such as ‘children and virtual space’.

Note also the glossary of complexity terms in Appendix A.
'children's moving between local spaces', the notion of 'children as producers' and 'children as consumers.' Finally, by drawing on discourses of 'being and becoming' which are present in both the literature on children and that on complexity, I argue that part of the methodological project of studying 'children in complex places' must also consider 'time', 'emergence' and 'relational interactions' as key themes in exploring how children interact with and within cities and urban regions.

Having set out the various components that give shape to the object of study, and the implications of adopting a critical realist and complex systems perspective to them, Part II describes the research design and methodological approach chosen to adequately capture a general understanding of change in York and Dijon. Part II also provides a narrative account of the fieldwork, the methodological and practical logistical issues encountered during it, and how I resolved them. I begin the section with an introduction describing how a series of methods were used. More precisely, I explain the way the research has been guided by grounded theory and justify this in the context of my overall critical realist and complex systems research perspective.

In Chapter 4, I discuss the ways in which census and administrative statistics have been used to explore York and Dijon. Because of the nature of both this research and this particular method, I also highlight the issues raised in doing cross-national research as well those involved in secondary research. Finally, I discuss the ways in which Key Informants were a vital part of collecting and understanding this statistical and administrative data.

I set out what was involved in another kind of method, which is generally referred to as documentary research in Chapter 5. Here, I explain how I went about using the following four main types of document: 1) local newspapers; 2) maps; 3) photographs, postcards and other images; and 4) to a lesser extent, urban policy documents concerning future plans and developments in each city. Whilst the first three kinds provide understandings of past change, the fourth is used to consider present and future change. This chapter also clarifies how the different kinds of document were used for the similar purpose of building up different representations of York and Dijon over time as a way of obtaining a general understanding of 'what happened when?' and in turn possibly gaining access to real 'traces' (Byrne 2002) of actual events.
Chapter 6 discusses the small group interview process used with local schoolchildren, living in York and Dijon. Again, I discuss the issues raised by this particular procedure. I justify this choice of method and the practical issues of gaining access and obtaining a sample of children through local schools. I also describe the interview process itself and how I managed the ethical issues of conducting research with children generally, such as how I tried to lessen power differences between the children and myself as an adult researcher and how I obtained informed consent from the children throughout the interviews. The last part of this chapter ends Part II of the thesis by describing the process of analysis and interpretation of the children's interview material, including how I transcribed the data and considered potential issues involved in the translation of the French interviews.

In Part III, the first three chapters are devoted to presenting the empirical findings of each of these different methodological approaches, whilst the last chapter develops a theoretical argument about change and continuity in York and Dijon based on an integrative interpretation of all the findings together. Thus, in Chapter 7, I provide a general story of change in York and Dijon using census and administrative data. In order to do this, I consider the boundary changes in each city. I argue that whilst the boundary changes present particular methodological issues, they also tell us something about change in these cities also. I then focus on two aspects of change: how the population in each city has varied over time and in the different spaces that make up the city. In other words, I build up an understanding of the spatial dynamics of people moving in and out of different places over time. I then also consider briefly the socio-economic patterns of the city as a whole. In this way, I develop a picture of not only people moving about locally, but also an understanding of the socio-economic patterns of change in the city as a whole.

Chapter 8 presents another kind of representation of York and Dijon by revealing what is found through using the different documents and telling a 'then and now' story using different kinds of visual sources. Through the use of images, I argue that whilst some areas of the cities have changed dramatically, other areas seem to have stood still, as if frozen in time; this is especially the case the city centre and especially so in York. I also suggest that the content and the availability of the photos
is significant, especially when we consider the way in which the local newspaper in Dijon tends not to show images of the city (whether old or new) yet in York’s local newspaper, old images of the city, especially the city centre, appear relatively regularly. Differences such as these, I suggest, raise interesting questions relating to agency, time and change.

Chapter 9 focuses on the children’s interview material and thus offers a third kind of representation of York and Dijon. Whilst the previous two chapters provide an understanding of past change, this chapter considers the cities’ possible futures. On the one hand, it argues that what the children say about the current city they live in raises new questions relating to the causality and structure entailed in producing York and Dijon as cities in themselves that were not raised using the other methods. On other hand, it describes various themes that emerge from what they say, which are mainly to do with their own reflections about York and Dijon and their different desire and projections for these place in the future. In so doing, it also highlights issues relating to agency and the notion of agents reflexively ‘being and becoming’ in changing places.

Chapter 10 proposes a theoretical argument based on all the findings together by joining up the notions of self-organisation and autopoiesis with Bourdieu’s concepts of the field and habitus. Here, I introduce the idea of the ‘complex city habitus’ as a way of explaining the interconnections between both the processes of change and continuity in York and Dijon detected through the official statistics, the visual sources, the children’s discussions about where they live now, the kind of city they would like to live in, and the city the children imagine they will inhabit in the future. In so doing, the chapter offers an integrative account of the different findings and provides an alternative representation of change and continuity in York and Dijon based upon them.

Finally, in the conclusion, I respond directly to the first question asked in this thesis: What are the methodological implications of a critical realist and complex systems perspective in the social world? I do this by critically reflecting upon the research itself and highlighting certain issues, which illustrate the potential of this approach to studying the social world more generally.
Overall, then, at one level, this thesis is about providing a description of urban change in York and Dijon since the 1970s. It considers cities as complex systems and is, therefore, concerned that the descriptions take into account the complex characteristics intrinsic to them. In addition, it considers children as agents involved in urban form in general and explores the ways in which local children may be involved in shaping the trajectories of York and Dijon specifically. At another level, the study is implicitly but constantly concerned with the methodological challenge of studying social phenomena in general. Therefore, it is interested in the strategies which social scientists might develop in order to gain a causal interpretation of past, present and future change, where human agency is at the core of the investigation.

All that said, let us now turn to Part I in which three chapters serve to explicate the object of study of this research. We begin, then, with a look at the general research perspectives and the related assumptions at the core of this methodological project.
PART I

EXPLICATING

THE OBJECT OF STUDY
Research Perspectives

This chapter lays out the conceptual framework of the research. Because the conclusions drawn from all stages of the research process are sensitive to the philosophical and theoretical assumptions invoked by the analyst (Manski 1995), it is necessary to expose these from the outset. The chapter is divided into four parts. Zooming in from the most abstract perspective to the most tangible, the chapter begins with a basic sketch of the metatheoretical schema that is implicit throughout the research. Secondly, it provides the main implications of the critical realist epistemological position inherent to the research. Thirdly, it briefly introduces what a ‘complexity’ stance involves. Finally, it summarises the implications of combining these research perspectives in relation to studying cities and urban regions.

Metatheoretical Schema

There are many philosophical perspectives available to researchers. Yet as will become clearer as I explicate the object of investigation, this particular philosophical perspective is selected both because of my own view of the social world, the extant literature relating to urban form and children and childhood, as well as the fieldwork carried out for this research. Simply put, this metatheoretical schema is the result of combining critical realism and complexity to explore urban form whilst also taking into account children’s views about the urban. The schema is not meant to represent all the aspects that combining critical realism and complexity bring into this research but instead aims to draw out some of the main ones.
Figure 3 above sums up the significant thought components that have shaped this project. The model has grown from Ritzer's (2000:638) 'Major Levels of Social Analysis' diagram. Ritzer develops his 'integrated sociological paradigm' by focusing primarily on micro-macro and subjective-objective dialectical
interrelationships. Essentially, I have extended his model by adding the other substantive issues of time, space, patterns, linearity-nonlinearity, agency-structure, which are also intrinsic to the metatheoretical approach that shapes my reflections about the ways in which cities and urban regions change.

For example, in terms of time, I am thinking in particular about the life-cycle, about interactions between generations (Alanen and Mayall 2001; Mannheim 1928/1984), and about the overall arrow of time from past to present to future (Gould 1987; Prigogine 1980). We cannot escape from time. We live in it in the form of immanent things that do not appear to change; by cosmic recurrences of days and seasons; by an apparent directionality from birth to death, and decay. It plays, therefore, a significant part in this research also, especially as I am interested in studying York and Dijon from past, to present, to future, and the ways in which children growing up in cities may shape the present and future of these places. In addition, by approaching children in schools for the research, I was also constantly reminded about the life-course, the body's process of 'growing up' and school being a place for 'younger' people.

*Space* has also been a constant 'physical' issue in the sense that the physical infrastructure of the city 'makes' the city what it is. Clearly, in a study such as this, which considers the process of urban change, space has been at the forefront of my thinking. Furthermore, *travelling* to schools, examining *maps*, going abroad for the fieldwork were all things that placed space at the core of this research. Space is also an administrative and statistical concept since all cities are part of a local, regional, national and global hierarchy and these spaces are often represented statistically through the various geographical zones used in the census. The boundary changes in York have also highlight the methodological issues involved in measuring changing spaces over time (see Chapter 7).

Grappling with the *agency-structure* dialectical relationships and interactions between *micro-meso-macro* levels has been a key aspect of trying to understand urban change. It should be said that I am strongly influenced by Bourdieu's approach to agency and structure and the dualities of subject and object as existing within one another. By this, I mean that I take social reality to exist, 'so to speak, twice, in
things and in minds, in fields and in habitus, outside and inside of agents' (Bourdieu and Wacquant 1992:127) (see Chapter 10). In addition, I perceive fields and habitus to be multi-dimensional, multi-level and nested phenomena (see Chapter 2).

The notion of patterns is as simple as it is complex. It has been an implicit and explicit part of my thinking and involves concepts as diverse as self-organisation, phase-shifts, punctuated equilibrium, etc.9 Whereas patterns are explicitly addressed in biology, this is as an area of study that has been almost entirely neglected in social science. Yet patterns are seen – we are dealing with something that is seen both arbitrarily through empirical representations of the real world and in the real world itself – in so many areas of social life that it is difficult to think of the social without them. Traffic rush-hours, stops, starts and flows of people walking around in the city, waking up in the morning and going to bed at night, going to work and leaving work, holiday time and term time, eating at lunchtime and going out with friends in the evening, etc. are all examples of the ways in which patterns form an intrinsic part of social life, and which I argue shape the way people interact with the urban space(s) in which they are situated. In turn, patterns influence the way that urban space changes. Detecting patterns is also a necessary part of causal explorations. Therefore, within the empirical data collected for this research, I was always on the lookout for patterns within it because I assumed that they might tell us something about the social and how it changes.

The notion of linear-nonlinear dynamics is placed in this schema primarily to remind us about the problems of causality, prediction and implementing change. It is there to underscore two interrelated things about social phenomena: they are dynamic and have multiple possible futures. (They also have multiple possible pasts and presents but as we can only influence the present and the future, these are what interest me most here.)

How we come to know what we know is the realm of epistemology and is always an implicit part of our investigations. As I will elaborate shortly, a critical realist

9 Although I would say that I have been fascinated by nature’s patterns ever since I was a child, it was D’Arcy Thompson’s ‘Growth and Form’ (Thompson 1942), which was introduced to by my supervisor, David Byrne, during my MA dissertation, that triggered my interest in them for understanding the social world.
epistemology is adopted in this research, not least because of its distinction between *intransitive and transitive* objects of knowledge (see below).

None of the levels of thought represented by the segments in the schema can be adequately dealt with apart from the others. All things relating to urban change are located in *time* and *space*, emerge from an *agency-structure* and *micro-macro* dialectic (see Ritzer, 2000), can be viewed in relation to one or more *patterns*, have emerged from *linear and/or nonlinear* dynamics, and are considered *intransitive and/or transitive* objects of knowledge. Therefore, any adequate consideration of causality must bear in mind, to a greater or lesser extent, all of these features. As we shall see, one of the reasons a complexity perspective is so useful to understanding the urban is precisely because it explicitly embraces each of these issues; hence, why it shapes this research in so many ways. Indeed, my aim for the remainder of this chapter is to explicate the critical realist and complex systems perspective as a way of further exposing how these research perspectives have significantly influenced this research.

**Critical Realism**

As already noted, the epistemological approach throughout this study is primarily informed by Bhaskar’s (1975; 1979; 1989) critical realism.¹⁰ There are two main aspects of Bhaskar’s philosophy that have especially influenced this work: his conception of knowledge and his understanding of cause. Both have proved to be helpful in thinking about how places change for a number of reasons.

First, Bhaskar’s ‘categorisation’ of knowledge provides a useful way of organising what knowledge is and what sorts of knowledge exist. Simply put, he distinguishes between transitive and intransitive objects of knowledge. The former refers to those things in which the production of knowledge is socially constructed or generated, e.g. concepts of science. Whilst real in the sense that they represent particular things to us, transitive objects of knowledge exist only in thought. They cannot be identified independently of their effects; nor do they exist independently of their effects either.

¹⁰ Note, as Danermark et al. (2002:1) point out, that ‘[c]ritical realism is not a homogeneous movement in social science.’ This is partly why I explicitly adopt Roy Bhaskar’s critical realism which has important nuances to, say, Margaret Archer’s (1989) version of critical realism.
From a realist position, these transitive objects are real in their consequences; hence also legitimate objects of empirical study.

In contrast, intransitive objects of knowledge refer to objects of knowledge, such as the density of mercury or the solar system: they exist regardless of, and independent from, human perception. Bhaskar explains:

We can easily imagine a world similar to ours, containing the same intransitive objects of scientific knowledge, but without any science to produce knowledge of them. In such a world... reality would be unspoken for and yet things would not cease to act and interact in all kinds of ways. In such a world the causal laws that science has now, as a matter of fact, discovered would presumably still prevail, and the kinds of things that science has identified endure... In short the intransitive objects of knowledge are in general invariant to our knowledge of them: they are the real things and structures, mechanisms and processes, events and possibilities of the world; and for the most part they are quite independent of us. They are not unknowable, because... quite a bit is known about them... But neither are they in any way dependent upon our knowledge, let alone perception of them. They are the intransitive, science-independent, objects of scientific discovery and investigation. (Bhaskar 1998c:17)

A fundamental premise to Bhaskar’s argument is that transitive and intransitive dimensions do not lie separately in terms of our everyday conceptualisations, but are both intimately related and dialectically interwoven. It is presupposed, therefore, that no thing can be adequately known apart from the overall system of (transitive and intransitive) realities in which it exists. No thing can be adequately known apart from the overall system of natural and social realities in which it exists (Laszlo 1996:145; cited in Montuori 1998:94).

In turn, explanations of the social world require an acknowledgement of its stratification, the possibility of emergence from certain interactions, and the ways in which causal mechanisms depend upon the effects of context (Sayer 2000:27). Furthermore, people act as reflexive agents who recursively interact within, and as part of, the knowledge systems in which they are situated. In turn, social research must contemplate a wide range of relational, co-evolutionary processes (of transitive and/or intransitive objects of knowledge) at multiple levels. Note, however, that the realist social researcher must always strive to avoid committing what Bhaskar refers to as the ‘epistemic fallacy.’ In other words, it is important not to confuse our knowledge about reality – whether it is thought to be a transitive or an intransitive
object of knowledge – with how reality is. As Archer (2000:469) puts it, ‘[o]ur epistemology is about something ontological, i.e., real, and it is imperfect because all human knowledge is fallible.’

Second, in terms of causality, a realist understanding of cause concerns the discovery of generative mechanisms that are contingent and independent of the events to which they give rise. Causal mechanisms depend upon the activation of causal powers and do not imply a regular conjunction of cause and effect events. In other words, contingency is central to any realist causal reasoning because it is assumed that the same initial conditions can produce different outcomes; conversely, the same outcomes can be produced by different initial conditions and different causes.

Bhaskar (1975) argues that it is useful to think of the world as three separate domains: the real, which refers to social or natural entities, mechanisms, powers, structures, etc.; the actual, which refers to events, i.e. the things that happen if and when the real is expressed or activated; and the empirical, which consists of experiences, whether or not they are observable. Each of these separate domains takes place within time and space. Therefore, explanation, writes Sayer (2000:14), depends on ‘identifying causal mechanisms and how they work, and discovering if they have been activated and under what conditions.’ Thus whilst the social world emerges from the ‘bottom-up’ from the real, the actual, to the empirical, in order to explain the world, our empirical investigations must move in the reverse order from the empirical, the actual to the real. A crucial mistake to avoid therefore in producing critical realist understandings of cause is what Bhaskar (1998a:646) calls an ‘emergent powers materialism, in which reasons are, and good reasons may be, causes.’ In other words, reasons may not explain real causes; it is the task of the social scientist to discover real causes using good reasons to explain them.

So what does this all mean to how we study cities and urban regions? It means that for every object of knowledge that is used to describe or understand a city or an urban region, it becomes important to try to think about it in terms of interacting transitive and intransitive objects of knowledge. In addition, we must think about how these different things produce, reproduce and emerge from one another. For example, however we might define, say, the concept of urbanisation, we are
assuming that it refers to change in a space and that change is caused by multiple things, some observable, some not. We might conceptualise this change in terms of a percentage increase in construction, be it housing, commercial, road surfaces etc. but the essence of the concept is that a space has changed over time; the change is real but what we measure (as ‘urbanisation’) is but a trace (Byrne, 2002) of that change. It is important to do this because it allows for error in our theories, abstractions and representations. Indeed, we must always take into account the possibility of error in our epistemological conceptualisations because it is so unlikely that we are taking into account all things that contribute to producing any object of knowledge.

It is worth noting that critical realism is not without its critiques. I will not provide a comprehensive defence of critical realism here since it has been done elsewhere (see Outhwaite 1987; Sayer 2000). However, I do want to address some common misconceptions. That said, note that whilst each of the points below are ones adhered to in this research, not all critical realists will necessarily agree with the extent to which I am making these claims. I state them primarily to clarify my position rather than to attempt to speak for all critical realists.

First, the philosophical framework is used as a way of understanding knowledge and the world. It does not claim to have the final word about what knowledge is or how the world is. In other words, I am not saying that the world is ontologically definitively and necessarily the way this philosophical perspective implies. Instead, I would argue that I prefer this view of the world because I am more convinced by it. However, I am open to the possibility that there are alternatives that may or may not change my conclusions. If an anti-realist claims something is ‘white’ and I perceive it as ‘black’, I am interested in our differences, prepared to defend my view, but willing to change it also depending on the arguments. Some may say this is taking a weak position. I would say that I am simply trying to make sense of what knowledge is, how and why the world may be constructed, and I am therefore able to adapt in order to learn more. This is precisely because I also take the (critical realist) view that any knowledge we have about the world will always necessarily lie in the transitive domain even if we use that knowledge to come closer to knowing the intransitive domain of the world (Archer 2000; Houston 2001).
Second, following on from the first point, the very fact that there is a distinction between transitive and intransitive objects of knowledge implies that a critical stance towards knowledge is adopted. Thus, even concepts of knowledge such as ‘gravity’, an example of a supposed ‘intransitive’ object of knowledge, is questioned and not taken as given or non-changing (because they are always necessary based upon transitive objects of knowledge). In a world without people, assuming it is possible to imagine such a thing, things would still hold steadfast to the Earth. That force which has been named ‘gravity’ would still exist. Yet how it is constructed, understood and conceptualised is historically and culturally specific. All knowledge is accumulative.

Third, to the extent that I presuppose the existence of transitive objects of knowledge which are socially constructed and sustained through social processes, and thus assume to some extent Derrida’s process of *différence* whereby meaning is obtained through a constant process of deferral – i.e. ‘Nothing… is anywhere simply present or absent. There are only, everywhere, differences and traces of traces’ (Derrida 1981:38) – I also presuppose that behind all the ‘traces of traces’ there probably lies some other thing(s) from which ‘traces of traces’ are constructed.\(^\text{11}\) That is, in the same way *one* answer to the question, ‘What came first: the chicken or the egg?’ is that something other than the chicken or the egg came first, critical realists assume that something other than our social constructions about the world exists to produce the social world as we know it. As Bhaskar writes:

> Realism in the sense that involves existential intransitivity is a presupposition of *discourse* which must be *about* something other than itself, of *praxis* which must be *with* something other than itself or of *desire* which must be *for* something alterior to itself. (Bhaskar 1998a:648)

How these intransitive objects of knowledge come to exist, may or may not be known but it is the task of science to attempt to discover them (through our use of transitive objects of knowledge). As Bhaskar writes elsewhere:

> whereas for transcendental idealism the imagined mechanism is *imaginary*, for realism it may be *real*, and may come to be established as such. What is imagined may be real; but what is imaginary cannot. ‘Imaginary/real’ marks an ontological watershed; ‘imagined/known to be real’ an epistemic one. [...] For transcendental realism that some real things and generative mechanisms

\(^{11}\) It is only possible to draw probabilistic assumptions about what lies behind the ‘traces of traces’ because all human knowledge is fallible (Archer 2002).
must exist can be established by philosophical argument (their existence, and transfactual activity, is a condition of the possibility of science). But it is contingent and the job of substantive science to discover which hypothetical or imagined mechanisms are not imaginary but real; or, to put it the other way round, to discover what the real mechanisms are, i.e. to produce an adequate account of them. (Bhaskar 1998b:50)

The point is that intransitive objects of knowledge exist whether or not human beings exist or know about them; they exist even if knowledge about them does not. Moreover, whilst they are independent of our existence or our knowledge about them, they play a part in what we are, how we interact in the world and the knowledge, experiences and meanings we produce and interpret about the world.

Fourth, critical realism does not negate the view that ‘objects are made not found’ (Fish 1990 cited in Crotty 1998) nor does it preclude that we are born into a world of systems of meaning (Crotty 1998). Whereas, ‘anti-realists’ (e.g. some adopting say a constructionist position) assume that ‘social realities are meaningful by virtue of the very act that brings them into existence’ (Crotty 1998:56), critical realists assume that the interactions that cause realities to become meaningful to us in the first place may be unobservable to us but – and this is a big but – this does not mean that they are unimportant vis-à-vis understanding how we interact in and with the world; indeed quite the contrary. As Price (1997:8) comments, although complexity theorists ‘accept that there is a reality “out there,”’ their paradigm recognizes that complex interactions can obscure that reality.’ In this sense, critical realism allows for the unknown and it is primarily for this reason that it is adopted here.

Finally, at its extreme, a social constructionist perspective on the social world assumes that there are ‘unparalleled opportunities for creative deliberation and action’ (e.g. Gergen 2001:vi). However, a critical realist perspective assumes that although there may be opportunities for deliberate social action, when combined with complexity, there are usually real limits to what is possible also. For example, the weather in any place and time usually remains within certain limits, however flexible those limits are (see the notion of attractors below). Thus, whilst it is the case that I can choose to transform my ‘woman’s’ body into a ‘man’s’ body, this is still a long way off from transfiguring my body into a flying bird or being able to run as fast as a
cheetah etc. Furthermore, due to the arrow of time and irreversibility of time, limits are also always *becoming* and therefore changing and open to radical change.

That said, I also support a less extreme social constructionist position with a stronger materialist base (e.g. Berger and Luckmann 1967) whereby ‘real limits’ may merely appear as such because they are socially constructed in this way. After all, they too are only objects of knowledge, and therefore fallible. This is not a contradiction but it is certainly a complication of the ontological and epistemological dialectic. Either way, in terms of how we understand human agency, it does *not* rule out the possibility of social transformation, nor does it eliminate the need to examine social processes from a political, moral or ethical standpoint. Instead, critical realism invites the social researcher to learn about the social world *as it is*, to consider *why* it is the way it is, *how* it came to be that way, and in turn consider what might or might not be possible in terms of our individual and collective future choices of change.

Whereas critical realism offers the standpoint that ‘causal explanations are directed [...] towards the uncovering of causal properties and processes’ (Ekström 1992:83), as I now go on to explain, complexity offers researchers ‘guidelines’ (Byrne 2001) as to how the world is.

**Complex Systems**

It is difficult to sum up the essence of the complexity programme. As Cilliers (1998:2) comments, ‘one should not be surprised if complexity cannot be given a simple definition.’ This is primarily because complex systems are understood through a combination of interacting characteristics, which are also often referred to using a particular vocabulary. As noted earlier, I have included a glossary of complexity terms in Appendix A to help tackle this vocabulary.

Furthermore, just as for Derrida (1997), meaning is never fully present in one particular manifestation of a word – it is always ‘not there’ and always ‘not that’; meaning is always moving along a chain of signifiers – so too do the characteristics of complex systems gain their meaning through each other also. Indeed, Cilliers (1998:80) writes that meaning ‘is the interplay between all the words (or, rather, all the signs) in the system. It is the effect of the dynamics within the
system, not of direct relationships between components of the system and objects in
the world.' Similarly, to understand cities as complex places, I am interested in
understanding the effects of the interplay between all the characteristics and
dynamics within a place.

That said, Holland (1994:310) helps by listing several characteristics in outlining
complex adaptive systems (CAS). He explains that CAS consist of large numbers of
components, agents, interacting with each other. He argues that it is the concerted
behaviour of these agents, the aggregate behaviour, that we must understand, (e.g. an
economy's aggregate productivity). Moreover, he stresses that we are dealing with
nonlinear systems. Allen (1997) provides a definition of a nonlinear mechanism:

A non-linear mechanism is one in which the change in a variable is not
simply proportional to its size or local concentration. It therefore reflects
some 'collective' behaviour of some kind which affects individual
molecules, so that they react 'faster' or 'slower' than they would if they
were alone. It is not surprising therefore that the consideration of non-linear
effects leads to a profound revolution in our understanding of the collective
properties of systems, and of societies. (Allen 1997:10)

In other words, the nonlinear interactions that generate a city's aggregate behaviour
cannot be derived by simply summing up the behaviours of isolated agents.

Holland continues:

The agents in CAS are not only numerous, they are also diverse. [...] This
diversity is not just a kaleidoscope of accidental pattern. The persistence of
any given part (agent) depends directly on the context provided by the rest.
[...] Moreover, the diversity evolves, with new niches for interaction
emerging, and new kinds of agents filling them. As a result, the aggregate
behavior, instead of settling down, exhibits a perpetual novelty. [...] CAS
agents employ internal modes to direct their behavior. [...] Internal models
add still further to the complexities of aggregate behaviour.

(Holland 1994:311)

The value of approaching urban form from a complexity standpoint arises for a
number of reasons. The main one, I think, lies in the fact that previous efforts have
failed to grasp the multi-dimensionality and nonlinearity of the changing world in
which we live. Those who adopt a postmodernist position correctly highlight the
importance of that which is local. Rather than an engagement in totalization,
emphasis is placed upon localised heterogeneous sociological microanalysis (Lyotard
1984). However, such an approach is clearly problematic because it perceives the whole as reducible to the sum of its parts; the parts themselves are seen as a complicated network of ‘local discourses.’ Postmodern approaches to the urban are therefore criticised for dismissing attention to general causal processes.

Best and Kellner (1991), on the other hand, argue that a more adequate explanation of contemporary social form must connect the macro-analyses of critical theorists with the microanalyses of postmodernists. Thus, there is a call to recognise that social phenomena emerge from micro-macro dynamics. Dear and Flusty (1998) respond to this call and argue for a ‘protopostmodernist’ approach in which urban processes are understood specifically as emerging from local and global restructuring of co-evolutionary interdictory networks within social and spatial realms. However, whilst taking postmodernism further, Dear and Flusty’s account is still not satisfactory because they do not consider that the patterns emerging from micro-macro interactions of open systems are complex. By ‘complex,’ I refer to specific properties characteristic of complex adaptive systems such as contingent and emergent behaviours (e.g. self-generation and self-organisation) that are widely observed during the interactions of multiple networks of nested, open, far from equilibric, dissipative systems.13

The complexity turn in social sciences, however, offers an alternative approach that not only reconnects all things but also addresses cause as contingent, multidimensional and emergent.14 I do not provide a thorough account of complexity or of the emerging work relating to it.15 Instead, I list some main features that tend to characterise complex systems (adapted from Cilliers 1998). In brief, complex systems:

- Consist of multiple and diverse components.
- Are usually open systems.
- Interact dynamically together.

13 See complexity glossary in Appendix A.
14 What is particularly interesting is that this literature emerges across the disciplinary boundaries, or perhaps more accurately, the material and its contents are dissolving the walls between the academic disciplines (Gulbenkian Commission 1996).
15 Instead, I refer the reader to Appendix A which includes a list of useful introductory texts on complexity as well as a glossary of some of the main complexity issues and concepts.
• Exist as semi-permeable nested systems.
• Co-exist simultaneously as parts and as wholes.
• Exist such that route between them can usually be covered in a few steps.
• Consist of modulated ripple-effect patterns of influence, which can occur in all directions between them.
• Interact mostly amongst their near-neighbours.
• Are nonlinear and operate under conditions far from equilibrium.
• Exhibit processes of self-organisation.
• Emerge from local information and local interactions.
• Are time-sensitive: they co-evolve and adapt to changes through time such that their past is co-responsible for their present; the time interval taken during and between their interactions has knock-on effects regarding the range of possible futures available in their evolution.\(^\text{16}\)
• Are space-sensitive: the topography in which their interactions occur may affect their evolution through time and in space.

This list is far from exhaustive but it serves as a starting point towards understanding some of the characteristics that are assumed to reflect the urban world explored in this study.

These characteristics are found in all complex systems. Regardless of the nature of the constituents, there are shared properties common to all complex systems, be they social, biological or cosmological. The extent to which the characteristics manifest themselves as observable properties varies from system to system, from time to time, and from place to place. Yet, something about the system's general behaviour can be obtained from knowledge of these shared properties.

A word of caution however: the actual behaviour of any specific system depends upon the local context of that system. Therefore, to understand what is going on in any system and, in turn, to learn more about the possible futures of that system, we

\(^{16}\) The use of terms such as 'evolving' or 'evolution' in this study refer to a general notion of change over time. I am not implying a Darwinian stance but rather one of adaptation.
must explore the ways in which each of these general manifestations is expressed at the local level. (This is similar to the way that every human being has fingerprints yet each fingerprint is unique to each person.) Hence, we must examine each particular locality to learn how these general behaviours are actualised within each locality. As Stewart and Cohen (1997:8-9) suggest, there is a need to incorporate ‘two disparate viewpoints, which complement rather than contradict each other’: one which takes ‘the system to bits – in a conceptual sense – and sees how those bits fit together. The other looks at context and sees how the system is shaped by what lies around it.’

Most of these points are integrated into the research by situating them within the other interconnected debates. Indeed, the remainder of this chapter explicitly discusses the implications of combining critical realism and complexity together in terms of researching the social world.

**Discussion: Critical Complexity**

In sum, then, critical realism concerns the discovery of generative mechanisms (which may or may not be exercised, actualized, detected or perceived) within an objectively existing social reality, whereby that which is in the world exists independently of our conception and perception of it. It is anti-positivist and post-empiricist. It defends the possibility of causal explanation, accepts hermeneutic concepts of social reality as communicatively constructed in a subject-to-subject relationship, and it involves a critical dimension whereby active change is possible. On the other hand, a complex systems approach involves a distinct understanding of how the world is, how its constituents interact with one another and the sorts of patterns of change (Waldrop 1992) that are likely to occur. A complex systems perspective is not a strict claim about how the world actually is because it assumes that the specific characteristics of the local and the macro- affect one and are also specific to time and space. Instead, it provides a general framework of ideas with which to investigate the world in order to understand it more specifically.
Combining critical realism and complexity in this way is proposed by Reed and Harvey (1992, 1996) and Byrne (1998b; 2001; 2002). Reed and Harvey (1992) suggest that linking critical realism and complexity produces 'a scientific ontology which fits Bhaskar's philosophical framework,' which treats nature and society as if they were ontologically open and historically constituted; hierarchically structured, yet interactively complex; non-reductive and indeterminate, yet amenable to rational explanation; capable of seeing nature as a 'self-organising' enterprise without succumbing to anthropomorphism or mystifying animism. (Reed and Harvey 1992:359)

Such an approach, writes Byrne,

provides us with a way of understanding which takes account of the specificity of unique local context whilst providing a general story of how the world works and how human beings work in that world, even if that general story is itself local, in time as opposed to space. (Byrne 2001:9)

Similarly in this research, I am concerned with urban morphology over time, how the urban changes, and in particular the methodological challenge involved in studying a changing thing. Combining critical realism and complexity, I suggest, is an appropriate framework to study urban change because it allows for a combined account of time, space, non-linearity and agency. Furthermore, it compels us to step back and take note of urban macro-phenomena and to lean forward to re-observe that which is present at the urban micro-level. Our investigations must follow iterative patterns of understanding – not unlike Heidegger’s hermeneutic-circle – that systematically move between macro- and micro-levels. In this way, the multi-dimensional, contingent and emergent dynamics or urban space may be also explored. In turn, feed-forward/feedback, and constraining/enabling dynamics operating at different levels may be considered too. Moreover, this perspective presupposes that it is possible to know the world using observational and empirical data that relate to multiple cross-sections to explore the nature of change over time.

So how are we to think of York and Dijon? What, more specifically, are the implications of a complex realist approach to our conceptualisation of cities? How does the theory practically relate to these places? What does it mean to York and Dijon? How does Bhaskar’s philosophical framework influence the way these complex urban systems17 might be studied? I address these questions in the next chapter.

17 Throughout this study, the term 'urban system' is used to refer to any system, known or unknown, that contributes to the emergent city form.
Chapter 1 provided an overview of the complex and critical realist perspective adopted in this research. This chapter continues to set out the object of study by providing more detail about what it means to consider York and Dijon as complex places. It is divided into two main parts. It begins with summary of the notion of city space that informs this research. It then draws out some of the most important characteristics of complex systems that influence this study. That is, I briefly consider the issues of ‘nested and multi-levelled systems’, ‘self-organisation and emergence’, ‘trajectories, phase-shifts and attractors’ with specific reference to understanding York and Dijon as complex places. By the end of the chapter, the reader will have a better idea about how the cities of York and Dijon are conceptualised in this study.

Cities as Complex places

Cities matter. With over half of the world’s population now living in urban areas (United Nations 2001), it becomes increasingly important to understand the generative mechanisms that produce these places and the impacts that such places have upon individuals. As Parkinson et. al. (2004:68) note ‘European governments, the European Commission, many regional governments and agencies in continental Europe recognise that to achieve national economic success it is necessary to have successful cities.’ In understanding the cities of York and Dijon as complex places, I am assuming two things: 1) York and Dijon are cities, and 2) they are complex systems. What exactly am I meaning by these two things? The first may seem obvious, but as Pumain suggests, it is far from it:
To define an urban entity is a difficult problem, because towns and cities can receive a variety of social meanings. They are usually considered as a permanent grouping of resident population on a small quantity of land, but no universal threshold of population density can be associated to the definition of a town for differentiating urban from rural settlements. More of the time, urban features are associated to non-agricultural activities, but the portfolio has considerably evolved over time with further progress of social division of labour. (Pumain 2003:2)

So perhaps an even simpler definition is preferable. Perhaps that proposed by Wilson (2000) whereby cities and urban regions are understood to be those entities which make up of an infrastructure relating to the activities of populations? Yet that "infrastructure" has been considered from a variety of perspectives, each perspective bringing its own particular type of focus. I do not intend to provide a review of the extant literature of urban form. There is simply too much of it. Besides, many other authors have already made valuable attempts to do something of the kind, and even many of these authors take quite different approaches to how the literature is thematically classified (see, among others, Byrne 2001; Clark 1982; Dickens 1990; Hall 1998; Pacione 2001; Savage and Warde 1993). Instead, I provide an overview of some the key aspects of this vast range of work that have been important to shaping my thinking for this research.

As an initial observation, I suggest that at the intersection of many authors' works is that space is "produced" (see, for example, Allen 1997; Castells 1989, 1996b; Harvey 1989; Lefebvre 1974/2003; Massey 1984). Moreover, "space is both constituted and constitutive" (Tilley 1994:17). It is produced by certain processes and it produces these processes. In Soja's words, this "socio-spatial dialectic" is such that:

[the structure of organized space is not a separate structure with its own autonomous laws of construction and transformation, nor is it simply an expression of the class structure emerging from the social (i.e. aspatial) relations of production. It represents, instead, a dialectically defined component of the general relations of production, relations which are simultaneously social and spatial. (Soja 1980:208)

In other words, the urban is more than simply a physical concept. Rather, it is a dialectical production of the social and the physical, which is also always situated in time.

Following on from this premise, many of the debates about urban space revolve around questions such as: What produces the urban spaces that we see today? What are the main driving forces? What are the most important effects upon how space is
produced? What things best describe contemporary urban form? What are some of the fundamental changes to modern spatial form compared to how it appeared to be in the past? Who is most effected by the changes?

I recognise I am condensing many ideas here; some will think too many. Much of the work over the past one hundred years that attempts to answer these broad questions falls into the three main schools of thought. Chronologically developing from one to the other, each school responds to some extent to the issues associated with the previous one(s). Each seeks to provide a general theoretical model of urban form, including a framework for understanding urban development. The two most cited of these schools of thought are the Chicago and the Los Angeles (or California) Schools. Both approaches are important to this research because although I take a different perspective, it extends these two in specific ways. Hence, I sum up these two approaches before elaborating the specific approach adopted here.

The Chicago School (of Urban Sociology) dates back to the 1920s. It adopts a Darwinian positivist approach to ‘the human ecology of city.’ It is most commonly associated with the ‘classic’ ethnographic-style work of Park, Burgess and McKenzie (1925), The City. Based upon the belief that human behaviour follows the Darwinian principles of evolution and ‘survival of the fittest’, much of this work revolves around descriptions of what can be seen as a competition for space(s) among different actors. The result, according to the Chicago school, is that the city develops around an organizing central core around which a series of concentric rings emerges; hence, the urban model most commonly associated with this approach is referred to as Burgess’ concentric ring model.

In contrast, the Los Angeles school, originating in the late 1960s, suggests that city space, as well the growth of city space, is much more fragmented than the ‘organic’ model developed by the Chicago school. It is most often associated with authors such as Davis (1990), Jameson (1992), Scott (1988), Soja (1989), etc. A main theme running through their work is that of spatial divisions and fragmentations. Typically, the spatial divisions are described in terms of economic, social and cultural patterns within the general city space. Different authors place different emphases on the causes and effects of these spatial divisions, but what ties them together is that they argue that divisions are driven by the changes in the global economy. For example, Lash and Urry (1987) focus on the ‘flexible’ forms of production of disorganised
capitalism. Castells (1989; 1996b; 1996/2000; 1997) concentrates on the networks of production, experience, power and culture. Massey (1984) considers the uneven 'spatial divisions of labour.' Others (e.g. Lash and Urry 1994; Sassen 1991, 1994; Zukin 1995; 1996) highlight the 'reorganisation of the financial industry', or the cultural consequences of the global political and symbolic economy. Zukin (1996), for example, distinguishes two approaches to exploring the global economy, which both serve to elaborate upon how contemporary society and its interconnections shape one another: one approach accents the political economy and the material conditions in urban places resulting from local and global urban development processes; the other emphasises the symbolic economy and the relationship between culture and power.

From these diverse approaches, urban space is akin to what Harvey (2000:77) describes as 'a geographical mosaic of socio-ecological environments and ways of life.' In other words, the focus is placed on understanding 'the differentiations, interactions, and relations across and within scales' that constitute urban space (Harvey 2000).

Some authors, such as Dear (2000), Dear and Flusty (1998), and Soja (1989) follow a slightly different argument by taking a postmodern approach to the urban. They suggest that although the processes of production are intrinsically connected to capitalist modes of production, the nature of the new global order and the spatial fragmentations that emerge from it are so fundamentally new that they must also be theorised in a new way as well. They argue that it is not simply that global forces organise the local socio-spatial organisation but that the local dynamics between the local fragmented spaces are also key to how urban space is shaped. Moreover, in the postmodern city, the urban peripheries, in particular the 'edge cities' (Garreau 1992), organize the centre not the other way round (Dear 2000). Thus, they highlight local causal dynamics and the need to think from a bottom-up perspective.

The third school of thought, which I refer to as a complex systems approach to the urban, is most relied upon in this research. Although much influenced by Peter Allen's work in the late 1970s (see, for example, Allen and Sanglier 1978, 1979a, 1979b), this approach really only began to take serious precedent in the early 1990s as a new wave of urban theorists integrated what was becoming known about complex systems in general; the advances in computer simulation techniques have
also driven the change of direction. Here, authors explicitly consider cities as complex self-organising systems (e.g. Allen 1997; Allen and Sanglier 1981; Byrne 1998b, 2001; Dendrinos 1996; Portugali 1997, 2000; Wilson 2000, 2002). How does this shift in perspective affect how we understand cities and urban regions? What really makes this approach different from the others just mentioned? What does it offer that the other approaches do not? What are the implications upon how we study cities? What are the main assumptions to understanding cities as complex places?

One of the main differences to how the urban is perceived compared to the above two approaches is that it is dynamic. Indeed, relative to the Chicago and Los Angeles’ points of focus, it is arguably upon the patterns of dynamics that researchers concentrate. Urban space is seen to evolve, adapt, and change because it is flexible, plastic and malleable. Indeed, Waldrop (1992:332) goes as far as saying that from a complex systems approach to ‘the world is a matter of patterns of change, that partly repeat, but never quite repeat, that are always new and different.’

Although the perception of place as a dynamic and nonlinear entity involves some very new and different implications for how we study cities and urban regions, it does not entirely negate the Chicago or Los Angeles schools of thought. On the contrary, it both incorporates and extends many extant theoretical and empirical findings about cities and urban regions. For example, it still assumes that macro-level capitalist modes of production are key to shaping modern urban form. However, importantly, the dynamics through which these related processes occur are understood in different ways. That is, they are assumed to be nonlinear. This is a crucial distinction and has important implications. Nonlinearities often emerge as contextually dependent phenomena. For instance, although linear patterns for a nation may be observed, nonlinearities can be extreme for certain subgroups of that population (Brown 1995:72). In Chapter 7, we shall see this discrepancy between linear/macro-level observations versus nonlinear micro-level observations in relation to population growth and socio-economic change across the city in York and Dijon. Through the notion of nonlinearity, a complex systems perspective to the city assumes the Darwinian approach of the Chicago school whereby natural selection is understood as a force driving adaptation. However, it also presumes that Darwinian dynamics alone cannot, and do not, explain the changing form of urban space. In addition to selection through the survival of the fittest, there are thought to be (feed-
forward and feedback) mechanisms which manifest themselves as self-organising processes also (see Kauffman 1993).

Furthermore, a complex systems perspective to cities assumes that urban dynamics occur at macro-, meso- and micro levels. We are talking about phenomena that are inherently multi-scalar. As time goes by, the connections that make up an urban place become more complex, and so too does the urban become more fragmented through a process of spatial specialization. Therefore, this perspective also supports the importance placed on the fragmentation of space(s) set out by the Los Angeles school. In addition, however, through the notion of phase-shifts (see below), it acknowledges the arguments put forward by certain postmodern urban theorists whereby the urban can undergo – and indeed has undergone – qualitative changes in which new emergent spatial forms appear. The importance of contextualizing generative processes is fundamental: global dynamics there may be, but their effects at the local level remain specific to that place. Let us consider this third perspective more closely by considering how it affects our understanding of York and Dijon.

**York and Dijon as Complex Cities**

As we saw in the previous chapter, many characteristics are implicit to understanding York and Dijon as complex places. However, four particular sets of complexity ideas have played important roles in shaping this research, namely that York and Dijon are ‘nested and multi-levelled systems’, ‘autonomous agents’, which exhibit processes of ‘self-organisation and emergence’, and in which ‘trajectories, phase-shifts and attractors’ help us to study them. Let us consider each of these ideas in turn and how they affect how we think about York and Dijon.

**Nested and Multi-levelled Systems**

York and Dijon are nested, multi-level systems. The idea of nestedness is simple but it has important implications. It assumes that York and Dijon, as well as the sub-regions that constitute them, are entities in themselves as well as integral parts of larger wholes. Nestedness presupposes that things are organised similarly to a set of Russian Dolls: they each remain individual parts yet are simultaneously inseparable from one another since they also consist of one another. Importantly, however, they
are not necessarily hierarchical (Byrne 2001). Some of York and Dijon’s components
are assumed to interact together and exhibit different behaviours than if they
remained alone (in much the same way as the cells of the body interact together as
organs).

In this way, York and Dijon are understood as nested within England and France
respectively; each country is nested within a larger global system. We can say that
today’s city of York consists of 22 wards (although we will see in Chapter 7 that this
has not always been the case), which constitutes ‘York Unitary Authority’, which is
situated in North Yorkshire, a county in the north of England. Likewise, Dijon is
located in the ‘Département’ of the Côte d’Or located in the region of ‘Bourgogne’
(or Burgundy) in the North-East of France. Each city is part of a global system,
which constitutes a phase-space (see below) within which the respective countries
are located (Byrne, 1998); the national system constitutes a phase-space to the cities
within them also. Yet we can also understand each city to be constituted by
individuals of different ages; individuals who are nested in time in terms of different
generations as well as nested within social groups that are also nested within other
social groups, such as families, households and communities, firms and institutions,
suburbs and ‘quartiers’, etc. Therefore, the boundary of any nested system is
arbitrarily defined relative to the other boundaries which constrain and define it (see
Cilliers 2001; Wilson 2000). In turn, the dynamics that go on between these nested
systems often occur within and across multiple levels.\(^\text{18}\)

Hence, although I do not explicitly deal with the global or political circumstances of
York and Dijon, I start from the position that they each compete against other cities
for resources (which are mostly economic, political and to some extent, spatial as
well) and the competition for these things takes places at global, national and
regional levels simultaneously. In addition, I assume that

\[\text{[t]he niche a city occupies in the world-system will deeply affect the nature of that urban area, but this niche is subject to change as world-system cycles and trends rearrange the global order, disrupting the ... 'flows' among cities, and therefore altering the interrelations among locales.}\]

(\text{Smith A. and Timberlake 1995:80-81})

\(^{18}\) See Cilliers (2001) for a discussion on the methodological issues relating to modelling boundaries and hierarchies that are necessarily raised by the nested and hierarchical nature of complex systems.
Moreover, I assume that York and Dijon are ‘open systems where the relationships amongst the components of the system are usually more important than the components themselves’ (Cilliers 2001:140, emphasis added), and furthermore, that the urban emerges from the interactions of these nested and multi-levelled dynamics. This is in stark contrast to the Chicago School’s interpretation, in which cities were viewed as nucleic nodes of a greater network that once established, were reinforced by the general forces around them. Instead, we have a system of cities (Bourne and Simmons 1978; Fujita et al. 1999) that can only be understood through its multi-levelled interactions. One of the most visible ways of seeing this system of cities is to look at the roads and transports systems that connect them to other places (see Figure 4 and Figure 5 below for illustrative examples of some of York and Dijon interconnections to other cities). Telecommunication and financial networks are also important flows and networks that both facilitate and create the system of cities.

Thus, as parts of a larger global system, there are flows and dynamics taking place across levels as well as within them. For example, York and Dijon happen to be twinned with one another, so every summer, in each city, there are groups of schoolchildren on their respective French or English exchanges. At this point of the year, the two cities are particularly connected to one another for these people who are involved in these exchanges. At the same time, however, it is the tourist season in both places, which attracts thousands of visitors from all over of the world. In addition, locally, regionally and internationally, the usual exchanges of goods, services and finances take place in both these cities as well. As Albrow (1996) points out:

The social activities which transpire in any one area are disconnected from each other, but equally are parts of social worlds which may extend beyond localities and national boundaries to the globe as a whole. This applies not simply to the more obvious economic linkages, work for a multi-national, or a retail outlet of a national firm, but equally to kin, friendship and special interest relationships.

(Albrow 1996:156)

Albrow (1996) develops an idea of Appadurai’s (1990) and suggests that we characterize these real networks between agents as socioscapes; the participants of which each socioscape occupy different sociospheres.19 In any one local place, hugely diverse sociospheres are always intersecting. In York, the children on their

19 Albrow (1996:161; italics added) explains that the term sociospheres is used to refer to ‘the celestial imagery of spheres, [it has] nothing to do with shape but much to do with motion.’
school exchanges pass the tourists and local residents without either interfering with the other. These relational patterns form part of the city fabric. These interlinked patterns give each place its own idiosyncratic ‘buzz.’ There is something about ‘York’ and ‘Yorkshire’ that makes each place what it is, just as there is something about ‘Dijon’ that is also about ‘France’ and ‘la Bourgogne’ – indeed in Chapter 9, we learn that the local children also voice this nestedness intrinsic to each place.

It is important to note, however, that whether we think of these networks of flows as socioscapes, roads, telecommunication wires, or financial relations, they all involve individuals living locally in time and space. Where there are individuals, there is also agency, because however contingent, accidental or deliberate the reasons are as to why these networks are set up in the first place, the fact that they are maintained suggests collective reflexive intention among the local interacting agents. One implication to studying urban places as complex systems, therefore, is that the methodology adopted must allow a) the possibility of capturing these various social inter-connections, and b) agency to be explored. As we shall see, the methodology adopted in this study seeks to do this. Furthermore, we will see in Chapter 7 that the socio-economic data reveals linkages in the form of foreign investors. In Chapter 9, we consider the ways in which the children spoke about various national linkages.

**Autonomous Agents**

Another issue at the core of thinking of York and Dijon as complex cities, which is also somewhat related to the idea of nestedness, is that these places are in themselves ‘autonomous agents’ (Kauffman 2000). This is a complicated concept but very simply put, Kauffman’s autonomous agent is ‘a self-reproducing system able to perform at least one thermodynamic cycle’ and act on its own behalf ‘to make a living in an environment.’ Thus whilst the cities are highly interconnected with other places, they also act as autonomous entities through the emergent behaviour of micro-level individuals. Moreover, both the city and the individuals and institutions that constitute it are considered as autonomous agents. That is, York and Dijon are each understood as a ‘self-consistent coevolutionary construction of autonomous agents’ (Kauffman 2000:74). Over time, the cities each ‘become as diverse as possible, literally expanding the diversity of what can happen next. In other words, [the cities] expand their own dimensionality as rapidly, on average, as they can’
Indeed, if we think about the history of any city, it has indeed undergone a series of diverse transformations as if expanding its repertoire of what it can be.

Whilst the implications of the notion of York and Dijon as autonomous agents are vast – Kauffman requires an entire book to explain them (and even then, he has condensed some very complex ideas) – I think one of the most important ones is implicit in the reasons behind the title of his book, i.e. Investigations. Kauffman explains that the reason he has blatantly borrowed from Wittgenstein's own book title, Philosophical Investigations, is because he is trying to say something similar about the Universe as that which Wittgenstein claimed about language games. He writes:

Wittgenstein’s point is that one cannot, in general, reduce statements at a higher level to a finitely specified set of necessary and sufficient statements at a lower level. Instead, the concepts at the higher level are codefined.

(Kauffman 2000: 52)

Kauffman’s (2000:53) point is that ‘[a]n autonomous agent is a relational concept’. Thus, a city is an entity in itself that cannot be defined by descriptions at a lower level. Yet at the same time, it is also completely inter-dependent upon other cities and places and even the lower-level entities also. It is this paradox between a city as a multi-dimensional entity dependent upon its constituents for its own re-production and yet autonomous and independent to its constituents that raises particular methodological issues which social researchers need to learn to address. Again, this research explicitly does this by trying to understand how different representations of York and Dijon – each representation highlighting a particular level of observation over a particular timeframe – relate to one another, thereby developing a sense of each city as an autonomous entity at the same time as acknowledging its constituents.

Self-organisation and Emergence

Self-organisation is another key complexity theme that runs throughout this work. As the term suggests, it relates to the idea that cities and urban regions self-organise themselves. Importantly, however, it refers to self-organisation without a top-down control system but instead from local bottom-up behaviour. Self-organisation is the idea behind what ‘makes’ birds fly in flocks, fish swim in schools, and people live together in cities. It refers to macro-level behaviour that emerges from micro-level
Figure 4: Major motorways connecting York to other UK cities
(Source: http://www.york-england.com/communication_road.shtml)

Figure 5: Local networks of travel in France
(Source: adapted from Pumain 1989:72-73 cited in Mérenne-Schoumaker 1996:40)

20 This spatial image is created through mapping which town local inhabitants most frequently visited (whatever the reason). It is based upon on each of France’s 7000 ‘communes.’
interactions, which is also why it tends to be closely associated with the concept of ‘emergence.’ Whilst the mechanisms behind this pattern of behaviour are still being explored, the current thinking about how self-organisation occurs is that (relatively) simple rules are enacted by individual agents at the local level to produce macro-level structures and patterned dynamics. As Johnson explains, local is key to understanding the power of emergent behaviour:

We see emergent behavior in systems like ant colonies when the individual agents in the system pay attention to their immediate neighbors rather than wait for orders from above. They think locally and act locally, but their collective action produces global behavior. (Johnson 2001:74)

Of course, neither adults nor children are ants but are conscious reflexive agents; their social environment is not, therefore, without meaning. Consequently, the sorts of interactions that take place at the local level that social scientists are studying are far more elaborate than Johnson’s explanation suggests.

The important thing about self-organisation and emergence to note here, however, is that the whole cannot be understood in terms of its parts alone. Macro-level regularities, such as birds flying in flocks, ‘result from the collective behavior of locally interacting objects without those regularities being imposed on those objects initially’ (Fontana and Buss 1994:229). We are dealing with systems that cannot be understood analytically through reductionist explanations. Crutchfield explains:

[e]mergence is generally understood to be a process that leads to the appearance of structure not directly described by the defining constraints and instantaneous forces that control a system. Over time "something new" appears at scales not directly specified by the equations of motion. An emergent feature also cannot be explicitly represented in the initial and boundary conditions. (Crutchfield 1994:516)

Note that we are not dealing with micro-level or macro-level interactions; nor are we dealing with micro-level and macro-level interactions. Rather, we are dealing with nonlinear inter-relationships that involve micro-macro interactions. Note also that self-organisation and emergence are only meaningful relative to the context of the processes themselves (Crutchfield 1994:526). The ‘newness’ of emergent phenomena
is only ‘new’ with respect to other structures in the underlying system; a system is only ‘self-organising’ when the emergent phenomena take on internal meaning and functionality within the system itself (Ibid). As we shall see in Chapter 10, the concept of self-organisation and in particular that of autopoiesis, which we will see is a specific type of self-organisation, are key concepts to the ways in which I come to understand the inter-relationships observed with the different empirical representations of change and continuity in York and Dijon.

**Trajectories, Phase-shifts and Attractors**

From the point of view that York and Dijon are complex cities, these two places are understood as historical entities. Furthermore, because this study explores change, it is implicitly engaged with the notion of trajectories; trajectories are essentially stories about change. The present day cities of York and Dijon are the results of thousands of years of geological physical and human interaction. They have each metamorphosed (Byrne 2001) several times throughout their long evolutionary trajectories, from being sites of Roman military occupation, (and then a Viking settlement in the case of York), to Medieval commercial towns. Most recently, many cities have shifted from industrial to postindustrial cities. As Soja (2000:XII) sums up, in the last three or four decades ‘nearly all the world’s major (and minor) metropolitan regions have been experiencing dramatic changes, in some cases so intense that what existed thirty years ago is almost unrecognizable today.’ York and Dijon have each repeatedly re-adapted, re-organised, re-re-presented themselves in response to exogenous and endogenous local, regional, national and global inter-relational forces of production for hundreds of years. There is little reason to think that this process of punctuated transformation will change now or in the future.

Studying trajectories is a fundamental part of social science. From the point of view of policy and planning, past trajectories are vital clues to predicting future ones. Ideally, social research would allow for prediction of radical change, both in terms of its timing and its outcome. Yet when it comes to nonlinear systems, the possibility of prediction is a highly contentious issue because many authors vehemently that it is
simply not possible. I will re-visit the issue of prediction in the Conclusion but suffice
to say that an implicit goal of this research is to explore the possibilities of prediction
in relation to urban planning. Moreover, I explore the issue of prediction from a
methodological point of view inasmuch as I am interested in developing a
methodology that accounts for the various properties of complex urban trajectories,
that allows us to know about them empirically and if possible, to consider mapping
out possible futures of those trajectories.

It is with this in mind that, on the one hand, this research attempts to piece together a
story about how York and Dijon have changed since the early 1970s. On the other
hand, it uses children’s stories about these cities to build up other stories about how
York and Dijon might change in the future. I am also interested in whether or not it is
possible build up other stories about the ways in which children may play a part in the
dynamics of urban change. After all, as Byrne (2001:7) explains, in order to
understand the urban, ‘we must deal not only with the trajectories of places’ but with
trajectories of people moving within and between places. In addition, we must deal
with people moving through their life-course. Hence, this research focuses on children
who live in the city with the view that these children will themselves carve out their
own life-course trajectories within the city trajectory. As I will discuss further in
Chapter 3, bringing children into the picture further highlights the dynamics involved
in the theme of trajectories. It allows us to reflexively examine the ways in which life-
course trajectories intermingle with other peoples’ trajectories, as well as the
trajectories of the places in which they live. Thus, I build up a picture of multiple
inter-related trajectories – trajectories of people throughout their life-course,
trajectories of people moving within and between places, trajectories of spaces within
York and Dijon – as a way of understanding the city-level trajectories of York and
Dijon.

Importantly, however, cities are not two dimensional, even though the empirical
graphical representations of their trajectories often are.21 In order to capture the multi-

21 That said, computer technology is changing the ways in which multi-dimensional phenomena are
depicted. The use of Geographical Information System software, for instance, allows more than two
dimensions to be captured. Similarly, quantitative statistical packages, such as Lisp-Stat, also include
dimensionality of city trajectories, a more adequate concept of trajectory is that of phase-space. The phase-space (which is sometimes also called the state-space) of a system is not quite the same as its trajectory but crudely speaking, it does involve a mental map of the dynamics of that system. It depicts the collection of possible states that systems of its kind can attain. The trajectory of a system is simply the path in phase space traced out by that system over time.\footnote{The extant hypotheses and explanations about why systems evolve as they do are beyond the scope of this thesis. See, however, Prigogine and Stengers (1984) Kauffman (1993, 2000) for discussions about this fundamental question.}

Different academic disciplines employ different terminology to refer to the same thing; in biology, phase space is known as ‘genotype and phenotype spaces’, in economics it is referred to as ‘production and consumption possibility sets.’ The aim of knowing more about the phase-space of a thing remains the same across the disciplines: it specifies the type of object being studied (Auyang 1998:89). Typically, dissipative systems that ‘begin’ from an arbitrary state either wander off to infinity or arrive at a bounded region in phase-space (Auyang, 1998:235). The latter case is more interesting because it is what most frequently happens in the world. The bounded region in phase space towards which the trajectories issuing from different initial states converge asymptotically over time is called an attractor. In effect, an attractor is a state in which a system ‘dynamically settles’ (hence why dissipation is needed). As we will see, attractors are fundamental to modelling change.

There are many different sorts of attractors. Each infers different patterns of movement. Systems that converge to a single state are said to have ‘fixed point’ attractors; a frictionless pendulum has two fixed points. These are examples of simple attractors in which the behaviour of that system is predictable. Other systems are not predictable, but the set-limits that contain their behaviour offer a sense of certainty as to where the system’s behaviour will ‘lie.’ A good example of this that Byrne (1998:168-169) provides is the thermostat – the exact temperature of say, a room, at any given point cannot be known in advance but there is nevertheless the knowledge that the temperature will fluctuate between a determined range of possible states.
Other types of attractors are observed by those systems that exhibit periods of chaos. These are called 'strange attractors.' Sanders succinctly explains the essence of what we are dealing with:

> The term “strange attractor” describes the behavior of the force or forces that hold the system variables in place. The strange attractor coalesces the energy and creates the system boundaries, whilst at the same time allowing dynamic activity within those boundaries. (Sanders 1998:67)

The simplest strange-attractor is the doughnut-like torus. The torus attractor describes systems which, over cycles of change, always end up somewhere within bounding limits. Because the system’s trajectory never closes and never intersects itself, ‘it gradually “fills” the entire torus in the sense that it is eventually bound to pass through a prescribed neighbourhood of any point of the toroidal surface’ (Nicolis and Prigogine, 1989:91). What we have, Nicolis and Prigogine explain, is this:

> a phase portrait involving a continuum of closed orbits or of toroidal surfaces nested inside each other. Inevitably, a small perturbation removing the system from a given orbit will throw it onto another invariant surface on which the system will remain trapped until another perturbation throws it onto a still different invariant surface, and so on. At best, therefore, under the effect of perturbations we expect simple or orbital stability and a jittery motion, rather than a sharply reproducible behavior. (Nicolis and Prigogine 1989:91)

Cities are thought to be systems that exhibit similar properties to systems that follow the dynamics of a strange attractor (see Figure 6 below). Usually, such systems remain within an attractor space. However, they can – given specific circumstances – be pushed or pulled into different states, which may or may not be stable. This concept of discontinuity within a system’s trajectory is known as the phase shift (or phase transition). The notions of attractors and phase shifts help us to anticipate (as opposed to predict) the general (but not exact) behaviour of a system. They are therefore useful concepts to think about when considering future possible states.

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23 Note however that there is some debate as to whether of not the torus can be classified as a strange attractor at all (see Byrne 1998).
Figure 6: Lorenz strange attractor
This is a two-dimensional picture of the dynamic trajectory of a strange attractor. In order to better visualize the picture 'in motion', see source webpage. Note that in reality, the strange attractor space is a multi-dimensional space, so whilst the simulation model better represents the strange attractor above, it is still a gross simplification of the real phenomenon.
(Source: http://www.sat.t.u-tokyo.ac.jp/~hideyuki/java/Attract.html)

Note what is not implied by the concept of 'attractors.' Attractors do not suggest that systems evolve to 'ideal' states. Indeed, in The Origins of Order, Kauffman (1993) develops the idea of the 'N/K fitness model' whereby systems evolve through a series of Darwinian and autopoietic dynamics such that local optima are achieved. Gould's (1992) Panda Principle is a classic example of this 'remarkable cooperation between chance and determinism' (Nicolis and Prigogine, 1989:14). The panda's thumb, Gould explains, is not a thumb per se, nor is it as efficient as a 'real' thumb. However, it is the best alternative to a thumb given that its fifth digit had already specialized for other uses. What the Panda Principle suggests is that things will evolve towards what is best from a range of possible outcomes within particular contexts. Thus, we move away from Platonic teleology whereby things evolve towards an 'ideal' form.

Instead, as Nicolis and Prigogine explain,

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24 The ‘fitness’ of a local landscape is the measurable capacity of a system to carry out some defined function. The distribution of the whole fitness measure over the phase space is therefore, the fitness landscape with respect to that function (Kauffman, 1993:121).
when a constraint is sufficiently strong, the system can adjust to its environment in several different ways. Stated more formally, several solutions are possible for the same parameter values. Chance alone will decide [through the dynamics of fluctuations] which of these solutions will be realized. The fact that only one among many possibilities occurred gives the system a historical dimension, some sort of “memory” of a past event that took place at a critical moment and which will affect its further evolution. (Nicolis and Prigogine, 1989:14)

The difference is critical. Multiple possibilities at each point of a system’s historical trajectory can lead that system to states that are far from ideal.

The same applies to York and Dijon. These cities have changed over time and human agencies (such as urban planning institutions, traffic and transport policies, heritage industry organisations, etc.) have in various ways attempted to change them in specific ways. However, as complex systems, these cities have nonetheless evolved towards attractor states that are far from ideal. Road and transport systems could be more efficient in both cities, housing versus workplace spatial configurations are not cost effective, environmental sustainability has a long way to go before it can be even close to being ‘ideal’, etc. All these characteristics were also raised by the children interviewed in this study. Likewise, when it comes to fulfilling the ‘Rights of the City’ (Lefebvre 1968) of all local inhabitants, both cities leave a lot to be desired and have clearly not evolved to ideal states.

**Discussion: Addressing the Complex**

This chapter has covered many issues. The aim has been to identify a) the areas that have particularly influenced the conceptualisation York and Dijon assumed in this research; b) to highlight certain issues that are also implicit in any research that adopts a complex systems perspective to social phenomena; c) to ‘lay my cards on the table,’ so to speak, regarding the issues that would ideally be embraced by the general methodological design used to study such phenomena; and, in turn, d) to expose the issues that are at the core of my thinking in terms of the research design adopted in this study.
As noted in the Introduction, whilst researchers are increasingly acknowledging the complexity inherent to studying cities, most authors who take this approach rely on various quantitative descriptions and computer and/or mathematical modelling techniques (e.g. Allen 1997; Wilson 2000). Whilst this has been useful for exploring hypotheses and raising new questions relating to urban dynamics more generally, these models remain ‘gross simplifications of reality’ (Richardson 2002:1.3). Thus, whilst I support Cilliers’ (2001:138) argument that ‘[w]e have no choice but to make models if we want to understand the world’ and that ‘models of complex systems will always be flawed in principle’, one of the most important limitations of these extant modelling approaches is precisely that they are seldom empirically grounded. Therefore, other than being useful to think with, these models cannot advance urban theory because without being empirically based, any thoughts and conclusions about it must remain speculative and provisional.

In contrast, one of the ways that this research differs from previous studies of cities as complex systems is precisely in the way that it is theoretically and empirically driven. Furthermore, it attempts to link the macro-micro-observational levels. It examines urban evolution not by concentrating on, for example, the macro forces of the global labour market upon the local socio-economic situation, although these are necessarily part of the urban picture. Rather, the focus of exploration is on the more subtle inter-relationship between how a place is, how it has changed, and in turn, how it might change in the future.

In Part III, we will see that the empirical representations obtained from this research suggest that York and Dijon have evolved in remarkably similar ways. As complex urban systems, these cities appear to have been ‘pulled’ towards similar attractor states and evolved similarly too therefore. On the one hand, this is quite surprising. York and Dijon are nested in different countries, are made up of different components, with different government and policy agendas supposedly driving the changes within them. On the other hand, it is perhaps to be expected. The components nested within them are similar kinds. That is, all cities are produced, destroyed and changed by people. People are permanent structural components of all cities and are as similar as
they are diverse across time and space. As I now turn to the next chapter, I explain just how I perceive the particular people within the complex cities of York and Dijon and what other kinds of implications there are upon the methodological challenge undertaken here. That is, I set out the particular ways that I approach the study of children in complex places.
'The way in which researchers conceive childhood will shape the research in which they engage' (Harden et al. 2000). In this study, I have spoken to local children to learn about the cities of York and Dijon, therefore it is necessary to set out the epistemological and ontological perspectives on children and childhood. This is the object of this chapter. Simply put, based on a critical realist and complex systems understanding of children and childhood in the city, I argue for a relational understanding of children as agents embedded in the set of local systems from which the urban emerges. I suggest that when this approach is adopted (instead of a constructionist perspective, which is most frequently adopted in this particular field) the extent to which children are considered to be social agents is increased.

My basic premise is that children need to be included in the explorations concerned with the ‘power geometries’ (Massey 1993b) describing the web of interactions which make up urban places. As Lefèbvre (1974/2003:178) would say, as children ‘living in that space,’ they are a ‘component part of it.’ This argument is formulated by bringing together a number of ideas primarily from three fields of literature: children and childhood, urban studies and complexity theory. In addition, the fieldwork conducted for this research informs my understanding of these theoretical readings. There has also been a drive to discover the real mechanisms, events, patterns, processes and structures that generate the actual phenomena of the urban world (Bhaskar 1998c:45). Hence, the argument set forth is the result of a reflexive activity, which is shaped by

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25 Cf note 6 (p.1) for details of the use of the term ‘children’ in this study.
moving backwards and forwards between my interpretations of the readings and the fieldwork itself.

The argument is made in three accumulative steps; each step is a distinct part of the chapter. First, I argue that children are agents of the social world by setting forth the main assumptions involved in a critical realist approach to understanding children and childhood. Second, I argue that children are agents of the city, i.e. they are embedded in the complex set of local systems from which the urban emerges. I do this by describing some of the documented ways that children are already acknowledged to be actively involved, albeit indirectly, in the urban. Specifically, I discuss ‘children and virtual space’, ‘children’s mobility between local spaces’, the notions of ‘children as producers’ and of ‘children as consumers.’

In doing this, my aim is to argue for the possibility of emergence from bottom up local agents; the agents in this case are children. Finally, I extend the argument by highlighting the poignancy of including children more systematically in social research precisely because children are agents that are ‘being and becoming’ in the city which is also ‘being and becoming.’ (Incidentally, adults are also always ‘being and becoming’ but they do so less overtly than children.) This final part of the argument draws upon the discourses of ‘being and becoming’, which are present in both the childhood and the complexity literature. This turn to the research informant as a way of exploring the interactions between people and the changing social world raises new and important methodological issues to studying complex places. Overall, then, this chapter further explicates the object of study considered here. Later, in Part II, I begin revealing what I suggest the methodological implications are to studying York and Dijon as complex places, where children are understood to be among the agents shaping those cities. First, then, a look at the main assumptions involved in a critical realist approach to children and childhood.
**Children as Agents**

Since the 1970s, children and childhood have been bourgeoning topics of social research. Since then, and increasingly since the 1990s, most attempts to understand children and childhood have adopted constructionist perspectives. Here, however, I assume a critical realist and complex systems approach to children and childhood. Moreover, I argue for a relational understanding to children as agents embedded in the set of local systems from which the urban emerges.

The assumptions intrinsic to this approach are summed up as follows. Children are active social agents who participate in the knowledge construction and daily experience of childhood (James et al. 1998a; James and Prout 1997). As Hendrick (2000) points out, this perspective entails three other important assumptions: a) children are capable of social action; b) areas in which children are socially active can be identified; and c) children are in (dialogical) relationships with other people and the world.

More specifically, I assume Corsaro’s (1997) ‘interpretive reproductive’ stance to childhood in which ‘children produce and participate in a series of embedded peer cultures’ (1997:24). In other words, I follow his ‘orb web model’ (see Figure 7) which he explains as follows:

> the radii or spokes of the model represent a range of locales or fields that make up various social institutions (family, economic, cultural, educational, political, occupational, community, and religious). The fields illustrate the diverse locations in which institutional interaction or behaviour occurs.... Cultural information flows to all parts of the web along these radii. ... [I]ndividual development is embedded in the collective production of a series of peer cultures which in turn contribute to reproduction and change in the wider adults society or culture.  

(Corsaro 1997:24-26)
In addition to Corsaro’s fields, I include a ‘spatial field’ spoke, thus highlighting the fact that children are also situated in space, namely a city space in this study. (In Chapter 10, based on the findings of this research, I further develop this idea to suggest that there is also a ‘city field.’) Therefore, children are seen as embedded in the complex set of local systems from which the social emerges.

By implication, children are also considered agents of the wider social world as well. As Mayall (2001) sums up:

[children] are not only ‘actors’ – people who do things, who enact, who have perspectives on their lives. They are also to be understood as agents whose powers, or lack of powers, to influence and organise events – to engage with the structures which shape their lives – are to be studied. (Mayall 2001:3)

I also follow others in the assumption that a ‘generational perspective’ to childhood is important to perceiving children and childhood in the social world (see Alanen 1992; Alanen and Mayall 2001; Christensen 2002; James et al. 1998a; Mayall 2002; Qvortrup 1991; 1994; Qvortrup et al. 1994). There are two key aspects at the core of generational approach. On the one hand, this approach takes it as given that ‘childhood is a permanent [social] structure, even if its members are continually being replaced’ (Qvortrup 1991:12). On the other hand, it acknowledges ‘generationing
processes' (Mayall, 2002) that are both structured and structuring (Bourdieu 1976; Bourdieu 1984, 1990b; Qvortrup 1991, 1994), where the notion of generation is comparable to other 'structuring structures' such as gender and class. Mayall (2002:25) explains it as follows: just 'as gender emerged as a crucial concept for analysing relationships between the sexes, so generation is coming to be seen as key to understanding child-adult relationships.' At all levels of analysis (e.g. individual, group or cohort) of the generational approach, the focus is on relational processes – how this thing has come about, how it is working out now and how these vary through space and time (Mayall, 2002).

Furthermore, in this study children are perceived to be both 'human beings' in their own right and human becomings. In other words, children are seen as present agents in the state of being (Brannen and O'brien 1995:730) acting as present agents of their daily childhood lives, and participating in the generative mechanisms acting today and agents. But they are also agents of their transition to adulthood (Brannen and Nilsen 2002) as they become, slowly but surely, future agents as adults in the making. This is not to say that the biological base of childhood is a forceful determinant. Indeed, whilst acknowledging the biological base, it is still 'seen as another context of a child's life which children learn to act within' (James 1998:62). Rather, it is acknowledging that children will (usually) become adults and the kinds of adults they are likely to become are shaped by the kinds of childhoods they are experiencing today. In this way, then, as James et al. (1998a:204) comment, 'children bear the marks or categorizations of their social reproduction' as well as being 'positioned as the very agents of cultural reproduction.' Overall, therefore, I also assume that the knowledge gained by including children more systematically in social research is, potentially at least, substantial.

Many of these assumptions are implicit in much of the work on children and childhood produced since the 1970s; increasingly since the 1990s, many are also explicit. However, if we look at the kind of research that children are actually involved in, practice would suggest that children are still considered to be only affective in terms of their own spaces, their own childhoods; even then, most
recognise that children’s lack of power relative to adults in the social world limits the extent to which children’s agency can be exercised. For example, studies might focus on children who are dying (e.g. Bluebond-Langner 1978), those who are ill (e.g. Backett and Alexander 1991; Ireland and Holloway 1996), disabled (e.g. Beresford 1997; Robinson and Stalker 1998), children as refugees (e.g. Aycotte and Williamson 2001), gypsy travellers (Jordan 2001b; e.g. Kiddle 2000; Lloyd and Stead 2001) or poor (e.g. Ridge 2002); children as consumers (John 1999; Mcneal 1992; Russell and Tyler 2002) or even children who are researchers themselves. The different ‘spaces of childhood’ (see below) are explored in a variety of ways also (e.g. Hart 1979; Holloway and Valentine 2000; Matthews 1992), as in the case of children in the school (e.g. Mayall 1994; Mayall 2002), children in the home (e.g. Christensen et al. 2000), in the city (Christensen and O’Brien 2002; e.g. Ward 1978), etc. Other authors focus explicitly on the theory and construction of childhood (James et al. 1998a; James and Prout 1997; e.g. Jenks 1982; Jenks 1996; Lee 2002; Qvortrup 1991; Qvortrup et al. 1994). Others still have written about methodological issues in conducting research with children (e.g. Fine and Sandstrom 1988; Mahon et al. 1996; Mauthner 1997; Waksler 1991; Waterman et al. 2001). 26

Most of these studies are small-scale empirical descriptions. Together and along with many others, they have contributed to the rich and valuable accumulation of knowledge in this growing field. They are important investigations and necessary to the sustained accumulation of knowledge about children’s life-worlds, which is fundamental to improving their daily lives. However, I argue that whilst in many ways quite diverse, these works approach children from a similar perspective. That is, as suggested, they each aim to contribute to a better understanding of children’s life-worlds.

In contrast, my own research engages with the sociological field of children and childhood, and in particular the notion of children as social agents, differently – but not because of the epistemological stance but because of the overarching research

26 This collection of works is but a handful of studies that have been conducted and presents a rather generalized version of what has been achieved so far.
question. More precisely, rather than asking the unidirectional question: ‘How might social research that explores children’s views contribute to the field of children and childhood?’, which I suggest is essentially the direction of enquiry that the above works and extant research take, I ask: ‘How might social research that explores children’s views also contribute to other fields?’.

Let me elaborate. If as the ‘sociologies of childhood’ (Mayall, 2002) suggest, children are seen as active social agents, who construct and participate in the knowledge production of the concept of ‘childhood’ and notions associated with ‘children’, and if childhood is also seen as a permanent social phenomenon, then by implication, children can also be considered as real social actors in the social world. I am not suggesting that there is no mention of children as agents of the wider social world; as we saw above, there is. Prout and James, for example, also write:

Children are and must be seen as active in the construction and determination of their own social lives, the lives of those around them and of societies in which they live. Children are not just the passive subjects of social structures and processes. (Prout and James 1997:8, italics added)

However, the vast majority of the discussions about children as agents argue that children are agents of their life-worlds. Moreover, most of the research focuses on obtaining children’s views and opinions in order to explore ‘children and childhood.’ I have not come across any research that turns to children to know about the wider social world. Thus, whilst in theory children are considered to be social agents, in research practice the discussions imply that children are agents only at the level of their own experiences and the construction childhood. Therefore, there is a discrepancy between the theoretical discourses about children’s agency and the research that children are actually involved in.

This discrepancy is serious because it implicitly undermines two key arguments that the sociologies of childhood seek to endorse. Firstly, the issue of children’s competency is put to question. Whilst it is argued that children are competent and legitimate social actors whose views are worth listening to, in practice their views are
only considered potentially interesting when it comes to learning about their own life-worlds and not about the social world that they nonetheless inhabit. The possibility that children are also capable of informing fields of knowledge other than children’s own lives and experiences is entirely negated by adult researchers who ask them about little else. Similarly, the recent movement to increase children’s participation in all or various stages of the research process, from research design to research analysis (see, for example, Boyden and Ennew 1997; Hart 1992; Kefyalew 1996; Kirby 1999; Pole et al. 1999; Worrall 2000) has successfully, I think, sought to empower and increase the general perception of children as competent social actors. Yet it begs the question that if children are seen as sufficiently competent to warrant their involvement in the research process, might they not also be sufficiently competent to answer questions about topics other than those concerning children and childhood?

Secondly, children’s active agency is undermined. Whilst the childhood sociologies promote children as active agents, the research which involves children and the writing about children’s agency, still does not consider them ‘legitimate enough’ to be social agents or social informants in the same way as adults are in social research. Yet when it comes to adults in social research, we do not think twice about including, say, women in the census even though the aim of the census is not only about women and femininity. Similarly, if men were only approached in social research that was concerned with men and masculinity, it would no doubt be viewed as unacceptable discrimination, which it would be! Why, then, are children seen to only have views about children and childhood? Why are children not approached more generally in social research?

Qvortrup (1997:88) accurately points out that ‘[r]esearch about socialization and other types of individual or biographic childhood studies are abundant, but as soon as the dynamics of individual development is replaced by childhood as a factor of societal dynamics, systematic approaches are generally lacking.’ Similarly, the notion that children are agents of societal dynamics, and not only agents of their childhood lives, is generally absent from the literature. Only including children in social research that aims to improve understanding about children and childhood implies that this is the
only area of social life that they affect. This approach supports an implicit understanding that children are frequently seen to be affected but rarely seen to affect. The underlying implication is that children are *passive* agents in the social world rather than active ones.

In addition, in terms of understanding cause, extending our thinking to include children and childhood might be beneficial. As James and Prout (1995) note:

> [c]hildren might employ a variety of modes of agency within and between social environments ... the possibility [exists] that children locate themselves flexibly and strategically within particular social contexts and that, through focusing on children as competent, individual social actors, *we might learn more about the ways that 'society' and 'social structure' shape social experiences and are themselves fashioned through the social action of members.*

(James and Prout 1995:78, italics added)

Zeiher (2001) also points to a key issue that is at the heart of my argument. She writes:

> Although children do spend a large proportion of their time in special temporal structures and separate places, *childhood is not a world apart from the "the real world"*. Children's ways of life are no less imbedded in the prevailing societal production relations than those of adults, and they are also subject to historical change.

(Zeiher 2001:1, italics added)

Her point is important and her explicitness is relatively unique compared to other authors. Zeiher raises the issue that even though children and adults are both part of societal dynamics, children do not have equal power to adults in those dynamics. I am not claiming that they do. However, as Zeiher (2001) says, children and adults are part of the *same* world even if they experience that world differently from one another.

Insofar as children are seen to represent some of the components (which are interacting with other components in complex ways) from which the urban emerges, the fact they are children is unproblematic. This is not to say that doing research with children does not present particular research problems. These difficulties, I argue, are
methodological ones and not because the participants are children per se. In this research, I assume that whilst children and adults may live in a same locality, the ways in which they both experience that place may differ but they can also be similar. Thus, whilst I acknowledge that there are specific differences in children and adults’ cultures, I challenge the view that these differences are necessarily significant because one is an adult and the other a child.

It is true that in contemporary western society, children and adults tend to be segregated in terms of time and space and the distinction between the concepts of ‘childhood’ and ‘adulthood’ remains a strong influence in defining the extent of that temporal and spatial segregation. I am not disputing this either. But as Freire (1970:60) reminds us, the oppressed (i.e. children) are not ‘marginals’; they are not people living ‘outside’ society. The oppressed, Freire stresses, ‘have always been ‘inside’ – inside the structure which made them ‘beings for others.’ Children are not ‘outside’ of something that adults are ‘inside.’ Both children and adults live in the social world. As James et al. (1998) note:

Children are a structural category, they are part of the very constitution of social life and should therefore be understood as an integral form within every and any social system. Children have always been and will continue to be in and of the society, whatever its present manifestation. (James et al. 1998a)

Thus, even though Aitken (2001:12) suggests that children are ‘the ultimate victims of the political, social and economic forces that contrive the geography of the build environment’, which I think they might be, I argue that children and childhood are nonetheless parts of the structures which make up cities and urban regions. Therefore, approaching them to learn more about the urban is methodologically and sociologically valid. As Scott et al. (1998) sum up,

children are seen as active social agents, whose identities are both shaped by, and wedged tightly between, other social structures, which also vary in time and space. Whilst children may remain by and large subordinate to adults, this does not imply that children are passive beings. (Scott et al. 1998)
Having established the main assumptions intrinsic to children in this research, I now turn to say a little more about how children are considered specifically in relation to cities and urban regions.

**Children as City Agents**

I hereby continue my basic premise that children and childhood need to be considered as part of the ‘power geometries’ (Massey 1993b) of urban regions. I do so by extending the notion of children as agents in the city by suggesting that children are embedded agentic components in the complex set of local systems from which the urban emerges. Note that since the post-war period, a growing body of literature that deals with children in urban spaces has appeared. McKendrick’s (2000) *Annotated Bibliography* is witness to the relatively vast number of works that have emerged within the ‘geography of children and childhood’ and ‘children’s geographies.’

Much of this work has evolved to fall into three camps. Firstly, there are a number of ‘classic studies’ which are seen to have paved the way for others to follow (e.g. Bunge 1973; Hart 1979; Hill and Michelson 1981; Hillman et al. 1990; Moore 1986; Ward 1978). Secondly, after a period of diversification and subsequently specialization, key areas of study appear, including children’s spatial cognition and perception (e.g. Lynch 1977; Matthews 1984, 1992), the spatial oppression of children (e.g. Bunge 1973; Bunge and Bordessa 1975; Ward 1978), exploring the rules of place that structure children’s actions (e.g. Wood and Beck 1994), and of course, children’s experiences of different local urban spaces, such as the street (e.g. Matthews *et al.* 1999, 2000), the neighbourhood (e.g. Tandy 1999), the city, (e.g. Christensen and O’Brien 2002; Hart 1979; Moore 1986; Ward 1978; Wood 1982, 1985), as well as children’s mobility in urban spaces (e.g. O’Brien *et al.* 2000). As McKendrick (2000:360) explains, ‘the early literature tends only to reflect the behavioural tradition, while the more recent literature reflects the cluster of ‘critical’

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27 Hart (1984) distinguishes between the ‘geography of children’, which is the study children’s spatial behaviour, and ‘children’s geographies’, which focuses more on children’s perceptions and experiences of place.
approaches to study’ (e.g. Christensen and O’brien 2002; Holloway and Valentine 2000; Philo 2000). More recently, a third camp of work groups together a series of efforts, which concentrate on increasing children’s political participation within local urban policy (e.g. Bartlett 2002; Chawla and Malone 2003; Wyness 2002).

Overall, extant research combining the topics of children, childhood and the urban consists of empirical descriptions, which situate children and childhood in an urban microcosm, be it the street, the home, the neighbourhood, etc. Authors then tend to zoom in to explore children’s daily experiences and the ways in which their childhoods are constructed in that space. These investigations tend first to focus on children’s spaces and the various ways that place matters to children and childhood and then maybe on the urban. Any understanding of the urban in these studies is a tokenist rather than substantive component to them. Any consideration of children’s active contribution to urban form is altogether absent.

Those advocating for children’s voice(s) in shaping their local environment place greater importance to the interaction between people and place. However, when we look more closely at the actual space that these authors tend to be interested in, we discover that once again the focus tends to remain on a space that appears to be epistemologically and ontologically set apart from the overall emergent city form. In other words, just as there is a tendency for authors concerned with children and childhood to divorce the child from the broader social context and indeed social theory itself (see James et al. 1998a, especially Chapter 10), when children, childhood and the urban are combined, authors focus on the physical spaces which directly matter to children and childhood, such as the school, the playground, the local park etc., and then maybe on the wider city space.

To be clear, I am not criticising these extant approaches. I merely want to stress that although children are perceived as social agents, they are described as agents only at the level of their own experiences and the construction of childhood. Authors acknowledge that children’s daily life and childhood are both constructed and situated in the urban world of adults and adulthood but then they generally fail to
acknowledge the multi-dimensional dynamics between these social and physical spaces. In contrast, however, I seek to integrate children and the urban by asking about the ways in which the dynamics shaping children’s daily lives and the city morphology might interact together. The city locality is used to frame the study but I am also interested in the real interactions between children and the urban.

One of the main implications of considering children and the city in this way is that the focus is on the relational aspect between the two. I am thinking specifically of the bottom-up behaviour of individual agents in a complex system who, through their collective action, produce emergent macro-level behaviour. In other words, I am arguing for the possibility that children are individual agents acting together as a social category within the permanent social phenomenon of childhood which is defined in processes of social action that are locally situated in time and space.

After all, if children are acknowledged social agents of their own experiences and the construction of childhood, and if childhood is a recognised permanent social structure that exists within other social interactions, then it stands to reason that children are permanently part of the social networks from which the urban emerges. If these generating processes are important in terms of understanding childhood, which is a social structure embedded within society more generally, why might these processes not also be valuable foci for understanding other permanent social phenomena? If childhood is perceived as ‘a nexus of connections’ (Alanen 2001:19) then might we not need to explore to what extent children are agents of the networks in which they are situated?

It was with these questions in mind that I spoke with children living in York and Dijon about their views about where they lived. What was said during these discussions is presented in Chapter 9 and discussed in relation to the other findings in Chapter 10. In what follows, however, I develop this argument further by briefly highlighting some of the ways that children are already acknowledged to be participating in the urban. By drawing some of these ideas together we can explore
documented ways in which children and childhood are possible agents in the city, as well agents of the city.

**Children and Virtual Space**

Postindustrial society is often characterised by the increase in new telecommunication and information systems. As if to ensure the livelihood of our networked cities, the use of Information and Communications Technology (ICT) is a central issue in current British and French education policy. ‘IT for All’ was a Government initiative launched in the late 1990s in England aimed to make information technology accessible, understandable and convenient for everyone. Since then, there has been an overall upward trend in ICT use in schools across the UK. The latest figures show that virtually all schools are connected to the Internet (Dfes 2001a). Today, 96% of UK primary schools and all secondary schools are now on-line.28 Similarly, in France by 1999, 23% of households had a computer linked up to the internet at home (Rouquette 2000), by 2001, 50% of primary schools in France were equipped with an ICT classroom (Rouquette 2002). By 2003, all of Dijon’s primary schools had a computer classroom and were linked up to the internet by 2003 (Key Informant interview source – see Chapter 4).29

Access to virtual space30 always occurs, by necessity, within real time and (urban) space. It is structured by, amongst other things, the economic and temporal realities of everyday life, the material realities of the technology itself (Valentine and Holloway 2002:312) as well as the parental and school restrictions imposed upon them. Thus, in practice, schools, teachers, parents, children, community and technology mutually

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28 The DfES’s (2001b) ‘Young People and ICT’ study revealed that 99% of the children sampled had used computers at home, school or elsewhere. 73% of the children sampled used the Internet at home, school or elsewhere. (The sample consisted of 1748 interviews conducted with one parent and one child per household.)

29 That said, although Government policy has been successful in terms of ensuring that all schools have sufficient quantities of computers and are connected to the Internet, the quality and the extent to which children actually access ICT is far from uniform in both England and France.

30 The terms ‘virtual space’, ‘cyberspace’ and ‘Information and Communication Technologies’, i.e. ‘ICT’, are used synonymously. They refer to Internet use, email, on-line games and general computer use, including word processing.
constitute, order and transform each other in real space and time (Valentine and Holloway 2002); real space includes urban space and therefore the argument holds for children interacting virtually in cities also.

Indeed, whilst the literature on the representations of virtual space tends to depict ICT as a space completely separate from people’s off-line worlds – and in turn as separate from the urban world they live in also – this representation is inaccurate in two important ways. Firstly, ICT has the potential to transform the relationship between school and home (Becta 2002; Dfes 2001c). For example, it encourages communication between home and teachers via e-mail, web-sites can inform pupils and teachers (Becta 2002). As the Becta report (2002:16) suggests, ‘[t]he ability to communicate electronically offers the opportunity to cross the traditional boundaries of time, place and culture that have, in some cases, separated schools and homes. It offers the possibilities of a continuum of learning stretching from school to home and for schools to develop new roles within the communities they serve.’

Secondly, Valentine and Holloway (2002) reveal that children’s on-line worlds are not, in practice, separate from their off-line worlds. In terms of how children integrate ICT into their daily lives, Valentine and Holloway (2002) identify four main ways in which their ‘real’ lives are incorporated into their ‘virtual’ lives and how the ‘virtual’ is incorporated into their ‘real’ lives. They suggest that the real is incorporated into the virtual in that: 1) some children’s identities are direct (re)presentations of their off-line selves and activities; 2) even when children’s identities are constructed differently, they are based on their real identities; 3) on-line worlds reproduce class and gender divisions; 4) children’s limitations of the technology, the economic and temporal realities of their everyday lives impact upon the nature and the extent of their on-line activities.

Conversely, Valentine and Holloway (2002) suggest that the virtual is incorporated in the real in the following ways: 1) on-line activities help to maintain, develop and reconfigure both distant and local real relationships and friendships; 2) children use ICT to find information about their off-line hobbies and interests; 3) on-line, children
talk about their ‘real’ hobbies and lives. This can lead to on-line friendships, which
then become part of their off-line social networks; 4) ICT can recontextualise
children’s off-line identities in both positive and negative ways.

Thus, the bridge that joins virtual and real (urban) space opens up new sites in which
children can exercise their power and agency. In the postindustrial city, growing up
and incorporating the real and the virtual is a necessity. How childhood continues to
be and become depends a lot on how the social space linking the real and the virtual
continues to be and become, and vice-versa. What is clear is that today’s children are
already part of the virtual networks that are intrinsic to many of Britain and France’s
cities.

Children Going Between Local Spaces

Moving from virtual space to real local space, the journey between home and school
is the journey people under-16 most frequently make (Adamkiewcz 2000; National
Travel Survey 2002). In both England and France, the older the children are, the
further they must travel to attend school (Haag 2001; National Travel Survey 2002).
Indeed, in the UK, the length of journey to school increases 18% for children aged 5-
10 and 35% for children aged 11 to 16 (Department of the Environment 2002); this
general trend is also found in France (Haag 2001). As is to be expected, travel to
school usually takes place at the same time each weekday morning and evening.
Women, and in particular mothers, are more likely to take children to and from school
(National Travel Survey 2002). These fluxes of travel are important physical (and
visual) city dynamics and children are intrinsically involved in them on a regular
basis.

Recently, a growing concern has been given to the decrease of children’s independent
mobility in urban regions (e.g. Barker 2003; Department of the Environment 2002;
O’Brien et al. 2000). Two main reasons are thought to be behind this: the danger
cased by the general increase in traffic levels and the fear of crime (Bradshaw and
Jones 2000; Crime Concern 1999; Haag 2001; Lee and Rowe 1994; National Travel
Survey 2002 revised). I am not denying that these issues are important. However, I want to underscore the view that even though children’s independent mobility may be restricted and constrained in various ways for various reasons, children nonetheless move between local spaces, even if they are accompanied by an older sibling, a guardian or a parent, etc.

So long as children continue to travel between local spaces, they also have the opportunity to see the world around them. In turn, children are also likely to form views and opinions about that world. Their views and opinions must be seen in the context of their relatively restricted independent mobility. However restricted independent mobility is, this does not imply that they see nothing of the urban world around them or that their views are rendered insignificant. Indeed, it could be argued that it is precisely because children do not have a free reign to explore their local urban environment because they are ‘journeyed’ to-and-fro local places by others that their views about what they see around them are more valid than the adults with whom they travel. Perhaps children are more appreciative of the space than adults might be because travelling through it is taken less for granted? Perhaps as passengers in cars or as guided pedestrians that they usually are (Barker 2003), children have more opportunity to look at, observe and re-observe the local space than adults? My point is that as children move through the local city space, they see the world. Therefore, it is important to know about the world that they see, however restricted their movements through local spaces might be.

Children as Producers\(^{31}\)

In the UK,\(^{32}\) working in paid employment is a majority experience for children and young people (Hobbs \textit{et al.} 1996), with up to approximately 63-77\% of children having ever worked before leaving school (Hobbs and Mckechnie 1997). Morrow (1994) suggests that child employment can be grouped into four types: wage labour,

\(^{31}\) Data on child employment in Britain and France is poor since British and French Government tend not to extend to people under 16 years of age. The figures used here are taken from the sparse literature that is available in this area for both these countries.

\(^{32}\) For a discussion on the history of child labour in Britain, see Humphries (2002).
marginal economic activity, non-domestic family labour and domestic labour. The most common form of wage labour is newspaper-rounds. Marginal economic activities include such things as baby-sitting, car-washing, grass-cutting and other odd jobs for non-family. It is estimated that in between 35-53% of 15-19 year olds in the UK are in paid employment (Dustmann et al. 1996; Oecd 2003). Bradshaw and Williams (2001) suggest that children work on average 6 hours a week and that despite UK law preventing children to work more than 35 hours a week, one in ten children are working more than this.

Similarly, despite French law prohibiting employment for under-18s, it is not uncommon for young people to work illegally. French children and young people usually occupy jobs that fall into the categories of marginal economic activity, non-domestic family labour (e.g. grape picking) and domestic labour (e.g. babysitting). But the extent to which they take part in paid employment seems to be much less in France than in the UK. That said, around 5.9% of young people were thought to be in paid employment according to 1999 figures (Dorman 2001). Note also that these rates are likely to be substantially less than the true rate of activity (Dorman 2001).

Some of the children interviewed in this study, though younger than those normally included in child labour surveys, commented that they wanted to work but that their parents would not allow them to. According to the children, parents were against them working for two reasons: 1) because they were concerned that they would be exploited in the workplace, and 2) because it is against the law for under-12s to work. However, many children commented that parents would nonetheless give extra pocket money for doing extra jobs around the house.

Although children are not directly contributing to the local or national economy, it would be interesting to find out how many adults are working because of their children. Similarly, how many jobs are actively dependent on children? The Education system, daycare and health professions, toy and leisure industries, are all in business thanks to the existence of children. Local, regional and national economies are dependent on children as producers, albeit indirectly.
Children as Consumers

What about children as consumers? In fact, this is a bourgeoning topic within the research and literature relating to ‘children and childhood’ and ‘business and marketing.’ Essentially, authors point to the increase of commercial spaces that are designated to children’s goods or that are specifically marketed at children (as consumers). Whilst there is disagreement about the extent to which this is a positive movement (Best 1998; Cook 2000, 2001; Cook 2000b; Cross 1998; Kline 1993; Postman 1994; Zelizer 1985), it does raise interesting issues relating to children’s agency (Cook 2000, 2001; Luke 1994; Mcneal 1992) as ‘significant players in the economy’ (Smith 2000). Many children in Britain and France have important ‘purchasing and spending power’ (Gunter and Furnham 1998) This can be seen from a number of angles (see Hall 1987): the money they spend on themselves (see Mcneal 1992); the money they spend on others; the money that parents, relatives, friends and others spend on children; the influence that children have over family purchases and expenditure (see Browning 1992); the influence they have over their peer’s purchases (Bachmann et al. 1993); and the money they will spend in the future as teenagers and adults.

Interestingly, however, despite this documented market potential, and more importantly, this agentic potential, there is surprisingly little research explicitly exploring the implications of these consumer changes on children living in Britain or France. Indeed, the vast majority of the research in this area comes from authors writing about, and research conducted in, American society. Yet a quick glance at some national statistics on child-related expenditure levels shows that children, directly or indirectly, are active parts of Britain and France’s consumer society also.

According to 1997 expenditure levels, for example, it cost approximately £50,000 to care for a child up to 17 years old (Joseph Rowntree Foundation 1997). Ninety percent of this was spent by the parents; approximately £3,000 was spent on children each year for regular items (e.g. food, clothing, childcare, school, toys, etc.); parents
spent an average of £5.92 a week on children’s educational items (e.g. school trips, school materials, etc) and an average of £83 on birthdays. According to another source, in 2000 children themselves spent an average of £10 a week (Social Trends 31 2001).

Similarly, according to the 1992 Education survey, over 75% pupils and students aged 6-25 living in France each received an average of over €460 pocket money per year, in the form of regular or sporadic payments (Barnet-Verzat and Wolff 2001). In contrast, expenditure per capita on children’s clothing alone in France in 2003 was an average of €618 per child (aged 0-2) and €510 per child aged (aged 3-14) (Euromonitor 2004). In both the UK and France, the older the child is, the more the financial assistance from the parents. Children’s financial independence grows with age, hand in hand with more regular pocket money payments.

A growing number of researchers in the UK are focusing on the relationship between consumption and children and childhood. Russell and Tyler (2002), for instance, explore ‘the complex relationship between consumer culture and the process of [a girl] becoming a woman’ by studying young girls’ shopping experience at ‘Girl Heaven.’ ‘Girl Heaven’, Russell and Tyler (2002:620) explain, is a ‘a chain of retail outlets in the UK specifically for 3-13-year-old girls that not only [stock] a range of (largely dressing up and party) clothes, hair styling products, cosmetics and accessories, but that also [provide] the opportunity for girls to have a make-over – to be transformed into a princess’ – in-store.’ Russel and Tyler’s research also draws our attention to the rise of commercial outlets within the (growing) shopping spaces in and around British cities, which are aimed at young consumers.

‘Claire’s Accessories’, for example, originally an American retail outlet which now has chains world-wide, sells a range of (mostly glittery) jewellery and hair accessories aimed primarily for young girls. ‘Claire’s’, started appearing in the UK in 1996 with fifty outlets throughout the country; there are now 370 shops scattered about Britain (Claire's Accessories). Indeed, ‘Claire’s’ bought out ‘Girl Heaven’ administrative receivership in 2001 and has plans to open a 150-strong chain dual-branded ‘Girl
Heaven’ and ‘Claire’s Accessories’ stores within the next 3 years (Mintel International Group Ltd. 2003a).

In line with this growth of shops selling accessories, Mintel International Group Ltd. (2001) reports that the market for childrenswear is estimated to have grown by 31% between 1995-2001, to reach £5.9 billion, with the girlswear market showing the strongest level of growth within childrenswear and supermarkets making the greatest inroads in market share between 1999 and 2001. For example, ‘Bay Trading’ (who launched ‘Bay Angel’ in 2001) and ‘George’ at Asda, one of UK’s large supermarkets, are continuing their increased focus on the ‘tweenage’ 8-13 year old market (Mintel International Group Ltd. 2003b).

Thus, given the changes to the British and French child-related market, the relative lack of literature on children as consumers in contemporary British and French society is interesting. It reflects, I think, a general sense of conflict about children’s participation in British and French society, and the British and French construction of childhood more generally (see Hendrick 1997 for Britain). Indeed, there is growing tension, which is highlighted in focusing on children as consumers, between, on the one hand, a desire to continue to perceive children as social actors who participate as economic agents in the wider social world, and on the other, the view that children must not act or participate ‘too much’ or else the construction of children as ‘passive’, ‘dependent’ ‘innocents’ (Jenks 1996) is potentially, at least temporarily, ‘fractured’ (Bourdieu 1990b).

The above examples are but a few of many examples of the ways that children are intrinsically involved in urban life. Whether it is through virtual space, real space, or economically, children are part of the dynamics from which the urban emerges. Education, health, leisure and consumption, and of course childcare are other examples that could have been explored also to reflect their participation. My aim has been to show examples of some of the documented ways that children are a necessary part of the urban processes. We tend not to think of children in this way yet the
institutions in which children and childhood are embedded are very much part of the urban fabric.

Identifying children's involvement in these kinds of processes is especially important to us methodologically because it sets children as embedded agents within social life. Moreover, as I now show in the next section, in terms of children as 'beings and becomings' in social life, research with children that explores social form is of particular interest. This is precisely because all people (ideally) go through a phase-shift during the course of their life, i.e., from 'being' a child to 'becoming' an adult (in terms of their body, their social identity, their legal status, etc.). Moreover, they go through these transitions whilst being constantly embedded in everyday life and social processes (which are located in time and space). Note, however, that macro-level social processes do not simply 'become' different because a generation of children 'become' adults at the micro-level. As I argue in the remainder of the chapter, it is this idea of children 'being and becoming' in places that are 'being and becoming' that is especially interesting to us methodologically.

**Discussion: Studying Children 'Being and Becoming'**

As noted above, notions of 'being' and 'becoming' are present in both the complexity literature and that of children and childhood (see in particular Prigogine (1980 and Lee (2002) for discussions within each of these areas respectively). Although each field tackles 'being and becoming' from different perspectives, they overlap with one another inasmuch as they each, implicitly or explicitly, deal with time and change. Being, becoming, time and change are themes that run throughout this thesis also. Therefore, this section presents the way in which I understand these notions to intertwine with one another.

Using Bhaskar's critical realist epistemology, I offer an alternative way of thinking about these various themes. More precisely, by drawing upon Prigogine's understanding of time and change in dynamic systems and the generational perspective of childhood (see Alanen and Mayall 2001; Mayall 2000b; Qvortrup et al.
1994), I suggest a way of resolving the tension between children as ‘beings’ and 'becomings.' I argue that it is precisely the temporality inherent in the notion of childhood (which is a permanent but changing social phenomenon in a perpetual state of being and becoming) that renders it important to consider both children and childhood in the evolutionary generative mechanisms that make up cities and urban regions. Simply put, this is a reflexive argument about the patterns of change (Waldrop 1992) inherent in certain temporal phenomena and about how time and change affect the dynamics of urban change. Let us begin, then, with a quick look at the notions of ‘being and becoming’ within the complexity literature.

In his book, From Being to Becoming, Prigogine (1980) discusses the relation between the physics of being and the physics of becoming in dynamic systems. The ‘physics of being’, he suggests, refers to the way time and change are understood in classical and quantum mechanics. Here, the Newtonian laws of physics are symmetrical in time, there is a sense of strict determinism, and time is reversible (i.e. there is distinction between the past and the future). In contrast, the ‘physics of becoming’ refers to the way time and change are understood in thermodynamics: time is an arrow ‘going’ in only one direction; thermodynamic interactions are irreversible and always ‘becoming.’

Essentially, Prigogine argues that a prerequisite to understanding dynamical systems is to merge our different ideas of time together: ‘time as motion, as in dynamics; time related to irreversibility, as in thermodynamics; time as history, as in biology and sociology’ (Prigogine 1980:xii). He contends that because irreversible processes are real, play a constructive role in the physical world and are deeply rooted in dynamics (1980:xiii), knowledge about the ways that these different notions of time interact is key to tackling the problem of understanding the world. More precisely, Prigogine (1980) explains, whilst the micro-level is ruled by the time-symmetric laws of classical physics where time is reversible, the macro-structures, which emerge from the nonlinear interactions of these micro-structures, are irreversible. As we have seen in the previous two chapters, capturing the micro-macro interactions among the key
things an adequate critical realist and complex systems perspective methodology would ideally entail.

In the children and childhood literature, however, notions of being and becoming refer to different discourses of children and childhood. Typically, before the 1970s, texts concerning children and childhood adopt a social psychological and developmental perspective. In turn, little attention is paid to what children ‘are.’ Instead, the onus tends to be on what children ‘become.’ That is, childhood is identified primarily as a site of investment for the future, the future of the both the individual and the state (Lee 2002). This perspective posits children as human becomings whose life-world is seen primarily as that of an adult-in-the-making. ‘Being adult’ is given the privileged status of being more ‘fully-human.’ The essence of a child is to ‘become’ that ‘complete’ (adult) human being.

More recently, the focus has shifted to perceiving children as human beings, as actors in their own right. As Lee explains:

> Whatever differences there may be between adults and children, contemporary sociologies of childhood urge that children be treated equally, at least in terms of recognizing that children have views and perspectives of their own. On this view, all humans, regardless of their chronological age, are and should be treated as ‘beings.’

(Lee 2002:2)

In underscoring the importance of considering children as ‘human beings’ in their own right, many contemporary authors emphasise that children have their own unique culture that is separate from that of adults. Whilst this stance shifts the focus onto exploring children as human beings from that of human becomings, the conflict between what children ‘are’ and what they ‘become’ remains. Other authors have attempted to make more explicit efforts to resolve the ontological and epistemological tension of what constitutes children and childhood by refuting the ‘human being’ or ‘becoming’ debates altogether. Lee (2002), for example, argues that one of the issues that determines whether people are seen as ‘beings’ or ‘becomings’ is that of ‘dependency.’ His argument rests upon the view that implicit in the developmental discourse of the child as a human becoming is that children are considered to be

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dependent beings that become more fully human as they grow up into independent adults. By introducing issues of ‘dependency’ into the ‘being vs. becoming’ debate, Lee successfully blurs the boundaries between ‘dependent, incomplete child’ and ‘independent, complete adult.’ Whilst Lee’s argument forces us to question our constructions of dependent-child and independent-adult, which I too think are implicit in the child as human being versus human becoming discourses, he fails to resolve the temporal reality inherent in the notions of ‘child’ and ‘adult.’

My own view is that children and childhood, and adults and adulthood, are always being and becoming. Whilst the arguments about who is being and becoming may be linked to issues of dependency, as Lee (2002) suggests, I argue that they are more grounded in issues about time and change. Indeed, it is precisely the temporal dimension of these terms that warrants our attention. More precisely, the temporality inherent in the meaning of these terms is important because if we are to understand how the social world changes, then we are also to understand how there are social phenomena which are grounded in notions of time and change. Thus, it is important to understand the ways that these phenomena might interact with how the social changes through time.

Freire (1970) argues that real social change must be a praxis: ‘the action and reflection of men and women upon their world in order to transform it.’ He stresses that our focus should be about people developing ‘their power to perceive critically the way they exist in the world with which and in which they find themselves in; they come to see the world not as a static reality, but as a reality in process, in transformation’ (1970:64; original emphasis). Following Freire (1970), therefore, I want to reflect upon the urban world and observe the way we – children and adults – exist in that urban world with which and in which we find ourselves in.

Thus, on the one hand, there is ‘childhood’ as a social construct that changes in time and space. On the other hand, there is ‘childhood’ as a permanent (though also changing) social structure that existed, exists and will continue to exist, independently of our knowledge about it or our social constructions of it. Discourses of childhood
may change through time and space but are a part of the human life-course, which today is commonly referred to in the English language as ‘childhood’, will persist as a constant social phenomenon. As Qvortrup (1991:12; original emphasis) notes, ‘childhood is a permanent structure, even if its members are continually being replaced.’

The implications of this new perspective on childhood and children’s lives are summed by Qvortrup as follows:

[s]ociological research is about looking for commonalities among persons and groups of persons; research in childhood is no exception to this rule. To find commonalities presupposes insight in both interpersonal relations at a local level and in macro-structures, of which they are necessarily a part. It goes without saying that without a dialectic approach to social realities we will not be able to finalize our intellectual journey convincingly.

(Qvortrup, 2000:92; emphasis added)

Hence, in thinking about children, childhood and the city, the focus is on the relational, i.e. focus is not on one topic or the other but on how their interactions can be understood. But how do we study relational processes? Methodologically, where do we go from here? How are we to study a changing place whilst also taking in account that places change in part due to the changing people within them? Thinking more specifically about the task at hand here, what methods can be used to study change and continuity in York and Dijon? What methods might we employ to explore the urban relations from which York and Dijon emerge? In Part II, I describe the ways in which I have answered these questions specifically in terms of this project.
PART II

METHODOLOGY

AND

METHODS
Introduction

In Part I, I set out the research question and described the epistemological and theoretical stances informing this research. Here, in Part II, I further expound the research process by providing not only ‘a description of the methodology but also an account of the rationale it provides for the choice of methods and the particular forms in which the methods are employed’ (Crotty 1998:7). More precisely, I attempt to answer two key questions, which Crotty (1998) argues are central to any social research. What methodology and methods have been used in this research? How do I justify this choice and use of methodology and methods?\(^{33}\)

In addition, I provide a first hand narrative account of what doing the fieldwork actually involved. I follow Harden et al.’s (2000) example of using italics in order to explicitly illustrate the way in which I have sought to integrate the methodological literature with reflections of the practical issues that were also confronted. The intertwined textual forms also reflect, though to a lesser extent, the way that I conducted this research: I considered the theoretical and real logistical issues together, and my decisions were based on both these things. As Bateson writes:

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\text{[t]here is always a right decision – or at least a decision that, in the light of the aims governing the research and the facilities [and time] available for it, is best – and there are several wrong, or less good, alternatives. What the researcher needs is a knowledge of these alternatives and an approach or orientation which will help him [sic] in choosing whatever is best for his [sic] particular research purposes.} \\
\text{(Bateson 1984:5)}
\]

\(^{33}\) Whilst ‘methodology’ is often seen as synonymous with the study of procedures (Blumer 1969), I use the term (as it was originally intended) to refer to its more epistemological meaning with regards to the role of theory in guiding the conduct of the inquiry research process (Kaplan 1964). ‘Methods’, on the other hand, are understood as ‘the techniques or procedures used to gather and analyse data’ related to the research question (Crotty 1998:3).
My view is that the researcher is more likely to make ‘right’ methodological decisions by taking into account the philosophical, theoretical and practical logistics into consideration.

The methodology used in this project is chosen from a number of available approaches, which vary according to the ontological and epistemological framework of the research as well as the extent to which they thereby rely on formal mathematical models and data, simulated or empirical. Furthermore, empirical data may be experimental or observational and can be cross-sectional or longitudinal. In addition, at least ideally, the methodology must consider the nature of the abstractions made in the object of inquiry whilst also attempting to maximize the probability that the object is adequately and accurately described and explored. Thus, the specific choice of methodology depends upon what one wants to learn about the object of study (Sayer 2000). Every piece of research calls therefore for its own unique methodology (Crotty 1998).

The methodology employed throughout this research is guided by Glaser and Strauss’ (1967) grounded theory approach. This is mainly because grounded theory is itself a general inductive methodology with the capability of discovering and constructing theories in order to understand phenomena. Furthermore, just as Glaser and Strauss (1967) developed grounded theory as a way of bridging the gap between theoretically uninformed empirical research and empirically uninformed theory, so too am I drawn to grounded theory because I want to extend the current work on complex cities (and complexity in general) by basing the exploration and methodological approach upon actual empirical data collected about the real world we live in (as opposed to theoretical hypotheses about it).

Importantly, grounded theory is also compatible methodologically as well as meta-theoretically to the overall aims underpinning this research. On the one hand, the methodology embraced by critical realism and complexity: a) defends the possibility of causal explanation; b) accepts hermeneutic concepts of social reality as being communicatively constructed in a subject to subject relationship; c) involves a critical

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34 See Lee (2003) and Downward et al. (2002) for an explicit discussion of the compatibility of grounded theory with critical realism.
dimension (Delanty 1997:130-131); d) assumes that reality is organised as multiple layers collapsed into one (of which three are the domains of the real, the actual and the empirical) (Bhaskar 1989:15); and e) assumes that the world is a matter of patterns of change, that partly repeat, but never quite repeat, that are always new and different' (Waldrop 1992:332).

On the other hand, grounded theory assumes that: a) social reality can be known through empirical observation; b) the world is empirically integrated, not logically modelled (Glaser 1998:189); c) that any adequate (theoretical) understanding must be rooted by empirical evidence; d) discovers emergent patterns of categories from the data; e) accepts the hermeneutic approach to meaning and understanding (Crotty 1998:90-91), whereby the text of, say, the interview transcript, is a means of transmitting meaning – experience, beliefs, values – between the research subject and the researcher; f) the researcher has the potential to uncover patterns of meanings, intentions and theory ‘hidden’ in the text, or rather, data. In this way, critical realism, complexity and grounded theory are seen as mutually compatible and complementary approaches, which support a similar ontological and epistemological stance. Furthermore, as I go on to explain, I was guided by grounded theory for both the quantitative and qualitative methods employed.

Thus, my concern lay in capturing the multiple facets of the research object. I was not seeking to test or elaborate existing theory or even use existing theory in a new way. Rather, I was more interested in finding out about two places and how they had changed, and learning about children’s views about these places. I did not have any preconceived plans as to where this might take me. The data was to be the source from which any ideas or theory about a possible relationship between how the cities had changed and the children’s views would emerge, or not as the case may be.

According to Strauss and Corbin (1990), there are effectively three steps to the grounded approach: 1) the research subjects tell their story; 2) the researcher creates a ‘rich and believable descriptive narrative’ using field notes, interview transcripts, documents, literature sources, researcher interpretations, etc.; 3) to construct a theory
using the patterns of categories that emerge from the whole collection of data materials. 35

This three-step process basically sums up the fundamental stages of this research also, although I have adapted them to incorporate young research subjects telling their story with the idea that census and administrative data and a range of different documents can also be collected in such a way as to allow this data to ‘tell its story’ too. Whilst interview material is produced ‘live’ during the research, secondary data and documents are produced in the past. However, all of these different kinds of data are nonetheless understood as representations that are necessarily also all produced by agents acting, interpreting, being and becoming in the world.

The constant comparative method and theoretical sampling are two of the main techniques that Glaser and Strauss (1967) consider central to each of these three steps, and they are central to this research too. In their own ways, they also contribute to causal and theoretical reflections. ‘The constant comparative approach is a means of suggesting, but not testing, properties and hypotheses about general phenomena’ (Murphey et al. 1998:141). As well as being part of the data analysis, the constant comparative method helps to direct the data collection process. ‘Essentially’ Byrne explains (2002:148), ‘the process involves developing concepts from the data and then searching through data to see if they hold up at all and, if they do, then what are the limits of their applicability.’

In practical terms, this involved going through the interview transcripts, coding the data in as many categories of analysis as possible (Murphey et al. 1998:141), comparing the data within and between the categories (this usually resulted in new categories or different ways of linking the categories that were already present), thinking theoretically about the categories, raking through the data again to verify that the categories and theoretical thinking work together, and repeating this process until nothing new is found in the data. At this point, theoretical saturation is said to have

35 In practice, these three steps emerge from a very nonlinear and iterative kind of research process, which involves a systematically applied set of methods and processes to generate an inductive theory about a substantive area (Glaser 1992:16). As Glaser (1998:1) writes, '[g]rounded theory is multivariate. It happens sequentially, subsequently, simultaneously, serendipitously and scheduled.'
been achieved. But this general process is possible to do for any kind of data not just interview data; we simply have to think beyond the word. Themes within quantitative data and within qualitative data such as images can also be coded.

Theoretical sampling, on the other hand, is basically a sampling method that occurs during the research and is based upon the data; it allows theory to emerge and develop from it as it is produced. Glaser and Strauss explain that it is:

The process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his [sic] data and decides what data to collect next and where to find them, in order to develop his [sic] theory as it emerges. This process of data collection is controlled by the emerging theory, whether substantive or formal. (Glaser and Strauss 1967:45)

Glaser (1998) points out, importantly I think, that although grounded theory is an inductive methodology, theoretical sampling is deductive:

It is the carefully grounded deduction from and inducted category or hypotheses of where to go next for data to compare. It is not logical, conjectured deduction based on no systematic research. It is carefully deduced probabilities on where to go next for what data one might find to induce further a growing theory. […] Deductions for theoretical sampling fosters [sic] better sources of data, hence better grounded inductions. (Glaser 1998:43)

As will be described in further detail in Chapter 6, as far as possible, this approach was used in terms of selecting which schools to approach for this study. However, again, this general sampling technique can also be used for any kind of data. In Chapter 5, I explain how this technique was very much relied upon in terms of selecting documents.

Glaser and Strauss explain the benefits and necessity of theoretical sampling are threefold:

Comparison groups provide, as just noted, control over the two scales of generality: first conceptual level, and second, population scope. Third, comparison groups also provide simultaneous maximization and minimization of both the differences and the similarities of data that bear on the categories of data being studied. This control over similarities and differences is vital for
discovering categories and for developing and relating their theoretical properties, all necessary for the further development of an emergent theory.

(Glaser and Strauss 1967:55)

In this way, I was able to compare the transcripts obtained from the differently located schools, examine the coding to see if it was still appropriate, adjust it accordingly if not, and reflect again upon what the emerging theory might be. I continued sampling, collecting and analyzing the data until a clear pattern of answers appeared and nothing new was revealed, i.e. until theoretical saturation had been achieved. Similarly, with the documents, where an area or a street of the city was understood as a case, I examined different images and representations of each case. Once a pattern appeared about that space, I explored other spaces and the various images that represented them also.36

Richards and Richards (1991:43) argue that grounded theory is often used as ‘an approving bumper sticker’ to qualitative research. Similarly, Bryman writes:

In spite of the frequency with which Glaser and Strauss and the idea of grounded theory are cited in the literature, there are comparatively few instances of its application along the lines developed above. The term is often used as a way of conveying the notion of an approach to the generation of theory which is derived from a predominantly qualitative research base. Much qualitative research relies on the elucidation of a theoretical framework subsequent (rather than during) the data collection phase. The idea of grounded theory is often used as a way of justifying the use of a qualitative research approach i.e. so the work can be confirmed as acceptable.

(Bryman 1988:85)

Be this as it may, I argue that this research has nonetheless adhered to the ‘fundamental procedures’ intrinsic to grounded theory methodology. These are, Charmaz (1983:125) suggests: a) that the structure of the inquiry is shaped by the aim to discover social processes; b) the data collection and analysis proceed simultaneously; c) the analytic processes are conducive to theory discovery rather than the verification of pre-existing theories; d) theoretical sampling refines, elaborates and exhausts conceptual categories;

36 The way the images were archived in York and Dijon libraries, as well as on Imagineyork.co.uk practically forced this method of sampling since they were filed according to particular spaces.
c) systematic application of grounded theory analytic methods will progressively lead to more abstract analytic levels.

*It is worth noting that whilst I recognize that grounded theory is, strictly speaking, a qualitative research methodology, I was guided by its principles for both the qualitative and quantitative approaches, and especially when it came to integrating the different types of data.* Whilst the dispute between whether or not it is even philosophically possible to combine quantitative and qualitative approaches is an old one, here, I take Danermark et al.’s ‘critical methodological pluralist’ position (2002) which is that first, a particular method cannot be excluded beforehand, and second, that it is profitable to combine methods in practical research work. This must not, however, be confused with methodological relativism – on the contrary, we try to present concepts and assumptions that make a conscious choice of design and method possible. (Danermark et al. 2002:151-152)

Whilst Danermark et al. are encouraging of using multiple (quantitative and or qualitative) methods, they stress that: a) ‘all methods are not equally suitable’ for all purposes; b) the ontological-methodological link such that the ontological base needs to be clear in order to draw conclusions which are also appropriate to it; c) the ontological-methodological link is *necessarily* part of social research; and d) the mix of methods must be governed not only by the research question but also by the ontological perspective assumed. These issues are also supported in this research.

I take the view that combining qualitative and quantitative research methods ‘increases scope, depth and consistency in methodological proceedings’ (Flick 1998:230). This approach is conducive to obtaining a more complete picture of the phenomenon investigated (Kelle 2001). Critical realism endorses the use of mixed qualitative and/or quantitative methods as they are seen as compatible with one another (Sayer 2000:19) whilst also stressing that ‘that the particular choices should depend upon the nature of the object of study and what one wants to learn about it.’
In addition, I follow Lemon (1999), who extends the means by which real patterns may be revealed by proposing an integrative methodology. He suggests combining qualitative and quantitative research strategies in order to access the breadth and depth of generative mechanisms intrinsic to real structures. This alternative approach allows the role of agency to be explored in relation to the on-going changes, and is therefore attractive to social scientists in general and specifically to my needs here. It emphasises that not only do we play a part in our reality, but that we can actually study that interactive relationship also. Moreover, we must examine it if we are to understand our social world.

I also argue that using grounded theory precisely as a tool to merge the different types of data is particularly worthwhile and not necessarily problematic. As Denzin and Lincoln (1994:278) note, grounded theory research will undoubtedly be affected by the increase of research involving both qualitative and quantitative methods. Moreover, from a critical realist standpoint, different kinds of data are considered to be traces of a real and complex world (Byrne 2002). Indeed, I believe that it is precisely by being guided by the grounded theory notion of allowing the theory to emerge from the real integration of the quantitative data with the qualitative data that this research gains its strength. After all, as I will show, it is through the integrative synthesis of the different empirical findings that the multiple interactions between the macro- and micro- social worlds can be explored.

As I now turn to illustrate the actual research methods used, the overall research process will become clearer. Indeed, in terms of actually conducting the research, it was necessary to think of the research question as three inter-related and overlapping parts. On the one hand, the study needed to employ strategies, which were conducive to obtaining a longitudinal description of the socio-spatial evolution of two particular urban regions since the 1970s. On the other hand, a cross-sectional exploration of children's views and perceptions of each particular urban region, particularly in relation to the children's imagined futures of that place, was also required. Only when these two tasks were achieved, was it possible to question if and how the city descriptions and the children's perceptions of the city related to one another.
Different methods were specifically appropriated to each of the different tasks; each broad method is presented as a distinct chapter, as are the findings, which are presented in Part III. Thus, for the task of describing the urban change in a given region, I relied primarily upon official statistics; this method and the issues I encountered are presented in Chapter 4. For this same purpose, I also used documentary analysis, which is described in Chapter 5. For the task of exploring children’s perceptions of where they lived, I relied upon small group interviews as well as a small sample of children’s drawings and Chapter 6 deals with the process and issues that emerged from these techniques. In addition, instead of using only one city as a case example upon which to explore the research question, I used two: as noted, these were York and Dijon. Therefore, comparative research methods were implicit in the use of each stage method and I draw out issues relevant to each method as I progressively provide a detailed description of the entire research process.

As will be seen, I describe each of the methods in some detail. This is because in Part III, I not only present the main findings derived from each method, I also suggest a theoretical argument based on the integrative synthesis of these various findings. Furthermore, in the Conclusion to the thesis, I directly answer the overarching research question concerning the methodological implications involved in adopting a critical realist and complex systems perspective on the social world. Therefore, in order to allow the reader to gauge both the extent to which the research question is adequately answered and the validity of the conclusions I finally draw, I need to be clear about the research methodology and methods that I actually employed. In other words, whilst in Part I, I explicated the object of study and the issues relating to a critical realist and complex systems understanding of this object, in Part II and III, I go about answering the research question by actually doing what I suggest the methodological implications actually are. Therefore, the thesis as a whole provides an illustrative example of my overall argument. In this way, I reflexively present my research argument by doing it.

All that said, a first look, then, at the process of data collection, which was conducted in order to build up a quantitative representation of York and Dijon and the related issues that arose from it.
Continuing Crotty’s (1998) distinctive elements of the research process, this chapter describes the use of official statistics in this study. In what follows, I respectively discuss the following issues: cross-national comparative research methods, secondary survey analysis and the use of key informants.

Cross-National Comparative Research

I used cross-national comparative research methods to explore the research question. Hantrais explains that:

a study is held to be cross-national and comparative, when individuals or teams set out to examine particular issues of phenomena in two or more countries with the express intention of comparing their manifestations in different socio-cultural settings (institutions, customs, traditions, value systems, lifestyles, language, thought patterns), using the same research instruments either to carry out secondary analysis of national data or to conduct new empirical work. The aim may be to seek explanations for similarities and differences, to generalise from them or to gain a greater awareness and a deeper understanding of social reality in different national contexts. (Hantrais 1996: page 2 of 7)

York and Dijon were the chosen cities. Whilst any two other cities might have been selected for the purposes of this study, these two were specifically chosen for a number of (mainly personal) reasons. York was chosen primarily because I had spent six years living there and I was, therefore, relatively familiar with it. Importantly, at less than an hour’s train journey away from where I was based, it was also easily accessible. Dijon
was chosen because it was somewhat similar to York in terms of its relative size and its history; both cities are medium-sized and each has an industrial past. Language and culture posed no difficulty and indeed was a driving motive. Finally, it was later discovered that York and Dijon have actually been twinned cities since the 1950s, though this seemed to be more common knowledge in France.

The benefits of comparative research are along the same lines as the advantages of the constant comparative method intrinsic to grounded theory: comparing similarities and differences between two cases helps to explore and understand the object of inquiry. Hantrais explains:

Comparisons can lead to fresh, exciting insights and a deeper understanding of issues that are of central concern in different countries. They can lead to the identification of gaps in knowledge and may point to possible directions that could be followed and about which the researcher may not previously have been aware. They may also help to sharpen the focus of analysis of the subject under study by suggesting new perspectives.

Cross-national projects give researchers a means of confronting findings in an attempt to identify and illuminate similarities and differences, not only in the observed characteristics of particular institutions, systems or practices, but also in the search for possible explanations of national likeness and unlikeness.

(Hantrais 1996:5 of 7)

As Bryman sums up, comparative research improves theory building. By comparing two or more cases, the researcher is in a better position to establish the circumstances in which a theory will or will not hold. Moreover, the comparison may itself suggest concepts that are relevant to an emerging theory... The key to the comparative design is its ability to allow the distinguishing characteristics of two or more cases to act as a springboard for theoretical reflections about contrasting findings.

(Bryman 2001:53-54)

This was certainly true in this study. Firstly, the statistical data allowed the urban evolution of York and Dijon to be compared. Similarities and differences between the two cities allowed a deeper appreciation of the urban changes taking place within both

37 The ESRC’s ‘Overseas Fieldwork Expenses’ grant made this comparative option financially feasible.
38 Although I was already fluent in French, I wanted to ensure that I continued to speak it. Going to France is obviously an excellent way of doing this.
countries. Secondly, I was confronted with an interesting situation that was precisely about improving my theory building. I first interviewed children from various schools in York. Having reached a point of theoretical saturation, I started interviewing children attending schools in Dijon. It was here that I was faced with different answers and was forced, therefore, to question my theoretical thinking. Having reached a second point of theoretical saturation in Dijon, I then returned to interview more York schoolchildren in order to verify whether the new emergent theory held.

It was only through combining the French data with the English data that I discovered an even more general theory relating to the children’s interview material and the urban form of each city. (Had I gone on to interview further groups of children in another neighbouring country, I may have found differences, which would have further developed my theoretical thinking but of course time constraints made this impossible.) As we shall see in Chapter 9 and especially Chapter 10, I argue that the children’s discussions not only relate to local urban change but also to the location of their school. Without the slight difference in patterns of answers in each city, the importance of school location would probably have been missed. Yet this forms a key part to the way in which I theoretically synthesise the observations derived from all the methods employed. Therefore, without the York versus Dijon comparisons, my analysis would have been much more limited and this in itself is a recommendation for cross-national research.

Nevertheless, as I discovered, this approach also has its problems. Cross-national research threw up some additional ones. I will begin with the logistical problems before commenting upon the more technical ones relating to the comparability of the data itself.

Though the logistical issues are perhaps blazingly obvious, they are by no means trivial. They certainly affect the way the research was conducted. Comparing data relating to two cities entails two data sources: the sheer quantity of data I collected and analyzed in this study was substantial; it was approximately double compared to if I had, say, only collected data about York. The information about each city is
organised in different ways in different places, and I had become familiar with both. Transcribing interview material is always extremely time consuming; the more material there is, the more time it takes; learning how to use an English/USA keyboard to efficiently type French took practice so transcribing the Dijon interview material took up even more time than expected.39

In addition, conducting research in Dijon meant, of course, that I needed to go and spend time there. As exciting as this first sounded, the harsh reality of doing fieldwork abroad quickly hit me once I set foot in the city. The fieldwork was due to last a total of twelve weeks, which were to be divided into four time-blocks. In the end, however, I went for a six-week stretch, which was then extended to ten weeks. Normally, I would never object to spending time in France, let alone being forced to extend my stay. However, overall, my experience of fieldwork in Dijon was cold, wet, lonely, frustrating and exhausting. Extending my stay in France was, on this occasion, not a welcomed opportunity at all.

I spent the first two weeks finding my way round the city and therefore, getting lost many times as I frantically tried to find budget accommodation for the rest of my stay. The next four weeks were spent setting up meetings; learning about, and then approaching, new organizations, a few of which turned out to be relevant and extremely fruitful but most turned out to be a waste of time; arranging access to schools (see below); sitting for hours in the cold city library tediously going through three decades of the local daily newspaper; and lots of waiting: waiting for my phone to ring to hear that I had managed to set up various meetings; waiting for emails and text messages from friends and family; waiting for buses; waiting in between meetings; waiting just before meetings; and, of course, waiting to see if I had been granted access to any schools.

The access to schools took longer than planned. After six weeks, although I had successfully obtained a sample of nine schools to visit, they were now due to break up

39 Indeed, so frustrating was it to type in French using an English keyboard, as well as the increased time pressure involved in conducting the French interviews later in the overall research process, that I ended up part-transcribing many of the French interviews, i.e. I did not transcribe verbatim and grammatical accents were omitted altogether.
for two weeks holiday. Ironically, the timing of my trip was initially scheduled to avoid this complication. Being budget constrained, I had to remain in Dijon. As I waited for school to resume, I continued to gather urban data (the novelty of which had long worn off) and spent many an hour in one of the eleven local cinemas. The last two weeks, I carried out the interviews with the schoolchildren. This was the busiest but most rewarding part of the stay. I was also motivated by the prospect of going home. Little did I know, however, that the return journey was going to be one of the most difficult parts of the fieldtrip. Paper is heavy! Having accumulated so much material that ‘might be useful’, my once 15kg luggage now weighed 47kg! With few escalators, lifts or luggage trolleys along the way, the journey to Durham was a long one. Nobody and no book had warned me about this possibility. Retrospectively, this was just another ‘obvious’ logistical issue intrinsic to fieldwork abroad.

As is typical with cross-national research, I was also confronted with the issue of assessing the comparability of the data and specifically with the problem of equivalence of indicators (Bryman 2001; Rokkan 1968; Warwick and Osherson 1973). Although both England and France have censuses, it is not possible to directly compare them with one another. Coded categories are different and so certain statistics might exist in one country but not the other. ‘For certain topics,’ explains Hantrais (1996), ‘information lay be routinely collected in tailor-made surveys’ in one country whereas in the other, ‘it may be more limited because the topic has attracted less attention among policy-makers. Official statistics may be produced in too highly aggregated a form and may not have been collected systematically over time.’

Thus, rather than abandon collecting information that was not strictly comparable, my aim was to collect comparable indicators. As Hantrais (1996) notes:

When existing large-scale data are being re-analysed, the solution is not to disregard major demographic variables, since they may indicate greater intranational than international differences. An attempt has to be made to establish comparable groupings from the most detailed information available. An attempt has to be made to establish comparable groupings from the most detailed information available, the raw data, and to focus on the broader characteristics of the sample. (Hantrais 1996: page 5 of 7)
In Chapter 7, it will become clearer as to how I have dealt with these issues. Where possible, I have used the same variables; where not feasible, I have attempted to depict something of a similar kind. The difficulties lie not only in the available variables but also in the translation of census terms. For example, in the UK census the term ‘services’ is used as a socio-economic category whereas for the most plausible equivalent term in the French census, the categories of ‘commerces’ and ‘bureaux’ have been noted instead. However, despite what the dictionary translations say, from my own knowledge of both languages, there is a subtle but I think important difference between them.

In turn, the measures described in this thesis are composed of a combination of a cross-national, identical set of indicators and/or a set of a nation-specific indicators (Prezeworski and Teune 1973:137) depending on the availability of the data in each country. I have assumed measurement to be identical ‘to the extent to which the operations furnish homogeneous indices for [both] countries. Measurements for specific countries are equivalent to the extent to which the specific measures are related to the identical measures’ (Prezeworski and Teune 1973:137).

My aim has been to ‘guarantee that the phenomena examined in [both England and France] constitute specific occurrences of a more general concept’ (Prezeworski and Teune 1973:173). I have built up an overall picture of urban form using the data that exists for each country, interpreting each picture separately in relation to the wider societal context, and only then comparing the pictures against one another. However, as I discuss below, negotiations and compromises are not solely to do with

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40 A useful guide to the differences in the actual categorizations between the British and French censuses is summarised in Dale and Marsh (1993:18).
41 The French ‘commerces’ has more specific connotations to commercially related industries. Also within the occupations classified as ‘commerces’, the category of ‘cadres’ for which there is no English equivalent. It would be interesting to conduct an in-depth analysis of the different classification of occupations between the different censuses. For instance, whereas the English census differentiates between managers, executives and professionals, in French these are closely related and the term ‘cadres’ offers a distinction between them that is not accounted for in English (Desrosières 1996). For similar reasons, it would be interesting to compare the educational training of those involved in compiling census statistics, which may also be an important feature influencing the possibility of direct comparability of quantitative data. As Desrosières (1996:23) points out, ‘France is the only country where statisticians working in government offices and agencies receive a high level of training geared to meet their needs.’
comparative cross-national research but to longitudinal research about one place also.

Secondary Survey Research

There are many ways to study local urban change. Whether these include asking people directly about the changes they perceive, collating or exploring various data sources, the researcher's aim is to collect sufficient information about the region over time in order to build up a general story change. *This was the case in this study. That is, I was interested in obtaining information about a city's demographic and socio-economic situation at particular points in time in an attempt to generate a series of snap-shots to describe an overall story of change for that city. Conveniently, this information already existed: descriptive or sociographic surveys, such as the Census of Population, had already been conducted by other researchers.* The data from these surveys offer a quantitative description of people's social and economic circumstances in a given location at certain points in time. Importantly, this survey data is also publicly available and free of charge to academic researchers.

My task was to access this survey data and subsequently interpret it. As will be seen in Chapter 7, the interpretation of categorical counts in the form of cross-tabular tables is the main way I have achieved this here. Using the data in this way in order to describe urban change was believed to be both adequate at the levels of validity and reliability. The reasoning behind this has to do with: a) the theory of knowledge intrinsic to social survey research in general, and b) the way this epistemology is compatible with the theoretical and philosophical approach of the research itself.

Platt (1972:77 quoted in Bateson 1984:3) describes the social survey as 'a technique of data collection, that is the systematic and structured questioning, either by interview or by questionnaire, of a relatively large number of respondents.' The survey, Bateson (1984:10-11) argues, 'is a means of knowledge production.' The survey method itself assumes the possibility that people can acquire, and convey to others, knowledge of that part of the social world that they encounter, either at first or second hand, in the
course of ordinary living. Moreover, Bateson continues, 'the survey method assumes not just that people can know the world but that they do know it.' That is, if we ask someone about his or her world, then we can expect that, under normal conditions, that person will 'tell it as it is.' This means that survey data are valid to the extent that they meet the needs for knowledge of whoever commissioned the survey and are hence 'relevant', and they represent the social world and are hence 'accurate' (Bateson 1984:32).

For my purposes, data obtained from surveys carried out for central and local government are considered valid, relevant and accurate for these reasons also. Details such as the percentage of men and women employed in industry-related jobs, or the number and location of households are all deemed valid and relevant in terms of assembling a picture of an urban region's socio-spatial and economic situation. Because these figures are often available at different time points, it is also possible to build up a longitudinal picture, which in turn depicts change in that urban region. The data is also considered accurate inasmuch as counts of people satisfying certain conditions (i.e. employed/not employed, etc.) can be used as traces of a more complex social world. They are seen as a set of variables, which are considered as 'traces of the systems which make up reality' (Byrne, 2002:32). The point is that the 'things we measure are not real in themselves but are expressions of the relationships' among real things that compose the world (Byrne, 2002:40). Thus, in line with the realist philosophy underpinning this research, all data – qualitative or quantitative – is 'seen as social constructs but constructs derived from social reality' (Byrne 2002:47). This is an important element running throughout the thesis.

However, researchers investigating secondary survey research are, by definition, not involved of the original research process of the survey. In turn, he or she will necessarily be faced with a number of issues, which may or may not be problematic to his or her purposes. Five particularly frustrating issues were met in this research. The first relates to my lack of familiarity with the data when I began the research (Bryman 2001:200). Although I had basic knowledge of the sort of information that the Census was concerned with, I had to get used to the size and layout of the datasets, the coding
and categorizations within them, and their geographical hierarchical nature before I could actually do anything meaningful with them. Becoming acquainted with the French Census was easier once I had become familiar with the English one because I had learnt about the sorts of questions to ask and because it is constructed along the same lines as the English one. However, I still had to re-acquaint myself with the French census’ particularities. Learning that the demographic statistics are published as the ‘recensement jaune’ (i.e. the yellow Census) whilst the socio-economic data is referred to as the ‘recensement vert’ (i.e. the green Census) is just one example of how knowing a seemingly small detail helped me considerably in my subsequent investigations.

A second issue that secondary research raises is that the researcher must make up his or her own mind as to the accuracy and validity of the data. However, in order to do this, the researcher must understand and gain access to the procedures used in the data construction process. Bateson notes that this entails having:

access to the report on the data-construction procedures specific to this survey, (that is, the questionnaire and any instructions, written or oral, given to the informants, interviewers, coders and editors pertaining to this survey – including, importantly, any late amendments added to these instructions) and a report of the standard working methods of the survey organisation, covering the methods employed to recruit, train, and supervise interviewers, coders and editors. (Bateson 1984:63)

As I discovered, Bateson (1984:64) is correct in his view that the secondary researcher may have some difficulty in accessing this information, if that is, it exists. Whilst definitions of terms are readily available (even if they are also quite confusing to a newcomer), it is surprisingly difficult to obtain information about the data-construction phase. For data other than that taken from the censuses, it became so time-consuming a task that in the end, I simply resorted to assuming that the data that I endeavoured to interpret had indeed been sufficiently constructed to give a good account of the social world (Bateson 1984:29). Though far from ideal, this allowed me to work with some data rather than none. This is less problematic for the census data than for the other local statistics used. After all, the Census of Population is commonly known as a reliable source of geographically based information used to track
population, occupational and housing changes over time. One of its major advantages is that the researcher can assume that sampling errors are relatively insignificant given that it provides information about the total population at any local level. As Marsh notes,

The census is also the gold standard against which many aspects of social surveys are judged, and sometimes on which they are based. Most social surveys, have two-stage sample designs, selecting first a representative sample of small areas in which to concentrate interviewing. The stratification of the list of areas is almost universally done by ordering in terms of various census characteristics. Attempts to validate the representativeness of sample surveys use the census to check the basic demographic profile of the respondents selected. (Dale and Marsh 1993)

A third issue I came to appreciate is that in secondary research, the researcher is restricted to that information which is already available. Put another way, the researcher has not been involved in the production of survey knowledge (Bateson 1984). As Bryman (2001:201) points out, ‘[b]ecause secondary analysis entails the analysis of data collected by others for either own purposes, it may be that one or more key variables may not be present.’ Although it is possible to re-code data to suit certain statistical explorations, the researcher is nonetheless forced to work from a set of variables that is pre-given. In turn, the researcher’s choice of which relationships between two or more theoretically important variables he or she explores is limited (Bryman 2001:201). For example, whilst there are figures relating to the numbers of people moving in and around York and Dijon, ones concerning children’s movements around the city were non existent (an issue Qvortrup (1997) takes up). Similarly, the French census concentrates almost solely on population counts by age and gender as well as household and housing summaries. Although it is also a source of information relating to occupation and industry, this data is only gathered for geographical levels lower than the ‘département’ from 1990. The result being that I was not able to measure socio-economic change for the Dijon ‘agglomération’ before 1990.

A fourth issue, which is related to the previous one, concerns the various hierarchical levels at which the data is available. Statutory and administrative geographical divisions in both England and France have a hierarchically nested structure. Whereas
English aerial units have changed since the census began and especially since 1961, French administrative boundaries have remained the same since the beginning of the last century. Starting with the largest area and moving towards lower levels, today's primary geographical output for each country is as follows:

*England:* county/region, local authority district, wards, enumeration districts (EDs); data at ward and enumeration district level are referred to as Small Area Statistics (SAS).


The issues related to this structure are twofold. As Bryman (2001:200) notes, the ‘secondary analyst must decide which level of analysis is going to be employed.’ Whilst on the one hand, the decision is based upon the research question and what one wants to learn about, on the other, it is dependent upon whether the data actually exists at all those levels in the first place. For example, I spent two frustrating months trying to chase down the 1961 Small Area Statistics for York. After some considerable investigation, I discovered that the 1961 data for the Wards or Enumeration Districts of York simply did not exist, which explained why nobody knew where they were located. This also explains why this study does not consider urban change in York before the 1970s, which I think would have been more interesting in showing the extent of the qualitative character of change.42

The fifth issue I confronted was in some way more problematic than the other three inasmuch as it was the most frustrating. Just as the research is restricted to that information which is already available, how the data is accessed and the form in which it exists are not chosen by the researcher either. Only the 1991 UK census is available through a ‘user-friendly’ windows interface and it is the only census to be readily available in mappable form (using Mimas’ ‘Casweb’ facility). The 2001 is also but this only appeared in the late stages of this research. Discovering that key figures for York were released in mid-August 2004 was exciting but it meant many last minute changes

42 After the 1961 Census, this data was only produced if the tables were commissioned by the Local Authorities. It seemed that the Local Authorities of York must not have required this data. Since the tables were never commissioned, they do not exist today.
to the thesis. Even though it is possible to access the 1971 and 1981 censuses through SASPAC, how to do this would have taken up a lot of time and in the end, I was not able to undertake this task. This made comparing change between censuses more difficult than I would have liked it to be.

Most researchers conducting secondary statistical analysis will encounter, to a greater or lesser extent, the aforementioned issues. In the same way, there are difficulties involved in working specifically with Census data. Some of the ones that I came across have already been noted in the above discussion but some others also warrant some attention.

**Using the Census**

Whereas the UK Census has been taking place regularly once every ten years since 1801 (with the exception of 1941), the French Census has taken place once every five years between 1801 and 1936 (also except during the war years). The five year periodicity was abandoned after the Second World War (Chaleix 1998). In contrast to the UK census and many European Censuses, there is still no legal requirement in France in terms of either conducting or participating in the Census, nor is there legal requirement relating to its periodicity. That said, after the war, the French Census was taken in 1946, 1954, 1962, 1968, 1975, 1982, 1990 and 1999. From the UK census, I have used the 1981, 1991, and 2001 data; from the French census, I have mostly used 1975, 1982, 1990 and 1999 data.

Unfortunately, I discovered that trying to make valid longitudinal comparisons between census years is surprisingly problematic. The core issue in calculating change between censuses is, as Marsh et al. (1988:854; cited in Openshaw, 1995:307) note, the researcher’s concern ‘to be able to distinguish real trends from artefactual change brought about by altering census definitions.’ *Two definitional difficulties arose in this study. Firstly, the amendment of the form of the question, which, for example, may allow respondents to select alternative answers; another is the alteration of the categories used for presenting the census data in the output data provided for public*
use (Openshaw 1995:311). Secondly, the addition or deletion of questions between censuses can render comparisons between the 1981, 1991 and 2001 impossible for some topics.

A third difficulty, which was in many ways the most troublesome of the three obstacles I came across in using census data longitudinally, was primarily due to my own mindset about the epistemological nature of quantitative data rather than a methodological one. I was stuck on the belief that without the same spatial area over time, measuring change quantitatively is not possible. As revealed in further detail in Chapter 7, the boundaries defining ‘York’ have changed between each of the 1971, 1981, 1991 and 2001 censuses. In 1996, the city also became a Unitary Authority. Frustratingly, there is no mention of these boundary changes in the census tables themselves; this information was learnt using other sources of information, such as urban policy documents. Therefore, ‘York’ appears as ‘York’ for each decade even though it is not spatially (not to mention, as we shall see, quantitatively or qualitatively) the same place, making it easy for the unwary researcher to make some serious mistakes.

GIS packages greatly facilitate the process of ‘matching’ census output areas so that valid comparisons of change through time can be made. This requires a certain procedure, which analogously amounts to breaking a larger surface into smaller pieces and then regrouping them according to a set surface area. As Openshaw correctly notes:

[s]uch are the problems and pitfalls of comparing the results of separate censuses that only extremely good reasons can justify all the effort and care required. Indeed, the difficulties are sufficient to deter most of the usual purchases of census data, evidenced by the fact that, owing to the very limited use made of the [UK] 1971-1981 Change File, no similar dataset on 1981-1991 has been produced by the census authorities. As a result, individuals wanting to analyse the 1981-91 and 1971-91 change need to construct the datasets for themselves by identifying comparable variables and common geographies. To do this successfully, some vital questions need to be addressed.

(Openshaw 1995:310)
Unfortunately, however, in the case of York, even the superficies and the boundaries of the relatively small EDs and parishes have also been changed between censuses rendering it impossible, for the time being, to draw any ‘like for like’ longitudinal comparisons for the city of York.\footnote{Those working on the census at York City Council are well aware of this problem and are currently working to rematch census areas and figures (whilst recognizing that because the EDs and parish boundaries have changed, errors will be intrinsic to the overall figures). The goal is to use a mixture of ED and parish areas to do this ‘rematching’ work. The hope is to make this data available for 2006 but with the late dissemination of 2001 Census data in general and for York in particular (for precisely these reasons), this is now expected to be perhaps in 2007 – with luck just six years after the survey was actually taken! The chances are that by the time the 2011 Census results come out, York’s boundaries will have changed again, compounding the problem of longitudinal comparison in York yet further. Since policy issues and planning are often based on Census figures, York’s boundary changes are likely to cause some serious knock-on effects in years to come.} Otherwise, it would have been possible to use the new 2001 Unitary Authority ward boundaries as ‘targets’ onto which the earlier census data was allocated (Openshaw 1995). Whilst these are necessarily issues within the interpretation of the York Census data, as I argue in Chapter 7, using the data as it exists nonetheless allows for a general understanding of change, and certainly a much better one than not using the existing data at all. Furthermore, and importantly in terms of the underlying goals of this research, the available data illustrates the potential of using quantitative representations as an important method of exploring micro-macro-level interactions of the real social world.

Admittedly, it could be argued that based on the abstractions used to represent, say, the ‘service sector’, neither the categorizations of the English census, nor those used in the French, succeed in adequately measuring such a sophisticated concept (Sayer 2000:19). Nevertheless, I have used the categorizations specific to each country’s census in an attempt to describe a similar phenomenon. Thus, whilst there are arguably problems of conceptualization and operationalization that are present in both censuses for certain phenomena, I have used the data that exist similarly inasmuch as I have assumed, as noted above, that the variables are considered as traces, which are not real in themselves but expressions of relationships among real things that compose the world (Byrne, 2002:42). In other words, although the categorizations used to describe the ‘service sector’ are neither identical between nor deemed to be without contention, they are still considered to correspond to a trace of something that is considered as a real and similar phenomenon in each country. Overall, these issues...
are unavoidable. Thus, with each issue that arose specifically due to issues relating to conducting cross-national and comparative research, I simply worked as best as possible with them.

It is worth noting that typically, with regards to obtaining a general understanding of urban and social change in the last three to four decades, authors refer to a number of key trends, which are themselves related to descriptions of modern social change more generally. Such key trends include, for example:

- **Socio-economic changes:** there is a shift from the production and manufacturing of goods to many information service industries; employment based on goods-related activities declines, and services, especially information-based services, increase.
- **Occupational changes:** there is a sharp increase in the labour force of professional, scientific, technical groups.
- **Political changes:** there is a new focus on knowledge, technology and information systems; globalization and internationalisation of power structures and systems.
- **Socio-spatial changes:** businesses spread across large areas; residential growth spreads to the outer suburbs and to exurban areas; social polarization intensifies.

Whilst these trends are implicit in the discussions in this thesis, my own concern with them is how they manifest themselves at the local level. For example, what kinds of socio-economic and spatial trends might we see in York and Dijon from the available data? What sorts of places are these cities for the people who live and work in them today? By drawing upon the Census and administrative data over the past three decades, I consider in particular population and socio-economic changes in York and Dijon. Note that tenure and housing were also considered relevant to the discussions in this thesis. In the end, however, I was unable to include it because upon analysing

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44 The emphasis here is on the words *information* and *services* respectively, and the plurality of the second noun.
the collected data, I realised that without going into the issues relating to governance and other related socio-political changes at local and regional levels, it was meaningless to discuss the tenure and housing data by themselves. Therefore, due to lack of time, I had to abandon this initial plan. Tables for basic tenure figures in York and Dijon are nonetheless included in Appendix G. Besides, as shown in Chapter 7, the population and socio-economic data is sufficient in order to depict an adequate representation of change in York and Dijon. More importantly, in terms of the underlying aim of the thesis, this quantitative data also illustrates the methodological implications of adopting a critical realist and complex systems perspective to studying urban change.

**Key Informants**

`Conversation,' writes Burgess (1982b:107), 'is a crucial element of field research.' And so it was in this research too. Indeed, without conversations with certain people, this research would not have been possible. Some of these people were 'luckier finds' than others - 'luckier' in terms of both the circumstances in which I found out about them as well the extent to which they proved to be invaluable to the entire research. All, however, helped the research process immensely. I refer to people working in a range of different settings who provided me with a wealth of information and who acted as valuable contact points at various stages of the research process as 'key informants.'

A few key informants were 'interviewed.' I use this term loosely because compared to the interviews with the children, there was little structure to the interviews. I arranged meetings with them because of their role, status or area of expertise and went along with specific questions to investigate further with them. Most, however, were informally approached as and when necessary. I tended to follow Evans-Pritchard's advice to the young Robert Burgess about doing field research which was: 'don't converse with an informant for more than twenty minutes because if you aren't bored by that that he [sic] will be' (see Burgess 1982a:9). Not knowing if or when I would
next need them meant that I tried to maintain positive relations with them as much as possible.

Whilst the majority were relied upon during only one or two periods of the research for specific reasons, a few were relied upon throughout the research and in many ways. All key informants played the role of providing me with feedback. The feedback acted as a 'self corrective process' (Tremblay 1982:104) in that I was able to verify my findings, avoid wasting time looking for various pieces of information and generally served to point me in the right direction at the right time. In York, Rachel Davis and Lyn Davis working at the York City Council were especially helpful in providing information on the census figures, particular in relation to the boundary changes that have occurred in York between the censuses.

In Dijon, a number of key informants were vital to this research. I note in particular the following: M. Jean-François Bazin who was (luckily) one of the first points of contacts I made in Dijon. This chance encounter changed the course of the whole Dijon fieldwork.45 He had just missed out on being elected mayor of Dijon and was therefore a very well known figure in Dijon by local ‘dijonnais’ in general but especially in any local government organisations. His name provided a key to opening up access to other important sources in Dijon. Also, the Dijon data comes essentially from one organizational body aimed precisely at producing and acting on the kind of data that I was looking for, namely l’Agence Intercommunale d’Urbanisme Dijonnaise (AGIUD), which was also conveniently located at one key site and M. Bazin also happened to have been the previous director of this organization, which again facilitated access and communication with key informants within the agency, not to mention helped me to learn about what information was there to be asked about.

Similarly, M. Michel Visteaux, another key informant, currently director of ICOVL and previous director of AGIUD, shared a wealth of knowledge and a passion for Dijon

45 I was buying M. Bazin’s (2001) book ‘Histoire de Dijon’ one afternoon and the lady at the cash till commented on how ‘productive’ the author was. Upon further discussion with this lady, I learnt that I could contact him via the Mairie. It was only later that I discovered why everybody knew him. Therefore, in many ways, I should be thanking the friendly lady at the cash till – whose name I unfortunately never obtained even though I returned later to thank her personally – for without this remark, the course of the Dijon fieldwork is likely to have gone very differently indeed.
that was invaluable to me also. Upon meeting M. Visteaux, he also very kindly gave me
a copy of his own two volume doctoral thesis (Visteaux 1980) about commercial and
spatial change in Dijon, concentrating primarily on the years between the early 1940s
and late 1960s; it has proved to be a unique source in terms of providing me with a feel
for the ground-level urban life just prior to the period that I have been exploring.

I also met with Mme Vollatier, also at the AGIUD, along with several of her
colleagues, on a number of occasions. Her inside knowledge of where to go, who to
speak to and what current documents were available was again key to this research,
particularly in terms of data and policy documents on housing and construction. It was
also through Mme Vollatier that I met Mme Françoise Bourdon and subsequently,
Mme Catherine Baumont and their colleagues at the Laboratoire d’Economie et de
Gestion at the University of Bourgogne, who again have been an important source of
knowledge and support for this study and in providing particular documents also.

Without these key people, I am not sure that I would have continued down the line of
trying to gather various documents because many were unpublished drafts, which are
simply very difficult to track down despite their relative value to researchers like
myself.

In addition, I also relied on ‘chance key informants.’ By this, I mean that wherever and
whenever the opportunity presented itself, I spoke with local people in York and Dijon.
For example, whenever I took a taxi I would make deliberate efforts speak to the driver
about the city, asking him or her about the kinds of changes they had noticed in the city
and what their views were about those changes. I was particularly keen to strike up
conversations with elderly people in this way when I had the chance to as well; this
could be anywhere, for example, on buses, in cafés, on a park bench having my lunch
etc. These encounters were non-systematic and relied both on chance opportunities
and my own mood and circumstances at the time but they were all extremely important
in terms of building up my data, and particularly in terms of reflexively verifying my
findings with local people who lived there. I do not consider these incidents as
interviews per se but they were informative conversations with local people of all ages
that I purposefully conducted in order to learn more about change and continuity in these places.

In addition to the above methods of exploring York and Dijon, as discussed in the next chapter, the use of documents was another key procedure employed in this study.
Exploring York and Dijon
Using Documents

This Chapter details the collection and analysis of various documents as sources of qualitative data about change and continuity in York and Dijon. A valuable feature of documentary research lies precisely in the diversity of available sources (Scott 1990:13). This research used: 1) local newspaper articles, 2) maps, 3) photographs and postcards, and to a much lesser extent 4) selected literary and academic unpublished sources including official urban planning and policy documents (many written by the key informants). Each of the different sources provides different kinds of information. I give an overview of the ways in which the first three of these documents were used before focusing on the specific issues relating to each type. Because the fourth type of document was used as background material rather as a systematic method, I integrate the findings from this type throughout the thesis rather than devote a section to it.

Despite the variety of the documents used, I argue that the main difference between them is the physical embodiment of that which is referred to as the ‘document’ (Scott 1990:12). Each kind of document served an overall common purpose, which was primarily to complement the secondary statistical data. On the one hand, this methodological triangulation46 was used, as is often recommended by a number of authors, as a means by which the validity of research findings could be strengthened.

46 I use the term ‘triangulation’ as Polit and Hungler (1999:1) define it, which is ‘the use of multiple methods or perspectives for the collection and interpretation of data about a phenomenon, in order to obtain an accurate representation of reality.’
(Bryman 2001; Denzin and Lincoln 1994; Hammersley 1990; Lincoln and Guba 1985; Murphey et al. 1998; Trend 1979). On the other, I used it to supplement the statistical description of urban change in both York and Dijon and therefore consider what else it could teach me about the way the urban environment had changed in each city. Whilst the statistical data offers a quantitative sketch of change, this qualitative material was seen to potentially offer a different aspect of the same phenomenon (Denzin 1970; Denzin and Lincoln 1994; Fielding and Fielding 1986; Geertz 1973; Oiler Boyd 1993; Silverman 1985, 1993). In addition, as Hammersley and Atkinson (1995) argue, I used these different types of document as valuable stimuli to my own thinking and theorizing. Once again, I actively and iteratively juxtaposed this material with both the official statistics and interview data.

To this end, my methodological concerns in using these various documentary materials revolved not so much about ‘what they reveal about the teller’s interests, perspectives and presuppositions’ (Hammersley and Atkinson 1995:160). Nor was I directly concerned with the trustworthiness of the documents as an exact representation of reality (see Burgess 1984), though, of course, this was considered. Rather, I relied upon the ‘unstated meaning structures’ of documents (Cicourel 1964) as potential sources of information, which might reveal different kinds of traces of the kinds revealed through the statistical data. In other words, the documents were understood to contain explicit and implicit subjective traces about the social and spatial world. Hence, in line with Byrne’s (2002:40) realist and complex take on the quantitative variable, I used the different types of documents as alternative expressions ‘of the real systems that compose the world.’

I argue that combining different documentary sources in this way allows the researcher unobtrusive access to traces of complex, multi-dimensional interactions from which the social emerges. Just as the survey to Bateson (1984:10-11) ‘is a means of knowledge production’, the document is seen here in the same way. The means by which the knowledge is produced differs between the survey and the document but

\footnote{While I recognize that Cicourel (1964) did not write from a critical realist perspective \emph{per se}, I believe that his work does in fact overlap with a critical realist approach and I have used this overlapping part of his work for my own purposes here.}
what we are dealing with is still fundamentally ‘a means of knowledge production’. Following Bateson’s account of the social survey, the document is seen as a social process based on a typology of social actors holding a distinctive form of knowledge of the social world. The social actor might be a journalist and the knowledge type a newspaper article; a photographer produces a photograph; a cartographer, a map; etc. Likewise, I argue, the validity of the text resides in the production of the document seen as an emergent whole. Documents are produced by many different types of actors, who interact with many other types of actors. These actors are participating in many multi-dimensional social systems that are also interacting with many other systems. The documents are produced for many different purposes and the purposes relate strongly to the character of these different interactions.

Thus, behind each document, I asked a series of questions that were explored to a greater or lesser extent, such as: ‘Who wrote the document?’, ‘For whom was it written?’, ‘When?’, ‘Why?’ and ‘Why was a certain medium chosen over another?’, ‘What has it been preserved and others not?’, ‘What institutional, social and cultural aspects help to contextualize the document?’, ‘How does it relate to, or compare with, other documents produced around the same time and place?’ etc. (Atkinson and Coffey 1997; Bryman 2001; Robson 1993; Scott 1990). Exploring these sorts of questions allows for an understanding of the document as a complex means of knowledge production. To the complex realist researcher, it offers, I think, another method of empirically exploring the physical manifestations of sk involves interpretive understanding of individual concepts, appreciation of the social and cultural context thought which the various concepts are related in a particular discourse and a judgment on the meaning and significance of the text as a whole’ (Scott 1990:31). This was extended, however, using a critical realist and complex systems approach to the research question. Thus, I also approached the document as potentially informing our understanding about underlying structures, processes and relations which might help to describe, but more importantly, to explain, the socio-spatial changes specific to the urban form of Dijon and York.
Hence, following and adapting for my own purposes here, Haynes' approach and analysis of text, I approached the documents with six key factors in mind:

- The history and context of the production of the document and the relationship of the document within and between document types.
- The representational style, framing and content of the document.
- The document as a source of information about the author's perspective relating to important actors and cultural values.
- The document as a source of information about the intentionality and processes relating to social agents acting to bring about change (Bhaskar 1978; Byrne 1998a; Outhwaite 1987).
- The document as a source of information concerning the relations and interactions of social agents (be they at the level of the individual author or systems of institutions), social actions and events (Bhaskar 1978; Layder 1990; Outhwaite 1987; Sayer 1984).
- The relationship of the document with time and space (see Byrne and Doyle 1998).

In addition, I continued to be guided by grounded theory in relation to the emergent concepts, themes, and hypotheses within and between document types. Moreover, I constantly questioned and compared what was (being) found from the documentary research to what was also (being) found from the other research methods. Thus, I sought to accumulate qualitative and quantitative data obtained from different sources whilst simultaneously using a 'continuous interplay of conceptualization/theory construction and contextualization' (Ekström 1992:116).

For example, I questioned why in both York and Dijon archived photographs and collected postcards almost invariably presented an aspect of the past or present city-centre. However, in terms of urban photographs depicted in the respective local newspaper between 1970 and 2001, in Dijon, no old city pictures were found whereas in York, they were regularly posted. Why is this? Why are these similarities and differences between data sources and between the two cities there? What might we
learn from them? And importantly, how might these observations relate to the interview material or the official statistics?

A major feature of modern society lies precisely in the proliferation of written records and increased communication through writing more generally (Castells 1989; Crowley and Mitchell 1994; Finnegan and Thomas 1993). In turn, therefore, when it comes to this methodological approach, it can feel as though there is an infinite supply of documents ‘out there’ to be accessed, explored and analyzed. In turn, the researcher needs a sampling procedure as well as a way of deciding when to stop gathering and analyzing documents.

Just as I used an overall methodological stance for all of the document types, similar collection, analysis and sampling procedures were used for them as well. Although I would generally focus on one type of document at a time, I frequently moved between types if only by initially checking out which documents were available in any one location. For example, on a first visit to each City Library, I inquired about the availability of each kind of document, but then I would return to focus on each one by one. Still relying upon the logic of grounded theory approach, collection, analysis and sampling of documents occurred alongside one another within and between the different types of document. My core sampling selection criterion was based on how to maximise the ‘opportunity to learn’ (Stake 1994:243) about underlying processes involved in Dijon’s and York’s emergent urban form. Therefore, for all documents, a combination of opportunistic and theoretical sampling techniques was used.

Opportunistic sampling was used initially because I had little or no previous knowledge of the documents, their availability or the extent of their relevance to my research until I began accessing them. Furthermore, for each document type, I had to ask a number of questions, which subsequently impacted upon how I went about conducting the research. For example, I wanted to access old and new photographs of both cities, but then I had to ask: Did these photographic images exist? If they did, where were they? How difficult or expensive was it to obtain or access them? Could I access them? In what form did they exist – where they online, in archive folders, etc.? Were the images worth accessing? What, if any, new and relevant information did
they offer to my project? Could they really help me in answering my research question?

These questions were answered through a combination of my involvement in the overall research and what I learnt specifically from the documents. In addition, I relied upon key informants. Indeed, without their help, I do not believe that I could have successfully advanced with this particular method. It often became clear that without the right question to the right person, certain answers could not have been known. Hence, to begin with, samples of each type of document depended upon the opportunities presented to me during the fieldwork, whilst also using the principles of theoretical sampling as much as possible as the collection and analysis proceeded (Clifford et al. 1997). This was conducive to a pragmatic approach, which also allowed me to follow up new leads during field work and take advantage of unexpected incidents of luck and good fortune (Hammersley and Atkinson 1995).

It is also worth mentioning that in the beginning of the collection and analysis of the different documentary sources, a considerable amount of new information was exposed. The extent to which each type of document continued to reveal new and relevant information differed between document types. However, I found that it was generally significantly less for all types as I went on to gather and analyze further texts. As time went by, within the context of what had already been discovered, it became increasingly less cost effective, in terms of my effort and time, to continue gathering and collecting a particular type of document once the pace of finding new information had obviously slowed down considerably.

That said, with all documentary types, the final decision to stop collecting more documents was based upon my discussions with various key informants and my own experience and discoveries whilst in the field. Fortunately, for each type of document, I was able to verify my findings with particular people. These key individuals were able to inform me about whether or not there existed additional documents beneficial to the research. In effect, I stopped collecting materials when both my findings relating to the different document types, and the general picture of urban change that
I was perceiving through all the different data sources, were perceived by these key informants to be both comprehensive and accurate. This was the general approach used with regards to the documents. What remains to be conveyed, however, are the details about the specific collection and analysis of each of the different types of document used in this part of the study.

**Local Newspapers**

Newspapers are frequently reported to be valuable sources for social research, and for documentary research in particular (Bryman 2001; Denzin and Lincoln 1994; May 2001; Murphey *et al.* 1998; Robson 1993; Scott 1990; Silverman 1985). After all,

> [n]ews representations are symbolic in the sense they embody, stand for, or correspond to persons, events, processes, or states of affairs being reported. News representation involves authorization of who can be a representative or spokesperson of a source organization, of what sources are ‘authorized knowers.’

(Ericson *et al.* 1991:5)

Yet, there is surprisingly little written about how researchers use this medium, other than a brief mention that it was used. Indeed, this is one of the arguments that Platt (1999) makes against documentary research methods in general. In contrast, then, this section attempts to explicitly describe, albeit briefly, the way that this document type was made use of here.

In both York and Dijon, there is a daily newspaper that has been in publication since (at least) the 1970s. Past and present issues of these newspapers are archived in each of the city’s main local libraries. In York, the ‘Evening Press’ is stored in ‘York City Library’, in Dijon, ‘Le Bien Public’ is archived in the ‘Bibliothèque Municipale de Dijon.’ Except for the last two to three years, the daily paper in both places is accessed via microfilm. This way of storing the newspapers was both beneficial and unhelpful to the research process. On the one hand, I could scan the daily issues between 1970 and 2001 on screen for relevant material faster than I could flick through its hardcopy form. On the other hand, I am more sharp-eyed when text is on paper rather than on screen. In total, just a small number of articles (compared to the
The total number of available articles were considered useful. Although it was possible to make photocopies, because there was a small payment for each copy made, I took notes on the articles of interest; only were I thought that the article might be of particular use later, was the photocopy obtained and taken away for further investigation.

I set out not knowing what I would find let alone if I would find anything of interest. Nevertheless, as I scanned the headlines, bold print and images, I began to narrow my focus on anything that directly related to the city's urban form. Thus, I chose articles that ranged from traffic and transport; building construction or large-scale renovation, which would include topics, such as housing, commercial or industrial, etc.; and articles that I knew related to a 'significant event' in the changing local urban culture, e.g. the development of Dijon's largest shopping mall, La Toison d'Or, which interestingly was relatively well documented in the local press. Thus, in the process of collecting the data, I was already sampling and analysing it. The analysis of the collected material continued as I continued to be guided by grounded theory constant comparisons, asking generative and concept-related questions and coding within this type of document and between other data material also (Strauss and Corbin 1994).

Maps

Because I was interested in how York and Dijon had changed spatially, it was necessary to try to map these changes as much as possible. Using existing maps was a way of studying this. As Harley (1992:231) accurately puts it, '[m]aps are too important to be left to cartographers alone.' Maps are a particular type of document. They are unique in that they act as a form of 'representation ... of all or part of the earth or some other body showing a group of features in terms of their relative size and position' (Thrower 1996:245).

More precisely, following Kosonen (1999), three levels of meaning were considered when approaching any map. The first involved paying attention to the content, the meaning of individual signs and symbols within the map. The second referred to
iconography and considered the extent to which the map represented the topographical reality of the physical space. The third level of perspective, on the other hand, referred to iconology and called for the interpretation of the map as a cultural text. As Pickles (1992: 193) argues, maps 'have the character of being textual in that they have words associated with them', 'they employ a system of symbols within their own syntax', 'they function as a form of writing (inscription)' and 'they are discursively embedded within broader contexts of social action and power.'

Taking all three levels together, then, maps were considered as another kind of document involving therefore, many of the issues shared with documentary research in general. Hence maps, along with map symbols, are seen as socially produced (Harley 1992; Kosonen 1999; Pickles 1992; Wood 1993) and 'mapping is necessarily situated, embodied, partial: like all other practices of representations' (Gregory 1994:7; original emphasis).

**Photographs and Postcards**

In addition, I also used photographs and postcard images of the two cities to explore urban change. Although visual methods are being increasingly depended upon in sociological research (Emmison and Smith 2000; Evans and Hall 1999), they still remain marginal compared to other methods. With the exception of Crang's (1996) study on Bristol, using photographs and postcards to study the urban is even rarer. However, had it not been for the photographs and postcards used in this study, the continuity involved in the urban evolution would surely have been missed altogether. However, as suggested by the title of the thesis, and argued in Chapter 8, this is a central part of my observations of change in York and Dijon. Moreover, we will see in Chapter 10 that the theme of continuity also forms a key element to integrating the children's discussions with the changes in these cities.

Fyfe and Law (1988:1) comment about the 'invisibility of the visual' is therefore very apt. Similarly, Chaplin (1994) writes that 'sociologists behave as though they were sightless.' Holliday (2000:504) suggests that hostility 'towards the visual within
sociology in endemic: there exists within sociology (and other critical disciplines) a deep mistrust of the visual image.' Among the reasons suggested explaining why the 'visual is repressed by the verbal' (Chaplin 1994) are that the 'analysis of images raises complex methodological and theoretical issues' (Silverman 1993). Prosser (1998:98-99) suggests that the key issues are: a) 'the act of image making ... unacceptably alters the object in the frame and thereby objective content and subjective meaning of the image'; b) 'images are, by their nature, ambiguous and do not in themselves convey meanings which are supplied serendipitaly by those who perceive them'; and c) contextual and reflexive data which are central to the interpretation of images is insufficiently presented.' The result, Prosser (1998:99) explains, is that images 'are unacceptable as a way of 'knowing' because they distort that which they claim to illuminate; and images being socially created and mediated are skewed by the socio-context of 'making', 'taking' and 'reading''. Gone, therefore, are the positivist days in which the photograph was assigned a privileged connection to reality. Instead, the photograph is assumed to be socially and politically constructed; moreover, it is constructive. Images, like all cultural objects, cannot be 'seen' outside their context of use, creation and distribution; nor can they be, as shown above, detached from systems of relationship between the viewer and the 'author' (Becker 1998; Harper 1994).

Nevertheless, it is argued that meaning and knowledge can still be learnt by photographs. As Chaplin argues:

> there is no reason why the social scientist should not take account of the fact that photographs are socially constructed, whilst acknowledging that they can also provide detailed information about a culture of which s/he may previously have known little or nothing. (Chaplin 1994:199)

Similarly, Harper continues,

> just because photography does not easily facilitate such standard procedures as variable analysis (images can be sorted, compared, or otherwise analyzed statistically, but it probably would not be the best use of photographic information), that does not mean that photography cannot confront critical questions about social structure or social organization. (Harper 1994:409)
Thus, whilst I acknowledge that using photographic images can be problematic, I have approached them with the view that they are nonetheless a useful resource for my purposes. Although I did not deny the problems of knowing ‘who created the image?’, ‘why was it produced?’, I focused mainly on the content of the photograph and ‘what the image was of.’ As Banks (2001:114) points out, ‘it is easy to overstress the importance of the external narrative and there are contexts in which the internal narrative is equally if not more important.’ Furthermore, when studying pre-existing visual representations that have been created by others, the dual strands of content and context in tandem are relatively easy (Banks 1995).

Following the critical realist underpinnings of this thesis, then, the photographs were seen as traces of the built environment that I wanted to learn more about. I was interested in what the city might have looked like as it changed through time and obtaining snapshot images of the city proved a possible way of doing this. In this sense, the photographic image was understood to contain explicit and implicit subjective information about the social and spatial world. In addition, because the very presence of the camera ‘confers importance and significance on the scene it reveals, to the viewer if not the participants’ (Banks 2001:18), the pictorial and visual representational use of photographic images was also used to study how socio-spatial changes were seen and represented by photographers (who are social actors).

A primary aim was to attempt to discover the attitudes and discursive forms emerging from the combination of actors, cultural values, and production of the image. I approached the photographs as ‘slices in time’ from which I could learn about the complexity of form emerging from the local social-cultural-political-economic spaces. The photographs were thought of as reflexive discursive spaces in which I could observe traces of the dynamic interactions (of interpretation and power) between the image, the author, the viewer(s), and the systems in which each of these is embedded. I assumed, therefore, that the photographic images took ‘historically specific forms linked to political, economic and social relations, which determine both their mode of production and their ability to constitute the social world itself’ (Harrison 2002:857).
More specifically, I followed the phenomenological hermeneutic approach used for all the documentary research in this study. Hence, I identified key factors as significant: 1) the history and context of the production of the images and the relationship of the image with other images; 2) the pictorial representational style, framing and content of the image; 3) the photographic image as a source of information about the photographers' perspective relating to important actors and cultural values; 4) the social theory and versions of reality put forward by the photographic image; 5) The document as a source of information about the intentionality and processes relating to social agents acting to bring about change (Bhaskar 1978; Byrne 1998a; Outhwaite 1987); and 6) the relationship of the image with time and space (see Byrne and Doyle, 1998). As Platt (1999) and Bryman (2001) point out, much can be learnt about the popularity and value placed on documents simply by observing the selective survival of them in the first place.

Thus, I collected pre-existing photographic images of York and Dijon. A main issue I confronted with this method was that of access. Before studying the photographs, I had to locate them. The main sources from which I accessed photographic images of both York and Dijon were: the city library archives, books about the city, newspapers and postcards. However, the extent to which I relied upon either source was determined by what was available.

There is a clear yet interesting difference between which source was relied upon most to learn about each city: for York, most of the photographs I accessed were stored in the city library and especially online via the hundreds available at Imagineyork.co.uk; for Dijon, most were in the form of old and new postcards. The reason for this different source of sample is simple: York's city library holds hundreds of photographs of the city whereas there were so few photographs of the city in Dijon that I wondered if I might have to abandon the comparative aspect to this method altogether. However, I did come across a market stall selling old postcards, many of which were photographs of the city. On a weekly basis when the market returned, I took notes on the kinds of images that were on sale. In addition, the Head Teachers of the one Dijon school happened to be an avid 'old postcard collector.' He was happy
to show off his collection, from which I was able to make notes after conducting the interviews at that particular school. Later, I also managed to collect over 150 old postcards on Dijon; most were purchased from collectors on Ebay online auction.

Having located the photographs, I needed to spend time examining them. This proved to be a problem in both York and Dijon. It was not possible to photocopy or scan the photographs held in the libraries (for both copyright reasons and the potential harm to the photographs that this might have caused). The postcard images of 'old' York and Dijon were too expensive to buy in large quantities. The books with old and new photographic images of the cities are few and far between. I could obtain photocopies of the photographs found in newspapers but the quality was so poor that it was not worthwhile. However, I did make notes of my observations. In addition, I managed to obtain some old and new photographs for each city. Although the number of examples I was able to collect for this thesis is relatively small, they were useful reminders and templates on which my field notes and observations could be attached for further inspection.

Why were old and new photographic images of Dijon mostly in postcard form? Why had one library taken care to archive photographic images of the city whereas the other had not? Why were the form and the content of the images almost constant over time for each city yet different between the cities? What could be learnt about the physical and structural changes of the cities through looking at photographs of the cities taken at different points in time? These questions were raised through using photographs and postcards to explore urban change in York and Dijon. Whilst Chapter 8 deals with the general findings derived from this method, I explore these questions in Chapter 10 through integrating all the findings of this research. Before this, however, in the next chapter, I describe one more method that has been used in this research, namely interviews with local schoolchildren.
PAGE MISSING IN ORIGINAL
Exploring York and Dijon
Using Interviews with Children

This chapter continues the description and justification of the methods used in this research, by progressively detailing the use of semi-structured small group interviews with children. Whilst ethical and methodological issues abound in any social investigation, they are accentuated in research with children (Alderson 1995; Christensen and James 2000b; Davis 1998; Mayall 1994). Indeed, as will be seen, this part of the research developed the form it did primarily because it involved children.

The chapter begins with a justification for the use of semi-structured small group interviews. Secondly, issues to do with access and sampling are briefly reported. Thirdly, the general interview process is described. Next, the process of data analysis is summarized, including related issues to do with transcription and translation. The chapter ends with further comments describing the ways in which I negotiated certain ethical issues, such as my role as an adult researcher and issues to do with obtaining informed consent. In this way, the process of conducting small group interviews with children is explicitly relayed.

Note that ethical and methodological issues permeate the whole research process; the research process is itself nonlinear and iterative. In reality, what really happened was more like this: I negotiated access to schools in York; I was not initially granted access to children in York schools; I did then gain access to a few schools in York; I interviewed children in York; transcribed some interviews; interviewed some more; transcribed some more; I negotiated access to children in Dijon; I began to interview
children in Dijon; I transcribed some of the Dijon material; at the same time, I began negotiating access to more schools in York; I finished interviewing children in Dijon; I then continued to negotiate access to more schools in York; I interviewed some more children in York; and then, finally, I then transcribed some more interviews, both of York and Dijon interviews. In addition, however, every time I conducted an interview, during the entire interview, I confronted adult-child status and power issues and related ethical issues, and I was thinking about the preliminary analysis that I had carried out on previous interviews, and so on. (And even this account is a lot more linear that the real events because at various stages, I was also conducting the other methods of collecting quantitative information and various documents about York and Dijon.)

Although the repetition involved in this series of events is a more accurate description of what happened, for both my own sake and that of the reader’s, in what follows, I avoid representing the process in that way. Nevertheless, it is a relatively detailed section because like the previous methods, I try to describe and justify the research process methodologically, but in addition, I endeavour to show the extent to which it was conducted ethically. In this way, it is hoped that the reader will come to know the basic facts, such as the number of schools sampled and the number of groups interviewed, gain a general feel for how the interviews occurred, as well as understanding the process of analysis used.

Why Semi-Structured Small Group Interviews?

In order to answer the larger research question, my task was to explore children’s perceptions of where they lived so as to obtain another empirical representation of York and Dijon. In other words, I was interested in eliciting, understanding and obtaining images of York and Dijon’s present and future urban forms as seen and understood through the eyes of children living in these cities. In turn, I needed to use a method that would be effective in terms of facilitating access to children’s views. One of the ways to find out what people think, imagine and believe is to ask them. Questionnaires and interviews are two of the most common techniques that
researchers use to do this. My main reasons for opting for interviews were twofold: relative to the aim of inquiry, they are an appropriate method; they are also a successful technique to use with children.

Questionnaires might have been also used. However, since I was unable to formulate appropriate and effective questions due to the relatively exploratory nature of this part of the research, and the lack extant research that deals with these issues, questionnaires were inappropriate here. As Vosey (1975; cited in Murphey et al. 1998:115) states, it 'is meaningless to produce measurements or qualifications of phenomena whose dynamics are not yet understood.'

With interviews, however, I was able to tentatively approach the children with my initial questions, to modify my line of enquiry if and where necessary, to follow up responses and investigate underlying motives in a way that questionnaires could not (Denzin 1970; Robson 1993:229). After all, one of the benefits to interviews is that they can open up and then pursue anticipated aspects of inquiry (Burgess 1982b). This was a particularly important trait since I did not know the kinds of responses that the children were going to provide. Interviews would also complement the other methods used in this study in that they would allow me to come into direct conversation with agents at ground-level. For these main reasons, the interview method became the chosen technique for this part of the research.

Once the general method was chosen, it became a matter of using it and where necessary, adapting it (for example, in this case, through the use of additional tools such as write and draw techniques – see below) such that it was methodologically and ethically suited to investigating the research question with children as participants. This is not to say that research with children necessarily requires specific tools. Rather, it is to say that the researcher must hone and refine the method that he or she is using to the needs of the research subjects – be they adults or children – and the aim of the inquiry (Lincoln and Guba 1985).

Among the different types of interview (of which Bryman (2001:110) suggests there are twelve) I chose to conduct semi-structured interviews. The many types of
interviews are generally placed along a continuum of standardization (Burgess 1982a; Murphey et al. 1998:112) with structured interviews at one end and unstructured interviews at the other (Burgess 1982b; Lincoln and Guba 1985). As the name implies, 'semi-structured' interviews lie in between the strict question order and wording of 'structured' interviews and the more free-flowing, conversation-like ‘unstructured interviews.’ Taking what was for my purposes 'the best of both worlds', semi-structured interviews offered both a structure and a flexibility that were, as I go on to explain, pertinent to the research methodologically and ethically.

One of my aims here was to compare what different groups of York and Dijon schoolchildren were saying in relation to their respective cities. Therefore, whichever technique I used, it needed to have a structure to it that was ‘transferable’ from group to group. Unstructured interviews were, therefore, not an option because, as their name suggests, they do not have any strict structure. Structured interviews would not have been as effective as semi-structured interviews because they lack the flexibility that was required to explore the research question with children, and especially with different aged children. The relative structure inherent to semi-structured interviews therefore ensured a certain cross-case comparability between groups and across each country (Bryman 2001; May 2001) which strengthened the validity of any similarities and differences observed, whilst their relative flexibility allowed to explore the children’s responses with them, and in turn, to better understand their answers.

The interview setting was ethically and methodologically beneficial to this research in many ways. One of the most obvious yet most important advantages was the face-to-face contact. This allowed both verbal and non-verbal communication, such as posture and facial expressions, to take place between myself and the children (see Bryman 2001:114; Robson 1993:231). Ethically, my responsibilities towards the children lay in ensuring that they were not harmed physically or emotionally (Alderson 1995; Morrow and Richards 1996). Face-to-face contact enabled me to conduct ethical research for two main reasons. Firstly, it allowed me to react quickly to a child’s negative emotional responses (Davis 1998; Levin 1994) such as embarrassment, shyness and fear (Beresford 1997). Their initial shyness and wariness
towards me at the beginning of the interview was something I was sensitive to in all cases. Secondly, non-verbal cues are central to all human communication and vital for building trusting, productive relationships (Knapp 1978) but they are especially relied upon in social situations that tend to hinder explicit verbal messages – e.g. where there is a power imbalance between two people – particularly by the less powerful person (Palmer and Simmons 1995). Therefore, it is arguably an ethical issue when this opportunity is taken away from children communicating with adults.

Methodologically, the face-to-face contact was important for three main reasons. Firstly, as Bryman (2001:319) points out, the researcher needs an understanding of what is not said or attempts to say things, as well as what is actually said. Non-verbal cues actually helped me to understand verbal responses (Robson 1993:229). For example, I interpreted fidgeting or restlessness as signs that I had to move on to another question to retain the children’s attention; a child’s frown in response to my question, as an indication that I might need to clarify my question or ask it in another way. Secondly, as has long been recognized, adults change their speech style when talking to young children (Brown 1973; Keats 2000; Snow and Ferguson 1977). This was something that I also did as I attempted not only to respond to the different individuals within a group but also the different ages within and across groups also. The face-to-face contact also enabled me to gain some understanding of the linguistic capability of each child during the interview, usually during the introductory stages (Keats 2000:94) and adapt my speech style accordingly. Thirdly, it helped the children and I to build up a sense of trust and rapport with each other. As Lincoln and Guba (1985:256) note, ‘[w]hile no one would argue that the existence of trust will automatically lead to credible data, the inverse seem indubitable. Respondents are much more likely to be both candid and forthcoming if they respect the inquirer and believe in his or her integrity.’ In turn, richer data is more likely to be produced because it better reflects how the interviewee thinks or feels (Bryman 2001; Denzin and Lincoln 1994; Keats 2000; Robson 1993; Rubin and Rubin 1995). As Hazel sums up:

researchers can increase the flow of data through the use of various prompts and reassurances. Participants can be encouraged to keep talking by the use
of neutral acknowledgements such as repeating a participant’s phrase and showing interest through head nodding and regular eye contact.  
(Hazel 1996)

My decision to conduct group (as opposed to individual) interviews was based on several reasons. Firstly, whilst I agree with Punch (2002:49) that ‘young people are not a homogenous group and they have different preferences so it cannot be said that a group or individual interview is more appropriate for conducting research with children,’ I also agree with researchers who have suggested that small group discussions are conducive to creating a safer environment than individual interviews because the adult’s authority is lessened through the ‘diffused attention’ of the interviewer towards the children (Hill et al. 1996), i.e. there is a sense of ‘safety in numbers’ for the children (Mahon et al. 1996). Secondly, the nature of the topic (Punch 2002:49) in this research did not warrant the more personal one-to-one interview. Thirdly, because I chose to access children through schools, I felt that group-work was more in line with this setting. Indeed, it is argued that this format is beneficial because it replicates the familiar small group setting within the classroom (Mauthner 1997). Fourthly, I chose ‘group interviews’ rather than ‘focus groups’ because I was more interested in obtaining multiple answers to my questions rather than exploring the group norms and dynamics around the topic of interest (May 2001:125).

Retrospectively, I wish I had given the children the choice of whether they preferred to be interviewed individually, in pairs (see Harden et al. 2000) or in groups (see Mayall 2000a; Punch 2002). Although it would have been more difficult to do this in practice, it might have been more ethical. It would also have been interesting to compare if the responses varied from the different adult-child dynamics. That said, given my own previous experience and familiarity with working with children in groups and my relative inexperience in doing research with children, I think for myself, starting with group interviews was ethically and methodologically the best possible option.

Indeed, the quality of the data generated by the children discussing various issues with each other was richer than I would have been able to obtain had I been talking to
the children individually. This was primarily because the children were less inhibited to challenge one another than I was in challenging them. My own efforts were focused on making the children feel okay in saying what they had said and encouraging them to say whatever they wanted to say, so much so that I often held back on saying anything that I feared might have appeared threatening or negative to the children. With each other, however, the children seemed comfortable to argue with one another, often vehemently and forcefully negating one another regarding their various views and opinions. This created dynamic conversations with the children continually sparking ideas off one another. The relative abstract nature of the urban was thus brought to life and made tangible through their own interactions rather than my prompts to make it so. Often, my role became both a facilitator and an interviewer in these situations where I summed up their arguments and asked further questions in order to explicitly elicit elaboration and/or clarification (May 2001:125).

In the later stages of the fieldwork, I also introduced ‘write and draw’ techniques which are especially relied upon in participatory appraisal research (see Backett-Milburn and Mckie 1999; Macgregor et al. 1998; Pain and Francis 2003)

Access and Sampling

The first part of this section outlined the overall reasons for choosing semi-structured small group interviews to explore the research question with children. By way of introducing the basic ‘facts and figures’ of the interviews, I now concentrate on the access and the sampling procedures used for the interviews.

Effectively, both the way I approached schools and my sampling procedure changed as I discovered the difficulties involved in talking to children in schools, which is why I discuss both topics here together. As much as was possible, I chose the location of the school. In practice, however, whether or not I gained access to the school to interview some children determined whether a school became part of my sample.

I generally spoke to groups of four or five but in fact, the groups varied from three children to sixteen. Clearly, group dynamics were significantly affected by the age
and number of participants. I would argue that the variation was itself a methodological advantage. It kept me more alert as an interviewer because the variable group dynamics made the series of interviews less monotonous. Sometimes, the larger groups forced me to be more creative and from them, therefore, I learnt better ways of conducting the smaller groups. For example, due to the poor quality of my tape recorder, it was nearly impossible to pick up clear voices from a large group. Hence, I quickly learnt that through setting the 'rule' that only the child holding the tape recorder could talk, not only did I obtain a clear recording of what was said, which is invaluable when it came to transcribing the sessions, but the children also spoke one at a time, which was an issue I struggled with when I began conducting the interviews. Moreover, each child was encouraged to talk simply because he or she wanted to hold and say something into the machine (see also Mahon et al. 1996).

In total, children aged four to thirteen years were interviewed from fifteen schools: six schools in York and nine in Dijon. Of the six York schools, two were secondary schools - one of these was a public girls school; four were comprehensive primary schools. In Dijon, no secondary schools were visited primarily because of lack of time. Instead, two of the nine Dijon schools were ‘maternelle’ schools (i.e. kindergarten); the other seven were primary comprehensive schools. (See Appendix I for further details on the different access procedures in York and Dijon and the ways in which this influenced the sample of schools.) In sum, 62 group interviews were conducted: 37 groups in York and 42 in Dijon. This represents a far more extensive use of group interviews than most other studies I have come across involving children. Some might say that this was an unnecessarily large sample. However, I would suggest that for this study, this was the necessary minimum number of interviews needed for theoretical saturation to be achieved and for me to be confident of the validity of my findings.

Each group was conducted during the school day, except for ten, which were selected from a York after-school club. Each discussion lasted approximately forty minutes.

48 In York, there are 12 secondary schools and 80 primary schools. In Dijon, there are 47 ‘groupes scolaires’ consisting of 44 maternelles schools and 41 primary schools; there are also 10 lycées and 23 collèges.
and was tape-recorded. The sample covered a wide range of different 'populations' in both Dijon and York and were selected primarily to explore diversity, rather than to establish any kind of 'representativeness' (see Kitzinger 1994). All clusters of children already knew each other through being in the same class or going to the same after-school club. This provided the additional advantage that the children were already used to talking to one another in groups. Apart from the ten after-school club groups, which the children formed themselves, the organizing teacher grouped the children into interview groups. I would have preferred the children to choose whom they wanted to be with for each group. The dynamics of the ten groups in which the children were to select one another to work together were markedly more animated and 'naturally' more interactive than the other groups. However, in only one school did I feel I was given that flexibility. Usually, because the children would leave a lesson to attend the interviews, their teacher assumed the authoritative role over his or her lesson and the children attending it. In such circumstances, I did not feel that my role as the young visiting researcher gave me either the authority or the control to challenge the teacher. A few teachers, however, did not seem to want to make a decision. In such cases, I would take this opportunity to suggest that the children chose one another for the groups. Mostly, however, the teachers took charge, often selecting children seated next to one another in the classroom to form a group. These power and control issues between myself and the adults with whom I had to negotiate were part of the routine in each school. I often felt I might have been given more control by these adults had I been older or male and that my gender and young looks went against me on these occasions.49

In the first four groups, I took notes on parental occupations. Afterwards, however, I stopped doing this for a number of reasons: a) I felt it was intrusive and inappropriate. If I wanted to know which jobs the parents did, I should ask the parents, not the children; b) I wanted to show the children that I was interested in their lives and that I was there to hear about their views; and c) the school catchment data provided information on the likelihood of the children's socio-economic

49 See Easterday et al. (1982) for a discussion on how the role of the young female researcher can further define opportunities and limitations of researchers.
backgrounds anyway. Although parental socio-economic status has implications on their children’s lives and views, I felt omitting these questions made my child-centred approach clearer; c) in all the interviews, I felt the pressure of time and I felt the interview time could be better spent, on building initial rapport for example; d) in each group, despite varying social backgrounds of the children, the discussions were largely similar. Instead, I tried to select schools according to the socio-economic and spatial location of the catchment area. This alternative method of thinking about the interactions between a school’s socio-economic and spatial situation and the children’s responses was more important in Dijon than in York inasmuch as the catchment area in Dijon tended to be smaller than in York. In turn, the range of socio-economic backgrounds within each school also tended, or rather seemed to me, to be less than that in York schools.

To begin with, I simply wanted a diverse sample of schools in order to compare responses as much as possible. Thus, as the research progressed, based on the emerging pattern within the interview material itself, how the location of school affected the children’s answers increasingly became my focus of attention. Hence, each school was classified as an ‘inner’ or ‘outer’ city school depending on the location and what the children themselves felt the school was in relation to the city-centre. In sum, I visited two primary schools and one secondary school (i.e. 16 groups) in inner city York; in outer city York, I visited two primary and one secondary schools (i.e. 21 groups). In inner city Dijon, I interviewed children from one kindergarten and one primary schools (i.e.9 groups); in outer city Dijon, one kindergarten and six primary schools were selected (i.e. 33 groups). The total number of inner- and outer-city schools visited and the groups of children interviewed within each type of school are summarized in Table 1 below.
York Dijon

<table>
<thead>
<tr>
<th>Type of School</th>
<th>York Inner city</th>
<th>York Outer City</th>
<th>Dijon Inner city</th>
<th>Dijon Outer city</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Schools (No.)</td>
<td>Groups (No.)</td>
<td>Schools (No.)</td>
<td>Groups (No.)</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Primary</td>
<td>2 14</td>
<td>13</td>
<td>4 6</td>
<td>29</td>
</tr>
<tr>
<td>Secondary</td>
<td>1 2</td>
<td>8</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Total</td>
<td>3 16</td>
<td>21</td>
<td>2 9</td>
<td>7 33</td>
</tr>
</tbody>
</table>

Total: 6 schools → 37 groups
9 schools → 42 groups

| Table 1: Details of schools visited |

So how did I attempt to conduct the interviews ethically? What other kinds of ethical concerns did I encounter? How did I resolve them? These issues are where I turn to next.

Where I felt that group dynamics would benefit, I proposed the use of ‘write and draw techniques’, which as the names suggests, involved using a combination of writing and drawing. As with the other methods used in this research, I chose this approach for a number of reasons. After all, there is an increasing number of other tools used to facilitate data collection with children, such as the ‘secret box’ (Punch 2002), completing sentences (Cavet 1996) and story or essay writing. I also seriously thought about using ‘photo elicitation’ (Collier 1967) techniques with the children as a variation of the interview (see Beresford 1997; Gilbert 2001) but I was concerned that introducing any image would influence, and thus bias, their responses. I also considered providing disposable cameras to the children and asking them to take photos of particular aspects of their urban world. Although this has been a successful technique to study children's view of their environments (see Calam et al. 2000; Cunningham and Jones 1996), the financial cost involved dissuaded me. (In addition to the cost of each film, I also would have had to develop double copies of each film also – one copy for my purposes and the other to give the children – which worked out more than my budget would allow.) Moreover, I was particularly interested in these methods in relation to the mosaic approach (Clark and Moss 2001), which is a multi-method approach conducive to obtaining a wider and deeper understanding of the dynamics in which the children are situated. However, primarily due to pressures of time and the difficulties I was already facing in relation to access, I decided to be somewhat less ambitious and more practical.
Thus, I turned to pens, coloured pencils and paper. I was mainly interested in trying this extra tool out. However, once I began, I also realized how effective it was (Backett and Alexander 1991; Beresford 1997; Oakley et al. 1995). It was also cheap and easy to do, and it enriched the quality of the data. It helped the children feel more at ease during the interview and therefore, helped them respond to the questions on their own terms in their own time. It gave the children something to do while they talked, which in turn, meant that there was no pressure on them to keep eye contact with me or even talk to me; awkward silences could be covered up (Banks 2001). Furthermore, because they did not look at each other either, they responded to one another almost entirely through what had been said, which provided rich and interesting conversations based on content rather than simply speaking for attention or through pressure. In addition, it took the children’s focus away from me, which I was interested in doing to lessen my authority. As Christensen and James (2000a: 165) argue, ‘[t]hese visual tools provide, therefore, a rich, multilayered and mediated form of communication which is facilitated both by the image and by its very process of production.’

In all cases, the children were keen to take up this suggestion. I tended to use this activity more frequently with younger children than older ones but it was useful with all groups. I used a variety of formats. Sometimes, I would place a blank piece of paper on the table, draw a line through the middle, dividing the page into ‘Things I like’ and ‘Things I don’t like.’ I would then ask the children to tell me what they liked or did not like about where they lived. This ‘buzz group’ exercise was simple and quick. More importantly, it provided some relatively long lists of items and aspects of York and Dijon that children living there did or did not like. Another common question I asked using this technique was what they wanted to see in that city if they were to return when they were old by dividing the page into ‘Things to stay’ and ‘Things to go.’ I found this technique to be more effective in obtaining dichotomous opinions than asking the group the same questions without pen or paper. With older groups, by offering the pen to a ‘volunteer scribe’, it also allowed the task to be directed by a child rather than myself.
With larger groups, the group was split in two – the children chose how this was done and generally chose to split into ‘boys’ and ‘girls’ – and each group was asked to do a group drawing. Sometimes, I used the same questions as above. Other times, I would ask the children to draw all the things, which represented their city in one way or another. Although this was a popular and effective activity, it required a relatively longer period (due to the group negotiations) for it to be worthwhile. Whatever technique I used, I kept the tape recorder running. Thus, in all cases except one (the exception being where the children did not want to give up their drawings) I have both a written/drawn account as well as the discussion that took place during its production. The transcripts of the discussions are, as Christensen and James suggest (2000a:164), ‘interspersed with other conversational snippets which reveal a great deal about the form and process of the method itself.’

The purpose of this ‘middle-phase’ was effectively to ‘obtain the data.’ Lincoln and Guba describe what takes place:

Questions become more and more specific as the interview moves along and as the interviewer begins to sense what is salient about the information this respondent can provide. It is important to keep an easy rhythm and, as much as possible, to keep the “talk turn” with the respondent (the interviewer rarely learns anything when he or she is talking). (Lincoln and Guba 1985:270)

This is, in effect, the main purpose of the interview. After all, the main object of interviews is that respondents are ‘put on notice to talk about something’ (Dingwall 1997:58). If the respondents are going ‘to talk about something which the interviewer is interested in’ (Dingwall 1997:59), this is likely to be when they do so. In the discussion below about how I analyzed the data, I say more about the epistemological status of the interview material obtained in this research. Generally, time dictated when we moved away from this phase and on to the next and final one. As Lincoln and Guba (1985:271) explain, ‘[w]hen the interview has ceased to be productive (the information is redundant; both interviewer and respondent[s] display fatigue; the response seems guarded; and the like) it is time to terminate.’
In the 'closing-phase', I ended the interview, reminded the children that their answers were confidential and that only I would listen to the tapes. I always played-back a small part of the interview so that each child heard him or herself on tape. The children always enjoyed this immensely despite an element of embarrassment in listening to their own recorded voice in public. Sometimes, the children would ask to sing a song into the tape recorded to hear themselves again. Time permitting, this also took place at this point. I also gave each child a 'thank you' note with my contact details to take away with them. I would then verbally thank and say good-bye to the children, thank the organizing teacher and/or Head of School and then leave the research setting. As a way of showing my gratitude, and in some cases also because it was requested in negotiating access, brief reports were later sent to each Head Teacher about what the children of their respective school said during the interviews. This, then, was the general structure of the interview process. Having conducted 79 group interviews, a considerable amount of data had to be transcribed, processed, understood, interpreted and analyzed. Therefore, before bringing this chapter to an end, I explain how I did this.

Data Analysis

A common complaint (made predominantly by quantitative researchers but also by qualitative researchers themselves) against qualitative studies concerns the lack of visibility relating to how the findings are obtained (Ritchie and Spencer 1994). Compared to the way quantitative studies are presented, the process of analysis involved in qualitative research would seem to be vague and unsystematic. On the contrary, however, qualitative analysis is both systematic and reliable. That said, as Becker and Geer (1982:244; italics added) note, whilst tables can be used to summarize statistical data and 'descriptive measures can often be reported in the space required to print a formula, qualitative data and their analytic procedures are often difficult to present.' Nevertheless, I attempt to make explicit a number of issues relating to understanding the interview material.
A first issue relates to the epistemological stance to data. This has been discussed earlier yet I want to draw out two overlapping issues here which concern the ‘reality’ that the interview data represents and how it relates to the overall meta-theoretical approach taken in this research more generally. Simply put, I support Holstein and Gubrium’s (1995; 1997) arguments about ‘active interviewing’ whereby I (the interviewer) and the children (the interviewees) are seen to have co-produced the interview data in active collaboration with one another. They explain:

Both parties to the interview are necessarily and ineluctably active. Meaning is not merely elicited by apt questioning, not simply transported through respondent replies; it is actively and communicatively assembled in the interview encounter. Respondents are not so much repositories of knowledge – treasuries of information awaiting excavation, so to speak – as they are constructors of knowledge in collaboration with interviewers.

(Holstein and Gubrium 1997:106)

The implications of this approach are twofold. Firstly, it implies an acknowledgement of issues of power, control, authority and expertise in the production of the data. Moreover, these issues are articulated through a collaborative exercise between the adult interviewer and the child interviewees. Therefore, the emphasis is on the powerful role that children have in the process of data construction. Although in many ways the adult interviewer is accurately perceived to be the dominant figure in an adult-child interview setting, the active interview approach blurs the boundaries between dominant and submissive actors. That is, the image of the child research subject is epistemologically active and engaged in the production of knowledge (Holstein and Gubrium 1997). (This was perhaps most evident during some interactions in which I struggled to guide the conversation back to the research topic.)

Although the key feature of the interview may be that respondents are 'put on notice to talk about something' (Dingwall 1997) and the interviewer attempts to facilitate the respondents to talk about the research topic, one of the reasons why the extent to which I was successful at eliciting the children’s views about where they lived varied is precisely because the children set 'the parameters for responses, constraining as well as provoking answers' that were, to a greater and lesser extent, germane to my
own research interests (Holstein and Gubrium 1997:118). I did not ‘make’ the children talk about the research topic any more than I told them what to say yet I clearly tried to guide and direct the topic of conversation. Importantly, however, it was down to the children, as individuals and as a group, to determine the extent to which I was successful.

From this perspective, the data produced in the interview is seen as ‘materials for analysis’ (Roulsten et al. 2001:769) which are co-constructed by the interviewer and interviewees interacting together during the interview. This deliberately moves away from perceiving interview data as un tarnished representations of the respondents’ external realities. From a critical realist perspective, there is an inherent subjectivity in the production of all knowledge anyway (Madill et al. 2000:3). Interview material, however, comes in part from the research informants and is seen as potentially allowing the researcher glimpses of the structuring and generative mechanisms in which they are embedded. As Hammersley and Gomm explain, the approach adopted here is that:

> Reality, even ‘inner reality’, is not something that exists as a self-displaying manifold which is open to view if only we can get into the right position, or acquire the right spectacles, to see it. Rather, it is something that we have to make sense of through concepts. At the same time, these concepts do not create something out of nothing but capture the nature of some act of reality more or less adequately. So, what people say – in interviews and elsewhere – can help us to understand their dispositions, even thought they do not have complete, direct or definitive knowledge of these... Often they will be a source of bias, but it may still be possible to detect and discount this through methodological assessment. Nor does the fact that interview accounts are always constructions mean that they cannot be accurate representations.

(Hammersley and Gomm 2004:96-97)

Therefore, I also argue that it remains possible to map the domain of empirical data onto domain of the real (Collier 1979). I adopt, therefore, Bateson’s (1984) view that the interview method assumes the possibility that people – be they adults or children – know the world that they encounter. Moreover, they can talk about it and from their descriptions, we can learn about it also. In turn, then, the interview data are valid to the extent that they meet my needs for knowledge and are therefore ‘relevant’, and they are ‘accurate’ because they represent the social world. Thus, whilst I do not treat the
interview data as literal descriptions of the children's realities, they are used as a resource to know about them (Atkinson and Silverman 1997; Silverman 1985; 1993; 1997).

Hence, my goal in analyzing the interview material is as Holstein and Gubrium argue:

> to show how interview responses are produced in the interaction between interviewer and respondent, without losing sight of the meanings produced or the circumstances that condition the meaning-making process. The analytic objective is not merely to describe the situated production of talk, but to show how what is being said related to the experiences and lives being studied. (Holstein and Gubrium 1997:119)

Four further points before explaining how I went about actually doing the analysis. Firstly, as I have mentioned above, being guided by grounded theory methodology, much of the data analysis took place during and after data collection. Secondly, the phases described below are not to be thought of as a strict chronological sequence of procedures but instead as fundamental parts of the analysis process, which occur repeatedly, in various orders, throughout the research process. Thirdly, I used the qualitative data analysis software package, Nvivo 2.050 to help manage and support my analysis of it.51 Fourthly, although I have been guided by a grounded theory approach to interpret the data, this is only one approach amongst others available to qualitative researchers. Indeed, during the course of the research, I also contemplated using the framework approach, which shares many aspects of grounded theory but is more of a content analysis method; had I had more time, I would liked to have used a combined grounded theory and framework approach.52 Having laid out these first few points, we can now move onto the analysis process.

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50 As well as being the 'industry’ standard, Nvivo was chosen for its software qualities and because it matched the needs of the research project (see Barry 1998). It was also available via the University. Although I was also interested in using Atlast/ti, it was not cost effective to me on this occasion.

51 There is a rapidly growing body of literature relating to qualitative research and computer software packages designed to support it. Whilst I do not cover this issue at any length here, I refer the reader to Lee and Fielding’s (2004) who provide an excellent review of current ‘approaches to the analysis of qualitative data, with an emphasis on resources and tools’ (p.529). See also Richards and Richards (1991) for an explicit and comprehensive account of using Nvivo in qualitative research, as well as a discussion about using Nvivo in relation to grounded theory.

52 See Ritchie and Spencer (1994) for a good overview of this approach.
My role in the analysis was ‘essentially about detection, and the tasks of defining, categorizing, theorizing, explaining and mapping’ (Ritchie and Spencer 1994:176). Indeed, grounded theory qualitative analysis follows, I think, the spirit of ‘exploratory data analysis’ (Tukey 1977) in that the aim of the investigator is to understand if, how and the extent to which, each case or each variable relates to each other; the tools that the investigator uses serve to do this. In addition, the investigator asks ‘why?’ the relationships are as they are. Based on Siedel’s (1998) overview of qualitative analysis and my own analytical practices during this research, I suggest that qualitative analysis is essentially ‘a symphony’ (Siedel 1998) based on five notes, or as I will also refer to them, five tools, which the researcher employs to explore if, how, the extent to which and why, certain relationships exist within what the children said. These five tools are: noticing, collecting, thinking, comparing and classifying. These five things each played a continuous and important part of my analysis. In addition, I used these tools bearing in mind the findings from the other methods employed in this study. This allowed me to weave together the findings and hypotheses of the entire research project.

Authors have come up with numerous diagrams to depict the stages involved in qualitative grounded theory analysis. In general, I find these diagrams problematic because although they succeed in highlighting key features, they fail to show the inter-dynamics that take place between them. Therefore, although I am also tempted to depict an overall schema to my analytic procedures, I will simply list and briefly describe the characteristics intrinsic to each tool.

**Noticing** involved making observations, writing field notes, making memos, listening to and familiarizing oneself with the taped interviews. As Siedel (1998) suggests, when you do these things, the researcher is producing a record of the things that he or she has noticed. **Noticing meant making multiple levels of observation. In this research, I noticed things, made observations, wrote field notes and memos, listened to interviews basing my investigation upon the different levels of the individual child, the (group) interview, the school and the city.** **Noticing entailed looking for ‘the meaning and perspectives of the participants’, looking for ‘relationships regarding**
the structure, occurrence, and distribution of events over time', and looking for 'points of tension', making note of concepts, categories or theories do not fit the data (Peshkin 2001:241).

Collecting involved gathering more data through theoretical sampling, coming up with further questions to ask the respondents, and considering alternative ideas and hypotheses relating to the data. It meant talking to people, whether it was the interview respondents themselves, key informants, friends, colleagues, local inhabitants and workers such as shop assistants or taxi drivers, about what has been noticed and collecting their feedback. Collecting also meant reading literature and following up references to discover potentially new information about the topic of research.

Thinking is akin to examining the various pieces of the puzzle. It meant approaching the data from different angles: stepping back and seeing the whole, zooming in and examining the pieces. It meant ‘subsuming particulars into the general, shuttling back and forth between first level data and more general categories’ (Huberman and Miles 1994:432). Thinking involved having the data and the research question in mind all the time. It meant laying things out and seeing what was there or listening to an interview again and seeing if new things were noticed. It entailed considering the variables or categorical nodes differently, asking if nodes could be merged or split. Did they need to be re-located or even abandoned altogether? This ‘thinking’ process meant ‘making conceptual/theoretical coherence’ and trying to ‘build a logical chain of evidence’ using only the data available as evidence (Huberman and Miles 1994:432). It meant thinking inductively and deductively (Glaser and Strauss 1967; Huberman and Miles 1994) and about the possibility of spurious conclusions and rival explanations (Huberman and Miles 1994).

Comparing meant looking for similarities and differences. It involved using ‘outlier-like’ observations to re-check, notice, think about the data. It meant comparing the data to literature; comparing the literature to the coding. Making comparison is a ‘classic tactic to sharpen understanding’ and encourage further classifying
(Huberman and Miles 1994:432). Ultimately, making constant comparisons is a way of testing the validity of patterns (Huberman and Miles 1994:438).

**Classifying** meant coding, categorizing, clustering, and generally sorting things out. It meant asking: ‘What things are like each other? Which things go together and which do not?’ (LeCompte and Goetz 1983; cited in Miles and Huberman 1984:218). Classifying was a way of organizing all that I had noticed, collected, thought about, compared, etc. However, as Miles and Huberman (1984) point out, it is just the beginning of the analysis process and is not in itself sufficient to obtaining qualitative research findings.

These five different tools are further illustrated through giving an example of how I put them to action. To begin, I examined each case and simply observed that which seemed to most noticeable. I then asked ‘why’ that noticeable thing existed. Next, I collected more data. In the fourth instance, I compared what I noticed, thought about, subsequently collected and compared. Afterwards, I classified observations by coding and thus, labelling them. For example, what struck me most about the very first group interview, which was conducted in York, was how opinionated the children were, particularly in relation to their views and feelings about the history of the city. Why was this so? Not only was I not expecting this, but it was a relatively permanent theme that ran throughout all the interviews to varying degrees. Why was this and how and why did it vary?

In terms of the actual dynamics of the analysis process using these tools, qualitative analysis was iterative and progressive, recursive and holographic (Siedel 1998). Siedel (1998:pp. 2 of 15) explains: ‘Qualitative analysis is iterative and progressive because it is a cycle that keeps repeating itself; when you are thinking about the data, you may also notice new things within it, which you then compare and classify and go on to collect and think about again.’ As Huberman and Miles (1994:431) describe: ‘[w]hen a theme, hypothesis, or pattern is identified inductively, the researcher then moves into a verification mode, trying to confirm or qualify the finding.’ In turn, a new inductive cycle is triggered.
The analysis was recursive in that one part can call the researcher back to a previous part. Thinking about the data could lead me onto further data collection, comparisons or classifications. Classifying the data could bring me back to comparing it or thinking about it. Finally, the analysis was holographic in that each step contained the entire process; noticing things necessarily entails mentally collecting and thinking about those things. The analysis therefore involved constant and regular comparisons within and across cases, categories, theories, explanations, mapping and hypotheses.

It could be argued that acts of ‘noticing’ and ‘categorizing’ are subjective. Indeed, I argue that a) it cannot be otherwise and b) this inevitable bias is corrected through grounded theory and is therefore unproblematic. Allow me to elaborate. Firstly, in both quantitative and qualitative analysis, the researcher attempts to subscribe ‘to the things themselves,’ to be as free as possible from all conceptual and initial suppositions, to ‘bracket’ and suspend prejudgments (Husserl 1965; 1970/1997). However, as Merleau-Ponty’s ‘primacy of perception’ (Merleau-Ponty 1962) suggests, researchers can only approach data with personal and theoretical knowledge and experience because they are inter-connected to the world. Furthermore, I question the desirability for a completely ‘objective’ approach even if it were possible. For just as a word only has meaning within the context of a sentence (Frege 1984) since its meaning depends upon its relation to, and its role within, other words (Derrida 1973), so too do I suggest that only in the local context in which the data is obtained, can the data be understood. Indeed, to complexity theorists, it is precisely the ‘local character of knowledge’ which must be considered (Byrne 2002:156).

Secondly, the subjectivity involved in noticing or categorizing certain features over others is corrected through the grounded methodology itself. Glaser (1998) argues that four interconnected criteria give researchers reason to trust the validity and reliability of the findings obtained through grounded theory methodology. These four criteria ‘engender trust because a theory with fit, relevance, and that works and that can easily be modified has “grab” without pressure to force it on data’ (Glaser 1998:237).
In answer to the question, then: ‘Does the concept represent or fit the pattern of data it purports to denote?’, which is essentially a question concerning issues of validity, Glaser (1998:236) argues that those concepts which are valid emerge through grounded theory methodology. In other words, the researcher learns which patterns fit the data because the data ‘informs’ the researcher as to which are valid and which are not. The researcher finds that there is a need to constantly adjust concepts and coding until he or she discovers the ‘best word to denote the pattern as constant comparisons occur and the pattern emerges. What fits will emerge as the pattern gets named’ (Glaser 1998:236). Before having conducted any qualitative analysis, I would have found this argument confusing and unsatisfactory. Now, however, I consider Glaser’s point accurate. I did come up with concepts, which were later abandoned or adjusted precisely because as I compared and collected the data, I learnt that they did not neatly fit the data or that other ones fitted it better. Therefore, the concepts that stand the test of constant comparison are also valid.

By implication, what emerges as valid is also relevant. ‘It is automatic that the emergent concepts will be related to the true issues of the participants in the substantive area’ (Glaser 1998:236). Glaser (1998:237) continues, ‘With concepts that fit and are relevant the grounded theorist starts to integrate a core category and sub-core category that account for most of the variation of behaviour in the substantive area.’ Put differently, the more the concepts prove to be valid and relevant, the more likely the visible the emergent core category becomes to the investigator. In addition, the modifiability of the concepts and theory allows the researcher to constantly modify the theory until concepts and theory fit the data, and are therefore deemed to be valid, relevant and said to work. As Glaser (1998:237) explains, ‘The theory does not force the data, the theory gets modified by it. The literature review modifies the theory when appropriate... The theory gets modified by subsequent data: period.’
Transcription

Perhaps surprisingly, Glaser’s (1998:107; original emphasis) advice to the solo researcher guided by grounded theory is: ‘DO NOT TAPE INTERVIEWS.’ Yet, I did tape all the York interviews and about a third of the Dijon interviews primarily to double-check my thinking. I transcribed the first fourteen interviews verbatim. However, the rest were typed up using selective and partial transcription whereby only material that I considered relevant, or that I felt might be relevant, was fully transcribed (Burgess 1984). I also omitted reporting who said what because one of the most time-consuming aspects of the transcription process was being able to recognize the voices of each participant and therefore, being able to place a name to each quote on the transcript. Voice recognition is an issue in transcribing group conversations anyway but it is particularly problematic in listening to children’s voices since girls’ and boys’ voices are often indistinguishable. Nevertheless, I listened to all tapes at least three times and thus became familiar with all the material.

Again, it could be argued that selecting what to fully transcribe leads to bias. However, I would argue that it is at least less bias than note taking without taping, which is what Glaser (1998) argues for. Indeed, using Glaser’s (1998:110) own reasons regarding why note taking is not problematically bias, we can also say that selective transcription is not necessarily bias either. Transcription ‘can be selective based on the preconscious matrix of associations build up in the generated theory.’ However, grounded theory methodology successfully keeps this selectivity open. Therefore, the selectivity involved in transcription remains ‘grounded and controlled by the emerging theory as coding, analyzing and theoretical sampling constantly correct the theory.’ Whilst Glaser argues that the mind naturally calls up data by

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53 Glaser (1998) gives three reasons for this. Firstly, he suggests that taping undermines grounded theory methodology because it necessarily ignores theoretical saturation of categories, which in turn delimits the researcher’s effort and the theory. Taping, Glaser writes (1998:108), ‘neglects the constant comparisons that constantly delimit the theory, while generating it, to achieve breadth and depth with parsimony.’ Secondly, the time taken to tape, listen, transcribe, and read the interviews is not cost effective. It delays theoretical sampling and ultimately prevents the researcher from quickly focusing on a core category and verifying it. Thirdly, taping interviews not only slows the research process, it also creates ‘too much unnecessary data.’ Glaser’s (1998:109-110) point is that ‘taping just collects words, not observations.’
association through grounded theory methodology, the researcher needs to be able to publicly report these processes for others to examine and judge. Taping and transcription are, I think, ways of ensuring that it is more feasible to make the subsequent process of analysis visible to others. Besides, as Silverman (1993:124) sums up, ‘[t]here cannot be a perfect transcript of a tape-recording. Everything depends upon what you are trying to do in the analysis, as well as upon practical considerations involving time and resources.’

Translation

What about translation issues? How did this come into the interpretation of the interview material? What kind of bias might we encounter in translating the French interview material? The problems related to translation in this study are summed up by Birbili in the following:

> When collecting data in one language and presenting the findings in another, researchers have to make a number of translation-related decisions. Words which exist in one language but not in another, concepts which are not equivalent in different cultures, idiomatic expressions and/or differences among language in grammatical and syntactical structures are issues which call for very specific decisions. These decisions along with factors such as, for example, who the researcher or her translators are and what they ‘know’ have a direct impact on the quality of the findings of the research and the resulting reports. (Birbili 2000:page 5 of 7)

However, it is important to note that no translation occurs in this study unless I directly quote from a French transcript to the English used to write the thesis. Being bilingual in English and French means that no translation process is necessary in either language. Therefore, whilst there are translation issues to be considered, they only arise in writing up the findings and not in the process of obtaining them. Therefore, the French material underwent much the same process of interpretation and analysis as the English material. In turn, the translation implications of the findings of this research are considerably less than they might normally be in other studies with different language interview material.
That said, there were subtle unspoken differences to do, I think, with the cultural norms surrounding adult-child interactions. This would be an interesting avenue to do further research in because I believe it did effect the methodological conduct of the group interviews. For example, there was an element of formality both on my part and the children's in the French schools that was absent in the English schools in that the French group dynamics seemed to be more 'serious'. Both Dijon and York children were glad to be out of a lesson to do the interview but for the Dijon children, the interview was still recognised as part of their 'school work' whereas the York children saw it was a 'break from school work'. Also, the younger French children seemed to be more articulate in voicing their opinions. The French children also seemed to be more empowered and less threatened by me – the example given below of a group of Dijon children refusing to hand over their pictures is not one I imagine happening in a York school. The French children also asked me more information about the research and who I was, what I was doing etc., than the York children.

Having personally experienced the French educational system until I was nearly fifteen years old, and then subsequently the British one (as a pupil in a Scottish school and then working with groups of British children attending English schools), and now my experience of conducting research in both French and English schools, I suspect that the cultural expectations about discipline and order in relation to children and childhood may explain, in part, these observations. Bourdieu and Passeron’s (2000) notions of 'pedagogical action', 'authority' and 'work' which serve to explain the reproduction of power relations in a social group come to mind, particularly as I noticed automatic changes to my own stance and posture – I even felt obliged to dress more formally in Dijon than in York – as if I too had somehow embodied the institutional 'standard'. I also feel that I was taken more seriously by the French adults working in schools than the English ones. Since there was always some introductory interaction between myself and an adult in front of the children prior to the interviews, then perhaps this came across and affected the way the children subsequently perceived me as well. Thus, whilst the translation issues were minimal, the cultural influences to the group interviews were more important. Even so, as we
shall see in Chapter 9, the children's verbal responses in York and Dijon were remarkably similar.

**Negotiating Ethical Issues**

What about other methodological issues? In this last section of the chapter, we look briefly at the ways in which I negotiated the ethical issues of conducting research with children. Broadly speaking, these ethical difficulties arise especially in relation to confidentiality, informed consent and the impact of the research on the children (Alderson 1995; Christensen and James 2000b; Davis 1998; Morrow and Richards 1996). Running across all of these issues, are the complications brought about by the unequal power relations between the adult-researcher and the child-research informant (Mandell 1991; Mayall 1994; Morrow and Richards 1996; O'kane 2000). One of the ways to deal with them is through the role of the researcher, and it is to this that I turn to next.

**Researcher Role**

It is generally accepted that there are adult-child power differences between the adult research and child research informant. I share Harden et al.'s (2000:6.1) argument that it is the 'children's social location rather than anything inherent in being a child, which merits our attention'. There is considerable debate, however, about how best to lessen the power differences, which particular ethics are most consequential, which tools best serve the job or which researcher roles are most appropriate in conducting research with children. Like the growing consensus, I share the view that:

> the ethics, tools and roles employed in qualitative children's research should empower children. Empowerment is associated with allowing children to choose to become active participants in the research process, employing tools which offer children the maximum opportunity to put forward their views and reducing the social distance and re-negotiating the power relations between researcher and child. (Davis 1998:329)

Throughout, therefore, my concern was to interact with the children such that their agency and competencies were not undermined. Thus, I sought out ways to engage
myself with the subjectivity of the children and to position them as social actors within the research process (James et al. 1998b:173). As part of the process of empowering them, it was equally important for me to help the children feel comfortable and as free as possible to express and articulate their ideas in their own ways. How I acted and presented myself were key to building up rapport and lessening the power difference between myself and the children (Mayall 1994; Morrow and Richards 1996). The result was that I merged and adapted 'the least adult role' (Mandell 1991), the 'non-authoritarian adult' (Corsaro 1985; Mandell 1991) and the 'friend' (Fine and Sandstrom 1988; James et al. 1998a).

I tried to present myself as a young, friendly (rather than 'friend'), least- (rather than 'non-') authoritarian adult. To elaborate, firstly, I did not pretend not to be an adult because I share the views with those who believe that whatever role they play, the researcher can never fully escape from being seen as an adult (Damon 1977; Fine and Sandstrom 1988; James et al. 1998a; Mandell 1991; Mayall 2002). Unlike Mandell (1991), for example, I did not seek to totally reject my research role as a detached observer and aimed instead for a 'completely involved membership role.' This is not because I think adults can only assume a detached observer role because the worlds of children and adults are so different (see Damon 1977). Rather, as James et al. (1998b:183) note, the key question is not whether it is possible to avoid being seen as 'adult' or whether this works but whether it is desirable to appear/be differently in the first place. Personally, it was important that this adult part remained continuously present and alert. It allowed me to think about previous groups' responses, investigate similarities and differences of opinion, and generally remain critical and reflexive in terms of why the children were saying what they were saying.

Furthermore, I argue that the 'problem' is not about being adult per se; being adult is not inherently authoritative. Rather, as Wyness (2000:1) argues, 'a recurring set of dominant ideas within political and academic concerns... draws a generational boundary between adults and children, in the process restricting children to subordinate and protected social roles.' I am not suggesting that this is either acceptable or permanent. However, I do think that it remains nonetheless extremely
difficult, particularly in relatively short-lived relationships such as those between researcher and research subject, to establish an equal status interaction between an adult and a child. As Mayall (2000a:121) notes, to children, ‘a central characteristic of adults is that they have power over children.’ Such is the pedagogy of the oppressed (Freire 1970), despite all the best intentions of the adult not to ‘look down’ (Alanen 1998) on the child, an equal adult-child relationship also requires the child not to ‘look up’ to the adult. Whilst the relational processes from which generationing (Mayall 2002) emerges are changing, adult researchers need to remain honest about what has been achieved so far.

There was little I could do about being a relatively young adult, except to be reflexive to the possible negative effects and exploit the possible benefits. But there was much more I could do to appear ‘friendly’ and ‘less-authoritarian.’ It was my responsibility to actively seek to integrate these characteristics into my researcher role during the interviews with children. Sometimes, the role was played out through what I said. For example, I tried to reassure them that I was not a teacher, that I considered the children experts on the city since many of them had been living in York/Dijon since they were born and that I was there to learn about the city from them, that there were no right or wrong answers, that it did not matter if they did not want to speak, etc.

Other times, I lessened my power precisely through what I did not say by listening to the ‘bass line’ (Jacobs 1985). That is, I tried to be aware of what is not openly said but what was possibly felt (Jacobs 1985:21). Therefore, I smiled a lot, I communicated a lot through the use of eye contact, I dressed casually, my posture was both open and calm, etc. My desire to make clear and overt facial expressions was heightened when interacting with the children as I attempted to show my genuine engagement in what they were saying and in who they were, etc. When someone spoke, I tried to show that he or she had my undivided attention yet at the same time being aware of the others in the group. I responded through gestures and eye contact to any children responding silently to what another child said. I would watch for openings for silent members (Jacobs 1985:89). I would often show my interest to a child’s comment even when he or she had strayed off the point of the initial question;
this was particularly the case where I felt the child was just wanting my attention. I would then gently and sensitively try to guide the conversation back to the questions that I wanted to ask them.

I felt that my job was to make the interviews enjoyable to the children. Sometimes, therefore, I deliberately used nonsense words, pretended to be confused, used exaggerated facial expressions, and acted in a clown-like way in an attempt to make the children laugh. These kinds of verbal and non-verbal cues play an important role in my communication with children generally and they did so in the research context as well. Indeed, if anything, it was my own difficulty in toning down this playful role that I had to focus my attention on. My underlying motive is, and was, always to encourage children to feel comfortable in my presence and, where there is more than one child, with one another. This was especially noticeable at the early and end stages of my interactions with the children, and more so the younger the children were.

Informed Consent

All researchers must, at some point, obtain the research subject’s informed consent to take part in the research. In order for both adults and children to be able to grant or decline their consent to participate in a research project, it is necessary that neither adult nor child feel threatened or coerced by the researcher. As I have just discussed, one of the ways that I ensured that the children did not feel threatened to accept to take part in this research was through my research role. How I then went on to obtain the children’s informed consent is revealed here.

In the letter to each of the schools and in talks with each of the teachers, I wrote that I expected to obtain parental consent for each child taking part in the study. However,

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54 Alderson (1995:69) sums up what is implied by consent as it is used here: ‘Consent is about selecting options, negotiating them, and accepting or rejecting them. Beyond making a decision, consent is about making an informed choice and becoming emotionally committed to it. Consent can only happen when there is no force. It is about deciding one’s own best interests and preferences; it determines whether children can decide which rights they prefer to have, or whether adults choose for them.’
only the after-school club organizers made any attempt to contact the parents. (Perhaps they felt more responsibility towards the parents since they would come into contact with them more frequently than any teacher would?) However, I obtained informed consent from the children themselves. They were certainly old enough to talk; my task was to explain what was going to happen, why, how and ensure that they felt comfortable enough to ask questions, not to take part and understood that they could change their minds about taking part at any point during the interview or about the interview process. I assumed, as Mahon (1996) suggests, that far from being passive participants, children’s declining motivation during an interview can be interpreted as ‘an indirect way of withholding or withdrawing consent to participate.’ Hence, I remained vigilant for this. Where I was concerned that one or more children might want to discontinue the interview, I offered the option end it. Inevitably, I was urged to continue. Sometimes I felt that this was just a way of getting out of their lesson. Other times, I felt their genuine enthusiasm was their motive.

On the whole, I am confident that the children felt as comfortable to take part as they did not to. Indeed, this became particularly clear on one occasion which included some drawings with a group of ten Dijon six-year-old children. Although they had understood that at the end of the interview they were going to hand me their drawings, one boy changed his mind and wanted to keep his picture. The other nine children followed suit and voiced their reluctance at handing over their artwork. I was surprised but I agreed that they each had a right not to comply with my requests. I obviously did not succeed in hiding my disappointment at having to leave without any drawings from this group because one girl suggested that I photocopy them and send them back, which was a good suggestion. Most children, by then however, wanted to keep hold of their pictures. As much as I wanted their pictures, I quickly explained that I was grateful to them for time and that, in any case, I had captured their discussions and descriptions about their drawings on tape, which was more than sufficient information for my purposes. I was pleased that they had felt able to ‘rebel’ and do what they wanted. I took their resistance as a sign of their agency and empowerment.
This, then, brings the review of the methodology and methods used in this study and thus Part II, to a close. The remainder of the thesis sets out to unravel the findings.
PART III

STORIES

OF

CHANGE AND CONTINUITY
Quantifying Change and Continuity: Using Official Statistics

This is the first of four chapters that consider the findings of the methods employed. Whereas this chapter and the next one look at aspects of the past trajectories of York and Dijon, the one after that reflects on their possible future trajectories. I then integrate the findings in a fourth chapter before ending the thesis with a Conclusion.

In this chapter, I rely almost entirely on Census data and other statistical material to provide a quantitative description of some of the broad ways that these two cities have evolved since the early 1970s. In the next chapter, I draw upon photographs and other visual material to provide a visual representation of their past trajectories. Together, the aim of these chapters is twofold. First, they provide a general understanding of York and Dijon's past trajectories. Second, because they offer different empirical representations of York and Dijon's past, which also offer slightly different interpretations of their respective trajectories, the chapters highlight the need for multiple methods for studying the multi-dimensional social world in which we live.

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Note that in what follows there are discrepancies between some tables, which supposedly report the same information (e.g. total residents, total households, etc.). The authors of the Research & Information (1997:2) booklet explain that this is due to 'the modification of statistics by the Office of Population Censuses and Surveys (OPCS) now known as the Office for National Statistics (ONS). This modification takes the form of the addition of +1, 0, -1 to data in source tables in a quasi-random fashion to avoid inadvertent disclosure of personal data. This data adjustment may in certain cases affect figures within tables such that the parts do not sum exactly to the total.'

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The chapter is divided into four broad, overlapping parts. First, I raise the issue of boundaries, which was a key difficulty with this part of the study and is also an issue when using Census and administrative data more generally. This discussion forms the basis upon which I explicate the methodological issue of measuring a dynamic entity. It also illustrates Byrne's (2002) argument that variables are 'traces' which is the perspective I take on the quantitative data reported here. In turn, I explain, whilst the representation of York and Dijon produced in this chapter is essentially a quantitative one, it is not given special status above the qualitative representations produced later.

In the second part, I draw upon the available Census and administrative data to describe how York and Dijon have altered over time in terms of their population levels. The third part provides some key figures relating to the socio-economic changes in these cities. Within each of these sections, I systematically give an account of York followed by one of Dijon, thus drawing out similarities and differences between the cities for each theme.

It is worth noting from the outset that whilst I highlight similarities and differences where possible, I do not seek to provide a direct comparison between the cities. This is primarily because a) it is rarely possible for reasons I set out in the first part of the chapter; and b) I have richer data for Dijon’s population changes but richer socio-economic data for York, and c) as I discuss in the final part of this chapter, despite these issues, it is still possible to illustrate the methodological potential of using large quantitative socio-spatial datasets to gain insight into micro-macro interactions involved in urban change.

**Shifting Boundaries – Variables as Traces**

Measuring a changing city space using quantitative data raises a number of issues. Because this research uses secondary data quantitative data and because I want to illustrate the process through which I arrive at the methodological implications proposed in the Conclusion, I want to illustrate these issues clearly here. On one level, I suggest, the difficulties revolve around two main issues. The first relates to the
different categorizations of data and the second, to boundary changes in published data outputs. The former, i.e. ‘statistical concepts, national statistical definitions, collection methods and availability’ (Cheshire 1997), is an issue both within and across national Censuses. For example, age categories are broken up differently between Censuses. Different industries are included in the different economic categories. The latter, i.e. problem of boundary changes, Cheshire (1997:4) explains, is ‘not only a far less widely recognised problem . . . but from a purely practical perspective, it is probably a more important problem.’ Feinstein (1981:112) suggests that complications arise because there are different definitions of the city-space for which the population was counted and, over time, we see changes in the boundaries adopted for any particular definition. Thus, the geographical zone used to refer to ‘York’ or ‘Dijon’ has changed over the years and so the available data also refers to a different notions of ‘York’ and ‘Dijon’ (see Figure 8). As Huby et al. (1999) comment:

The city that Rowntree56 studied [in 1899] is not the same City of York today. This is not an observation on the fact that times and social conditions have changed (which they obviously have) but a comment on administrative changes that mean that the area now denoted as City of York is larger than that of Rowntree’s day. (Huby et al. 1999:112)

These changes primarily reflect the growing residential population and its economic and social ties but they also signal the re-organisation of political governance at local and regional levels. In turn, although demographic and socio-economic data exists for York and Dijon at different time points dating back to the 1970s and before, we need to be vigilant as to what the series of snap shots actually represents. Simply put, it is important to think about the data as re-presentations of the re-organisation of political control, the various boundary extensions, as well as the change in population counts, especially in the case of York.

York’s boundary changes are summed up in Figure 8 and show the transformation of York as a Roman fortress to a modern Unitary Authority. With regards to the

56 Seebohm Rowntree’s (1901/2000) study is one of the earliest studies about York. Still today, it is considered to be one of the most significant on York’s socio-economic situation and often acts as a point on which change in York is measured, as most explicitly achieved in Huby et al.’s work, A Study of Town Life, Living Standards in the City of York 100 Years after Rowntree.
boundary changes that effect the census outputs used in the thesis, the following changes must be noted:

- The 1971 Census output is for York as a County Borough with 12 wards.

- The 1981 Census output is for York District with 15 wards and based on the predicted future ward changes of 1991.

- The 1991 Census output was first produced for York District with internal changes to the 15 ward boundaries, i.e. the 15 wards in 1991 are mostly the same wards as 1981 except that some wards also took in parishes boundaries (see Appendix D for map of parish boundaries).

- ONS (Office for National Statistics) was then asked to do another output predicting the 1st May 1996 boundary changes and so the 1991 Census output was re-produced as 29 wards (but was still commonly referred to as York District – see Figure 9 for a map of these 29 wards. See also Appendix D for a map of York’s parish boundaries and Appendix E for further details of pre- and post- 1996 ward changes.

- 1st May, 1996 boundary changes come into effect – York becomes a Unitary Authority. As a Unitary Authority, many of the powers and responsibilities lost to the former York County Borough were restored. The City of York ceased to form part of the county of North Yorkshire, its boundaries were considerably enlarged, taking over an area of more than nine times the size of the former York City Council and a population increase of around two thirds (Research & Information at City of York 1997:1).57 During this boundary restructuring, some wards were split and new ones were created.

- The 2001 Census output is produced for York Unitary Authority as 22 wards and is based on the 2003 predicted boundary changes. (Note, however, that in

57 This included around 49% of the former Rydale population, 20% of the former Selby and about 3% of Harrogate. In turn, ‘North Yorkshire’ lost about 24% of its population (Research & Information at City of York, 1997).
addition to the boundaries changes in York, and indeed in part because of the additional difficulties that they cause, not all the 2001 Census data has yet been released. Although there had been hopes and expectations that it would be released early 2004, I was informed at the end of May 2004 that they had experienced yet further delays and are now expecting the data to be released late 2004.)

- 2002 boundary changes come into effect thereby restructuring York as 22 wards – see Figure 10 for a map of these ward boundaries.

- 2003 boundary changes come into effect, which effectively involve a few internal changes to the 2002 ward boundaries, thus maintaining the 22 ward structure.

Technically speaking, therefore, the available data on York does not allow for detailed longitudinal comparisons between censuses because the areas upon which the figures are based are not directly comparable with one another. (Note also that the boundary changes are in addition to the general changes to the census methodology.) However, as we shall see shortly about Dijon, even if the geographies were comparable, they probably would not be as useful as might appear anyway.
Figure 8: From Roman Fortress to Unitary Authority\(^{58}\)
(Source: adapted from Feinstein 1981:112)

\(^{58}\) The title of this caption is taken from Nutgens's (2001) diagram 'York 2000. Roman Fortress to Ringroad.'
Figure 9: York with 29 wards
This is the area of York as defined by the 1981 and 1991 figures used in this study.
(Source: The Boundary Committee for England)
Figure 10: York with 22 wards
This is the area of York as defined by the 2001 data used in this study.
(Source: The Boundary Committee for England)
Figure 11: Dijon boundary changes
(Source: Cadet et al. 1988:22)

Figure 12: The COMADI
(Source: L’agence d’Urbanisme de la Communauté de l’Agglomération Dijonnaise)
In an effort to confront this issue, I do three main things. Firstly, for the 1981 and 1991 census figures, I rely on an important booklet produced by York City Council, which summarizes the main socio-economic changes by using the 1981 and 1991 Census Small Area Statistics (see Research & Information at City of York 1997). At the time this booklet was produced, the plan was to restructure the City of York into twenty-nine wards. (Indeed, this is one of the main reasons it was commissioned in the first place.) Therefore, the booklet’s published data is these twenty-nine wards (see Figure 10). However, as noted, York was since restructured into twenty-two wards. The 2001 census figures used here, therefore, are for these twenty-two wards (see Figure 9). The 1981 and 1991 data is, of course, still Census data but the outputs are not the original outputs. I rely on the data in this form, however, primarily because it allows for a better understanding of change between 1981 and 2001 than the original Census 1981 and 1991 outputs would have been (which were for fifteen wards). I found this to be the best compromise given the available data and my goal of trying to gain a longitudinal representation over this time. A York City Council key informant confirmed that this was the best one could do.

Secondly, in the tables produced here, I set the 1981 and 1991 data against the 2001 data in such a way that comparisons are to some extent possible despite the different ward geographies. Where the 2001 geographies are called something completely new, I have included the names of the parishes upon which these new wards are based which allow the reader to know which 1981 and 1991 wards they roughly refer to.59 Thirdly, I follow Feinstein’s (1981) example of reporting figures as they are available and thus relating to the population within York’s boundaries as defined at that particular date. In the same way, then, I include notes along with the tables to specify which ‘York’ the data refers to.

In Dijon, something similar has taken place but different issues arise instead. In France, the Census boundaries have remained the same since the Census began.

59The names of the parishes are often used as the names for the wards since it is mainly upon the small parish zones that the wards are created. See Appendix D for a map of York parish boundaries as well as a a table showing the comparison of pre- and post- 1996 wards.
Therefore, the zones demarcating the Côte d'Or region or the commune of Dijon, for example, are like-for-like comparable with one another. Importantly, however, from the point of view of collecting longitudinal data, these administrative zones are not as meaningful as they are convenient because the administrative geography does not reflect the growing city. It is in part for this reason that several other administrative units have been used instead. The zone most commonly used here to represent 'Dijon' is the Communaute de l'agglomération dijonnaise (COMADI hereafter). I rely most on this area rather than others available because a) it is most frequently used by l’INSEE and any analysis on Dijon, b) it is area used most frequently by the urban planning body in Dijon, l'Agence Intercommunale d'Urbanisme de Dijon (hereafter AGIUD), c) it also appears frequently on other available data on Dijon, and in turn, d) for my purposes of collection longitudinal data, this area fitted my purposes better than any other.

The COMADI was created in 2000 (see Figure 12) but has been in the making administratively since the 1970s (see Appendix C for further details of the chronological account of the creation of the COMADI). As well as referring to a geographic space, it is a multi-department body described by Baumont (2004:5) as a 'kind of large town council', similar perhaps to something like York City Council. It is responsible for coordinating a range of local public services such as urban planning, transport, refuse collection, fire, gas and water services, etc. The area comprises sixteen communes of various sizes, which share close social and economic ties with one another: Ahuy, Chenôve, Chevigny-Saint-Sauveur, Daix, Dijon, Fontaine-lès-Dijon, Longvic, Marsannay-la-Côte, Neuilly-lès-Dijon, Ouges, Perrigny-lès-Dijon, Plombières-lès-Dijon, Quetigny, Saint-Apollinaire, Sennecey-lès-Dijon, and Talant; the most important being Chenôve, Talant and Chevigny-Saint-Sauveur in terms of the number of residents. (In fact, in January 2004, a further three communes were added to the COMADI area and this larger zone is referred to as Le Grand Dijon. However, for the obvious reasons of time, there are very few figures available for this geographical unit, which is why there are none included here.)

Baumont describes the COMADI as follows:
The COMADI can be considered as a conurbation structuring the Metropolitan Area (MA) of Dijon, which is composed of 214 towns in 1999 for a total surface of 561,156 acres and 327,000 inhabitants. The COMADI concentrates 73% of the population of the MA, 86% of the MA employment and more than 90% of the jobs in the tertiary sector. As the strongest urbanized area of its Metropolitan Area, the COMADI concentrates more than 76% of the housing and the concentration is even more important for the apartments (97.2%) than for the single-family homes (50%).

(Baumont 2004:6)

The COMADI is effectively the most important urban area in the Côte d'Or region.

Another important geographical measure that is used, albeit less frequently, and is another main official measure of urbanization defined in the French Census, is l'unité urbaine ('the urban unit'). This term was officially registered by l'INSEE in the 1950s and refers to any urban region in which a) the population is over 2000 persons and b) the built environment is compact and continuous, i.e. there are 'no gaps' (in the form of agricultural land, forest or woodland, etc.) of more than 200 meters between built units. I will say more about both York and Dijon (and in turn, the COMADI and l'unité urbaine) shortly. Before, however, I want to clarify what the shifting boundaries imply to the interpretation of the quantitative data used here. After all, the issues that were met in attempting to capture a quantitative representation of York and Dijon reflexively illustrate those faced by those attempting to study change empirically of a dynamic entity.

As noted with respect to Dijon, even where like-for-like comparisons can be made (for example, where the administrative boundaries have not changed), because the thing that the measurement supposedly pertains to has changed qualitatively, the validity of the quantitative like-for-like measure is significantly reduced. Yet paradoxically, as noted with respect to York, where like-for-like comparisons are not possible (for example, where the boundaries have changed), the data nonetheless reflects the changing cities and is therefore considered valid. Put another way, the reasons why the boundaries of York have changed is precisely because York – understood as an entity in itself – has changed; the reason it is more meaningful to think of Dijon as the COMADI is also because Dijon has changed.

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Due to the cross-national and grounded theory component of this study, therefore, I was forced to further appreciate the challenge involved in developing an adequate methodological approach to studying complex places (which, as noted in Chapter 2, implies that the places are dynamic and nonlinear entities). This is because when it comes to studying change of a dynamic entity, it is oxymoronic to strive for like-for-like comparisons anyway. The very fact that something is understood as dynamic implies that over time it is also understood to have changed and that it is not possible therefore to obtain like-for-like comparisons of that thing - hence why additional methods have been used to capture change in these places in this study. It is also the reason why I argue that quantitative descriptions of change are not given special status over and above qualitative descriptions but rather an equal and complementary one (see also Byrne 2002 on this issue).

Thus, whilst it is important to be aware of the various boundary changes, from an ontological and epistemological perspective, the data as it is available remains informative. The key is to move away from the notion of the variable as a measure of a thing in itself and instead towards the idea of the variable as a trace of that thing which it measures (Byrne 2002). This argument has been phrased in different ways since Plato’s allegory of the cave and essentially it has to do with the epistemological versus the ontological complexity of the world and our efforts to relate one to the other – or more accurately perhaps, it has to do with the extent to which one believes it is possible to abstract one from the other.

My own take on this debate follows Byrne (2001), Cilliers (2001) and Bhaskar (1998). They each argue (though in different ways) that to think of the epistemological realm (which in this case has to do with quantitative descriptions) and the ontological as independent of one another is a mistake. This is because, as Cilliers spells out, there is ‘a constant to and fro between them in which our models and, especially in the case of the human sciences, the world itself is transformed’. Cilliers continues:
Boundaries are simultaneously a function of the activity of the system itself, and a product of the strategy of description involved. In other words, we frame the system by describing it in a certain way (for a certain reason), but we are constrained in where the frame can be drawn. The boundary of the system is therefore neither purely a function of our description, nor is it a purely natural thing. (Cilliers 2001:141)

In other words, the boundaries to which Census and administrative statistics refer to are representations both of the system and a representation of our description of it. This is a crucial point and is central to my argument in this chapter and subsequently in the methodological implications suggested in the thesis also.

That said, Bhaskar’s logic remains important:

To be is not to be the value of a variable; though it is plausible (if, I would argue, incorrect) to suppose that things can only be known as such. For if to be were just to be the value of the variable we could never make sense of the complex processes of identification and measurement by means of which we can sometimes represent some things as such. Knowledge follows existence, in logic and in time; and any philosophical position which explicitly or implicitly denies this has got things upside down. (Bhaskar 1998a:29. italics added)

That is, in order to obtain a description of something, that thing first needs to exist (and then we need to become sufficiently (consciously) aware of it).

Guérois and Paulus (2001) raise this issue in an interesting paper about the history and chronology of the main urban geographies (e.g. l’unité urbaine or l’aire urbaine, etc.) in French census and administrative statistics. They argue that the timing of new terms and concepts become officially recognized coincides – and is a direct consequence of – what is happening directly at ground level, often as a widespread phenomenon across cities and urban regions throughout France. Similarly, I suggest, the boundary changes in York, for example – which are actually remarkably confusing as there are as yet no publications which record or detail them – reflect something about what is currently happening at the ground level. York is changing at a pace unknown to it since the World War II. If we understand the boundaries in this way, then not only can we conclude that York as a place has changed between the
1981 – 2001 censuses, but that between the 1991 and 2001 Censuses, the pace of change has accelerated significantly. Furthermore, local people were not only responding to these changes, i.e. by actually reconfiguring the boundaries in 1996 – but they were also anticipating future change, for example, by producing census change profiles for 1981 and 1991 in anticipation of the (future) 1996 boundary changes. However, by 2003, York had yet again undergone such extensive change that the boundaries were altered once more. This indicates that whilst future change had been foreseen in York, the extent of change had not. Therefore, in what follows, whilst the York figures are not directly comparable, they still form a useful representation of change in this city. All that said, let us now consider the quantitative descriptions of the population changes in the two cities.

**Population Change**

Like most cities today, York and Dijon have not only grown spatially in terms of the boundaries that define them but the number of inhabitants within them has increased; indeed the boundaries change primarily because of the increase in population. The population of the City of York has grown from just over 159,000 in 1971 to over 181,000 in 2001 and the Dijon conurbation has grown from nearly 213,000 in 1975 to over 238,000 in 1999 (see Figure 15); an increase in both cities which is roughly in line with their respective national population increase (see Eurostat 2004). Thus, both cities have had to adapt to and accommodate a considerable number of extra residents over the past three decades.

Behind this general trend lies a much more dynamic and varied spatio-demographic rate of change at local level. Looking at the available data more closely reveals that far from the population increasing steadily over time or evenly throughout the city, there have been dynamic fluctuations at some times in some areas and less so at other times in other areas. Localities such as the city-centre, for example, show only small gains or losses in total population. In contrast, other areas, most often outer-city wards or communes, show a constant growth rate that is as rapid as it is significant relative
to the rest of the city. Due to the problems mentioned above, it is more difficult to tease out these kinds of details of this more dynamic picture for York than it is for Dijon – an observation that reappears throughout this chapter but is reversed in the next chapter, which examines the findings of another method. Let us first briefly look at York and then move onto say more about Dijon.

Looking at the population counts in York for each ward in 1981, 1991 and 2001 (see Table 3), we can say that between 1981-1991, the population in most York wards decreased by only a little and a few wards showed small increases (i.e., ± 100-300 people). All but a handful of wards absorbed a relatively important number of people. Foxwood, for example, gained the most residents with 2,129 persons in total during this time, followed by Clifton Without (1,093), and Wiggington (1170). Copmanthorpe, Rawcliffe and Skelton, and Wheldrake each gained a moderate number, with around 600-800 people in each ward. Although it is difficult to comment on exact figures for the period between 1991 and 2001 for each ward, as a general comment, it can be said that most wards gained a small number of people.

Unfortunately, based on the available figures alone, it is not possible to make more precise comments other than this in terms of this time period. We can comment on individual wards between 1981 and 1991, and approximately consider them again in 2001. Similarly, whilst there have been interesting snapshot studies of York, which are informative in themselves (see, for example, Esher 1967; Falk and King 2003; Joseph Rowntree Foundation 2001; Meethan 1996; Nuttgens 2001), they do not allow for the longitudinal quantitative understanding of change to the city (understood as an entity it itself as well as the components within it) that I am seeking to represent in this research. This is the case even when we consider the studies together. This is unfortunate because, as we shall see from Dijon, from the overall change suggested by the boundary changes, it is likely that a more detailed local-level understanding of change would reveal significant non-linearities within York (as a whole) as across the wards (as components), especially between 1991 and 2001.
Due to these limitations, however, in the later stages of this research, I directly approached one of the key informants working in York City Council about the ways in which the Dijon findings (which we will look at shortly) compared to what he knew about York. This was a useful way of verifying the interpretations obtained here. Indeed, I was told that if more accurate data was available on York over the past three decades, it would be highly likely that similar punctuated phases of change that were found in Dijon (which we will be looking at shortly) would also be found in York. On that note, what can we learn about Dijon?

Fortunately, in the case of Dijon, we can say a lot more from the available data. A first glance at Figure 14 tells us that the population of the Burgundy region increases between 1962-1999 at a rate of change, which is relatively small compared to the general population increase across France as a whole. In fact, each département within Burgundy shows a population increase, though the population increase in the Côte d’Or is more important than that of the other areas over this period. More precisely still, the rate of change in the Communauté de l’agglomération dijonnaise is greater than regional or national trends.

Looking closer at this population increase, we learn from Table 4 and Table 5 that far from showing a steady linear trajectory, Dijon’s demography has evolved through a series of six punctuated phases, which are as follows.

*Phase 1: 1946-1954.* This is a period of relative stability. Importantly, however, in 1946 the built environment is still so compact that it shows no distinct suburban area around it but by 1954, this has begun to change a little with a 3.8% gain to the population living outside Dijon commune (Cadet et al. 1988).

*Phase 2: 1954-1962.* The Dijon city-centre commune witnesses its most dramatic population increases (2.8%) of its entire demographic history. Outside the city-centre region, the population increases considerably also (Cadet et al. 1988).
**Phase 3: 1962-1968.** Although the population continues to increase both in the city-centre and the suburbs, the growth in the suburbs is the most important it ever had been and ever has been since: with an annual increase in the suburbs during this period of around 14.8%, compared to 1962, the population is almost double (i.e. 88% increase) just six years later in 1968. The areas to accommodate the most people are the outer city-centre communes of Chenôve (35.5%), Quetigny (24.1%), and Chevigny (31.7%); the populations of Marsannay and St Apollinaire also increase moderately (Cadet et al. 1988).

**Phase 4: 1968-1975.** An interesting phenomenon emerges: the distinction between the city-centre and the suburbs becomes all the more visible as the two areas now exhibit contrasting population dynamics (see Figure 16). Whereas the city-centre commune shows a 3.0% loss of population, the surrounding suburban area shows a gain in population of around 7.0%, which despite its importance is half the rate it was in the previous phase. At the more macro-level, little has changed: the overall COMADI population continues to increase. The annual increase is 2.2%, which is a slower pace than before but it is still relatively important. However, the growth is far from even across the COMADI: in seven of the fourteen communes which constituted this area at the time, the annual increase is at least 6.0% and in the suburban communes of Quetigny and Chevigny, the growth rate is 41.4% and 43.3% respectively; the population in Neuilly is almost triple compared to its previous level (Cadet et al. 1988).

**Phase 5: 1975-1982.** Another pattern appears in the Dijon conurbation as well as across most French cities, which Cadet et al. refer to as the ‘urban exodus.’ This phase is best depicted in Figure 17, which shows the change in population figures between 1975-1982 in each commune. The result is that not only does the conurbation as a whole gain around only 2,000 people in seven years, with the exception of the areas of
Daix, Ahuy, Fontaine d'Ouche, Talant, La Montagne, Quetigny and Perrigny (which all increase annually by 3.9%-23.4%) all other areas of the conurbation actually lose residents. The population of Dijon’s city-centre commune falls significantly by 7% (i.e.10,500 persons) during this period (which is less than its 1968 level). At the same time, a new phenomenon appears for the first time: the process of urbanisation now extends beyond the conurbation boundaries. This period is essentially one of decentralisation whereby the centre of the city, which is usually defined as the central business district (CBD), ‘empties’ itself towards the suburbs, and where the suburbs themselves expand outwards and show complex patterns within them.

Phase 6: 1982 onwards. Three main things take place alongside one another. 1) The urban sprawl continues to develop outwards, expanding the urban bulk of the city. 2) The newly developed ‘edge cities’ (Garreau 1992) become stronger than ever in terms of housing and employment, and more visible as growing numbers of ‘shopping malls’ and large leisure and commercial outlets set themselves on the outskirts of the city, creating urban clusters with less and less social and economic ties to the original core city. And 3) Dijon’s city-centre commune begins to fill up again. Indeed, by 1999, this area has almost regained the population it lost between 1975-1982. This is very much a result of planning efforts to ‘re-juvenate’, ‘re-novate’, ‘re-market’, ‘re-produce’ the city-centre precisely in response of the decline and deprivation that the city-centre witnessed during the previous phase.

In sum, then, the population of the overall COMADI region increases over time. The period of 1968-1975 highlights the emergence of two distinct areas, which also

---

60 Decentralisation has been noticed in many cities throughout the world between the mid-1970s and early 1980s (McMillen and Mcdonald 1998; Small and Song 1994) and is one of the main reasons why the monocentric urban model (Alonso 1964; Clark 1951; Mills 1972; Muth 1969) (which essentially assumes a series of expanding and evolving concentric rings developing around the CBD) has been so frequently challenged in recent years in favour of a polycentric understanding of urban growth. More will be said about this later with reference to employment and industry changes in Dijon.
exhibit contrasting population dynamics: the city-centre commune versus the suburban communes. From 1975 through to the early 1980s, Dijon underwent a process of decentralisation. Thereafter, the formation of 'edge cities' becomes more apparent. The overall result of these various phases is best depicted in Table 5, Figure 18 and Figure 19 below, which show population changes in the COMADI between 1975-1990. From Table 5 we see that with the exception of the city-centre commune and that of Chenôve which have both decreased, the population in all other the communes has increased to varying degrees: nearly half of the communes have more than doubled, two have grown by over 70%, another two have grown by 32-37% and the others have grown by 0-25%. Yet the net overall increase in the COMADI area is only 11.5%.

Figure 18 documents the overall percentage change in each area and Figure 19 shows the overall gains and losses of population in each area. By comparing the two figures, we obtain an overall picture of the change in the COMADI and the communes, which constitute the area. However, we also learn a little more information about the ways that this change occurred. For example, from Figure 18, we notice that the population in the south-west of the COMADI in the Chenôve area, for example, has decreased between 1975-1990. Looking at this same area in Figure 19, however, shows us a slightly more complicated set of events: even though the overall the population may have gone down (as displayed in Figure 18), people have been moving into the area as well as out of it. In a similar way, when we look at particular areas more closely, we learn about other seemingly paradoxical micro-level trajectories nested within more macro-level patterns of change. For example, l'unité urbaine increases by 15.0% between 1975-1999, but the smaller COMADI area within does so by just over 11.0% (see Table 5). Furthermore, although the overall population of the COMADI areas increases over time, other areas within it undergo much more dynamic trajectories. For example, the population in Sennecey, a small and relatively young commune on the south-eastern edge of the Dijon agglomeration, increases dramatically by 58.1% between 1962-1968, increases again slightly between 1968-1975; it then loses residents between 1975-1982, gains some between 1982-1990, before finally
increasing rapidly by 29% between 1990-1999. It is important to weigh up these rates of change with the absolute figures – Sennecey's population in 1962 was only 171 residents. However, it remains the case that small, young areas such as these show a far more dynamic pattern of change than older more established ones. As we shall see, however, as well as these population dynamics taking place in the region over the past few decades, other important socio-spatial events were taking place also, namely to do with economic and industry trends.

In a similar way, when we look at particular areas more closely, we learn about other seemingly paradoxical micro-level trajectories nested within more macro-level patterns of change. For example, l'unité urbaine increases by 15.0% between 1975-1999, but the smaller COMADI area within does so by just over 11.0% (see Table 5). Furthermore, although the overall population of the COMADI areas increases over time, other areas within it undergo much more dynamic trajectories. For example, the population in Sennecey, a small and relatively young commune on the south-eastern edge of the Dijon agglomeration, increases dramatically by 58.1% between 1962-1968, increases again slightly between 1968-1975; it then loses residents between 1975-1982, gains some between 1982-1990, before finally increasing rapidly by 29% between 1990-1999. It is important to weigh up these rates of change with the absolute figures – Sennecey’s population in 1962 was only 171 residents. However, it remains the case that small, young areas such as these show a far more dynamic pattern of change than older more established ones. As we shall see, however, as well as these population dynamics taking place in the region over the past few decades, other important socio-spatial events were taking place also, namely to do with economic and industry trends.

**Employment and Industry**

We have briefly seen the ways in which the population changes have affected the overall character of York and Dijon. Furthermore, in the case of Dijon in particular, we have also looked at the different ways that change occurs according to the level of observation one takes (e.g. the commune, the COMADI, or l'unité urbaine). I will
come back to this point shortly. In the meantime, what about the socio-economic changes? How have these affected the places?

First, let us look at the general socio-economic character of York. What can we learn about it from official statistics? What sort of representation does such data produce? What real events might we learn from an empirical exploration concerning its past? What possible futures might we imagine from it? Feinstein starts us off by pointing out that York’s past trajectory has been relatively successful but by no means linear:

Throughout its long and absorbing history the economic fortunes of York have depended partly on its position as a regional capital: a secular, ecclesiastical, military, judicial, social and commercial centre; and partly on the enterprise and activity of its manufacturers and merchants trading at home and abroad. The former has provided a stable basis for a buoyant local economy; the latter has been relatively volatile, bringing great prosperity in some periods and deep depression in others.

(Feinstein, 1981:109)

Indeed, I argue that York has undergone two important socio-economic phase shifts – punctuated equilibria, if you like – since the early 1830s: the first around 1870s and the second in the late 1960s-early 1970s. However, I also suggest the possibility of a third turning point around the mid-1990s. For reasons which I discuss, it is difficult to be certain whether this is simply to do with the spurious effects of the available data combined with the aforementioned boundary changes or whether the different data is actually providing an accurate representation of something significant taking place in the real world which it seeks to measure.
### Table 2: Population in York, 1981-2001

(1) Relates to population within boundaries of York as a District.
(2) Relates to population within boundaries of York as a Unitary Authority.

(Sources: Population of Censuses; Research & Information at City of York 1997)

<table>
<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Total Residents (No.)</strong></td>
<td>159,029</td>
<td>166,040</td>
<td>181,094</td>
</tr>
</tbody>
</table>

### Table 3: Population in York by ward, 1981-2001

(1) Relates to population within boundaries of York as a District.
(2) Relates to population within boundaries of York as a Unitary Authority.

(Sources: Research & Information at City of York, 1997; National Statistics website)
<table>
<thead>
<tr>
<th>Year</th>
<th>Dijon Conurbation</th>
<th>Dijon city-centre commune</th>
<th>Dijon Suburbs</th>
</tr>
</thead>
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<tr>
<td>1946 (1)</td>
<td>129,421</td>
<td>106,664</td>
<td>12,642</td>
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<tr>
<td>1954 (1)</td>
<td>129,421</td>
<td>112,979</td>
<td>16,442</td>
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<td>1962 (1)</td>
<td>161,181</td>
<td>138,111</td>
<td>23,070</td>
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<td>1968 (1)</td>
<td>186,944</td>
<td>143,546</td>
<td>43,398</td>
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<tr>
<td>1975 (2)</td>
<td>217,550</td>
<td>151,582</td>
<td>65,978</td>
</tr>
<tr>
<td>1982 (2)</td>
<td>219,081</td>
<td>141,002</td>
<td>78,059</td>
</tr>
<tr>
<td>1990 (2)</td>
<td>230,469</td>
<td>146,723</td>
<td>83,746</td>
</tr>
<tr>
<td>1999 (2)</td>
<td>236,953</td>
<td>149,867</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 4: Population in Dijon, 1954-1990

(1) Figures based on Dijon as defined by its 'agglomération' boundaries at that date.
(2) Figures based on Dijon as defined by its 'Unite Urbaine' boundaries.


<table>
<thead>
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</thead>
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<tr>
<td>Ahuy</td>
<td>633</td>
<td>960</td>
<td>1,283</td>
<td>1,356</td>
<td>+723</td>
<td>+114.0</td>
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<td>Chenève</td>
<td>21,448</td>
<td>19,362</td>
<td>17,721</td>
<td>16,257</td>
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<td>Chevigny-St-Sauveur</td>
<td>5,645</td>
<td>7,148</td>
<td>6,223</td>
<td>10,141</td>
<td>+4,496</td>
<td>+79.6</td>
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<td>Daix</td>
<td>533</td>
<td>786</td>
<td>862</td>
<td>1,479</td>
<td>+946</td>
<td>+177.5</td>
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<td>Dijon</td>
<td>151,582</td>
<td>141,002</td>
<td>146,723</td>
<td>149,867</td>
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<td>-1.1</td>
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<td>Fontaine-lès-Dijon</td>
<td>5,009</td>
<td>7,046</td>
<td>7,853</td>
<td>8,878</td>
<td>+3,869</td>
<td>+77.2</td>
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<td>Longvic</td>
<td>7,442</td>
<td>8,173</td>
<td>8,275</td>
<td>9,017</td>
<td>+1,575</td>
<td>+21.2</td>
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<td>Marcannay-la-Côte</td>
<td>6,583</td>
<td>5,937</td>
<td>5,216</td>
<td>5,211</td>
<td>+1,372</td>
<td>+20.8</td>
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<td>Neuilly-lès-Dijon</td>
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<td>1,926</td>
<td>2,142</td>
<td>+588</td>
<td>+37.8</td>
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<td>Ouges</td>
<td>1,028</td>
<td>798</td>
<td>964</td>
<td>1,043</td>
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<td>+0.1</td>
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<td>1,381</td>
<td>1,648</td>
<td>+838</td>
<td>+103.4</td>
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<td>Plombières-lès-Dijon</td>
<td>2,063</td>
<td>1,827</td>
<td>2,123</td>
<td>2,491</td>
<td>+428</td>
<td>+20.7</td>
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<td>Quétiény</td>
<td>4,593</td>
<td>7,303</td>
<td>9,232</td>
<td>9,410</td>
<td>+4,817</td>
<td>+104.9</td>
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<td>Saint-Apollinaire</td>
<td>3,790</td>
<td>4,613</td>
<td>5,579</td>
<td>5,025</td>
<td>+1,235</td>
<td>+32.6</td>
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<tr>
<td>Sennecey-lès-Dijon</td>
<td>1,053</td>
<td>927</td>
<td>1,535</td>
<td>2,168</td>
<td>+1,115</td>
<td>+105.9</td>
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<tr>
<td>Talant</td>
<td>4,427</td>
<td>11,705</td>
<td>12,858</td>
<td>12,176</td>
<td>-7,749</td>
<td>-175.0</td>
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</table>

Table 5: Population in Dijon by commune, 1975-1999

(1) Figures based on [(1999 figure - 1975 figure) / 1975 figure] * 100
(2) INSEE 2000

L'Aire Urbaine (2) 277,741 291,486 312,904 326,631 48,890 +15.0

COMADI (2) 213,759 219,944 231,734 238,309 +24,550 +11.5
Figure 13: Commercial zones and 'Edge Cities' across Dijon conurbation
(Source: Documentation Agence Intercommunale d'Urbanisme)

Figure 14: Population change in the COMADI and Burgundy 1962-1999
(with no double counts and based on an index of 100 in 1962)
(NB: 'Dijon' refers to Dijon commune)
(Source: Insee 1999:2)
Figure 15: Dijon population density 1975, 1990, 2000
(Sources: (1) Documentation Agence Intercommunale d'Urbanisme; (2) Insee 2000:1)
Figure 16: Dijon population change 1968-1975
(Source: Cadet et. al. 1988: 35)

Figure 17: Dijon population change 1975-1982
(Source: Cadet et. al. 1988: 37)

Figure 18: Population change in Dijon conurbation by commune, 1975-1990
(Source: Documentation Agence Intercommunale d'Urbanisme)

Figure 19: Population gains and losses across Dijon conurbation, 1975-1990
(Source: Documentation Agence Intercommunale d'Urbanisme)
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Ahuy</td>
<td>272</td>
<td>373</td>
<td>471</td>
<td>+199</td>
<td>+73.1</td>
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<td>Chenôve</td>
<td>6,171</td>
<td>6,270</td>
<td>6,214</td>
<td>+43</td>
<td>+0.01</td>
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<td>Chevigny-St-Sauveur</td>
<td>2,109</td>
<td>2,616</td>
<td>3,621</td>
<td>+1,512</td>
<td>+71.7</td>
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<td>Daix</td>
<td>241</td>
<td>287</td>
<td>457</td>
<td>+216</td>
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<td>Dijon</td>
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<td>63,880</td>
<td>71,334</td>
<td>+14,651</td>
<td>+25.8</td>
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<td>3,032</td>
<td>3,701</td>
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<td>+44.1</td>
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<td>Longvic</td>
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<td>3,056</td>
<td>3,585</td>
<td>+803</td>
<td>+28.9</td>
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<td>Marsannay-la-Côte</td>
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<td>1,823</td>
<td>2,016</td>
<td>+241</td>
<td>+13.6</td>
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<td>291</td>
<td>324</td>
<td>+70</td>
<td>+27.5</td>
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<td>Perrigny-sur-Dijon</td>
<td>337</td>
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<td>565</td>
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<td>769</td>
<td>966</td>
<td>+292</td>
<td>+44.0</td>
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<td>Quetigny</td>
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<td>3,075</td>
<td>3,428</td>
<td>+1,144</td>
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<td>Saint-Apollinaire</td>
<td>1,441</td>
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<td>+574</td>
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<td>264</td>
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<td>666</td>
<td>+392</td>
<td>+148.5</td>
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<td>Talant</td>
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<td>4,801</td>
<td>4,981</td>
<td>+900</td>
<td>+22.0</td>
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<td><strong>COMADI</strong></td>
<td><strong>84,289</strong></td>
<td><strong>95,710</strong></td>
<td><strong>106,999</strong></td>
<td><strong>+22,710</strong></td>
<td><strong>+26.9</strong></td>
</tr>
</tbody>
</table>

Table 6: Total number of households in COMADI, 1982-1999
(Source: Audit Urbain 2002)

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>COMADI</td>
<td>93,382</td>
<td>112,518</td>
<td>128,018</td>
<td>143,632</td>
<td>162,723</td>
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<tr>
<td>L’Aire Urbaine</td>
<td>84,928</td>
<td>103,071</td>
<td>117,527</td>
<td>132,754</td>
<td>151,525</td>
</tr>
</tbody>
</table>

Table 7: Number of residences in COMADI and l’aire urbaine
(Source: INSEE)

Figure 20: Change in number of residences across the COMADI, 1990-1999
Imaged based on population density per iris.
(Source: Insee 2000)

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61 The term ‘residence’ is used as a translation of ‘logement.’

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Figure 21: Dijon agglomération urban development, 1970 to 1995
(Source: Agiud 1999b)
The first turning point, I suggest, dates back to the 1870s when York experienced a dramatic expansion to its transport and manufacturing industries. The rise of the factory system gave way to two industries which tower over all others in the economic history of the city. The first is the manufacture of confectionery, most notably of chocolate; the second is the railway, with its ancillary building and repair of rolling stock (Feinstein 1981:123). Small handicrafts thus gave way to establishments with a labour force counted not in tens, or even hundreds, but in thousands. Rowntree's workforce, for example, rose from just around 100 in 1879 to over 4,000 in 1909 and basically continued growing thereafter (Howard 1995). What we see, then, is 'a change in both scale and character of economic activity' (Feinstein 1981:123).  

The second big turning point, I suggest, is in the early 1970s. Again, it concerns both the scale and the character of socio-economic change. Up until then, York's economic structure was typical of a pre-industrial town, with a large percentage of domestic servants, tailors, milliners, dress and shoemakers and other shopkeepers (Feinstein 1981:121). From then on, however, things become very different. By examining economic activity over time (see Table 9), particularly by type of industry (see Table 8), we can get a real sense of the overall qualitative socio-economic change in York over time. On the one hand, there is a decrease in full-time employment and a rise in part-time employment. On the other, there is a decline in numbers working in manufacturing and construction industries along with a rise in employment in service and other related industries. These patterns of change are typical of the kinds of trends one expects to see in British and other European cities during the transition from industrial to postindustrial urban life (Byrne 2001; Castells 1996a; Dear 2000; Lash and Urry 1987; Mérenne-Schoumaker 1996; Soja 2000).

More specifically, we learn (from Table 8) that between 1951 and 2002, out of all the industries in York, manufacturing industries show the biggest level of change,

---

with a fall from a total of 38.0% employed in this sector in 1951 to just 9.3% in 2002, i.e. an overall decrease of 28.7%. Whilst this drop in manufacturing jobs is significant, it is important to note that today York nonetheless still holds most of Yorkshire’s larger manufacturing and retail companies (North Yorkshire Joint Structure Plan 2000). In contrast, the total number of people working in public administration, education and health industries shows the second biggest level of change, with an overall increase of 17.9% during this period, rising from 7% employment in this sector in 1951 to 24.9% in 2002. Overall levels of employment in the distribution, hotels and catering sector, and those in the banking, finance and insurance sector, also show important increases, rising from 14.0% in 1951 to 28.3% in 2002 (i.e. a gain of 14.3%) and from just 2.0% in 1951 to 16.3% in 2002 (i.e. a gain of 14.3%) respectively.

The sheer extent to which the local economy relies on such information-based services can be seen in Table 10, which lists York’s single largest employers. In descending order of importance, its eight largest single employers (in terms of employee numbers) are: the City of York Council, Nestlé Rowntree, York Health Services Trust, British Telecom, CGU Life Insurance, Shepherd Building Group (which includes Portakabin Ltd.), University of York, Railways (of which the largest operations are Railtrack North East, GNER, Northern Spirit, and Jarvis Facilities Ltd.

Other firms employing between 45-100 people are also important qualitatively relative to York’s past identity although they do not carry the same importance in terms of their number of employees. For example, in this category of employers we see: the Jorvik Viking Centre, the Joseph Rowntree Foundation, York Archaeological Trust, Bettys Café and Tearooms, Theatre Royal, York Race Committee, Fleetways Taxis, Yorkshire Divisional Fire Headquarters, Barnitts Ltd, W.H. Smith, Boots the Chemist, Warner Brothers Cinema, Stakis York Hotel, North York City Football Club etc. Indeed, it is arguably this interesting mix of medium-sized leisure, heritage and service employers that shape York’s local socio-economic character today.
As noted, I suggest that if we look more closely at the data, we can see reasons, which signal that there may also be a third turning point in York’s socio-economic trajectory around the 1990s. Whilst it is debatable that this is simply the same continuum of change just mentioned, I argue that the data may nonetheless be pointing to something different happening around that time. This is not to say that it has nothing to do with the changes that have taken place since the 1970s because, of course, it has – just as the post-1970s changes are related to the post-1830s changes. However, it is to say that around 1990s – and onwards, I predict – the changes manifest themselves locally to a much greater degree than before.

I argue that this is the case for five main reasons. The first goes back to the employment data shown in Table 8. These figures depict the overall numbers of percentage of the total number of employee jobs according to the three main types of industry (i.e. manufacturing, construction and services) and according to the four main types of service industries (i.e. distribution, hotels and restaurants; transport and communication; banking, finance and insurance; and public administration, education, and health) respectively. By looking at Table 8, we notice that in terms of the rate and the extent of change, the most dramatic period in both the manufacturing and service sector is between 1991 and 1995, where the proportion of people working in manufacturing jobs is 19.2% in 1991 and then 8.90% just four years later, and that of people in services is 69.1% in 1991 and has increased to 82.90% by 1995. Perhaps, symbolically, this rapid change is marked by an important pre-cursor in 1989 when, ‘all the changes started’ (quoting 'Jean', a Rowntrees factory worker; interview available from Cocoareworks) when Rowntrees was taken over by Nestlé.

It is possible that these figures are caused by using two different data sources, and also that the 1991 figures are based on only a 10% sample whereas the 1995 figures are not. However, if this were so then we would expect to see significant discrepancies in the other types of industries also. Yet when we compare 1991-1995 figures across the table we notice that this is not the case. For example, the range of change between 1951 and 2002 for the percentage of people employed
in the construction sector is remarkably small relative to that observed in the manufacturing and service categories. Similarly, the data describing the proportion of people working in distribution, hotels and catering jobs does not show the kinds of differences that we see in manufacturing and service industries over the same period. Furthermore, if we look at the way that the banking, finance and insurance sector has changed over time, we observe similar percentage increases within and across the different data sources. That is, there is a 3.2% increase in numbers employed in this sector between 1981 and 1991 (i.e. within the same source), then a 2.8% increase between 1991 and 1995 (i.e. across the different sources), and the numbers rise again by 3.0% just a year late (i.e. using the other data source). This would suggest, therefore, that the observations relating to significant changes in the manufacturing and service industries between 1991 and 1995 are reliable.

The second reason for suggesting that there is an important shift in York’s socio-economic trajectory during the mid-1990s is through examining the change in the proportions of people employed by type of industry as shown in Figure 22 and those relating the different types of service industry as shown in Figure 23. Note that Figure 23 simply provides a visual representation of the same data described in the last four columns of Table 8. However, this visual display of the data allows one to see that across the graphs, 1996-1997 is a particularly important time in terms of the changes across all the industries taking place. Whilst Tufte (1997; 1983; 1990) would remind us to be somewhat cautious about relative measures depicted through this visual representation of quantitative⁶³, I nonetheless argue that Figure 22 and Figure 23 along with the information provided in Table 8 are useful sources of information that also suggest some interesting questions about what we see happening in the mid-1990s.

A third reason is that since the mid-1990s, as if following Castells’ (1989) information society thesis, York’s planners have been striving to re-present the city

⁶³ Note that a) pre-1995 data is not included and therefore from these graphs alone there is no way of knowing from the graphs alone whether or not these variations are significant in a long-term retrodictive analysis, and b) the degree of variation both between the different Types of Industry and the different regional and national measures is slightly exaggerated through these images because the y-axis is ‘broken’ and the scale it represents is not identical across graphs.
as more than ‘just’ a tourist city, which – without the chocolate or railway industries at its core – was effectively all that was left to York’s traditional identity. Indeed, since 1998, in addition to its call for tourists, York has publicly been portrayed as a *Science City*, with the University (seen to be) pumping innovation and scientific expertise into its local, regional, national and international networks. Currently, over a fifth of York’s working population is employed in the information economy. As if changing the colour of York’s own blood, the arrival of large companies such as Ministry of Agriculture, Fishing and Farming (MAFF), *Sand Hutton* laboratories and *Smith & Nephew* pharmaceuticals, and credit card fraud and insurance companies, such as *Card Protection Plan* (CPP) (intending to bring with it 750 jobs over the next five years) are transforming the qualitative character of this city (see Table 10 for more information on York’s largest employers).

More still than a ‘tourist city’ or a ‘Science City’, York’s *Without Walls* ‘Local Strategic Partnership’ – which represents a group of significant local organisations and entrepreneurs working together as a response to the Government’s call that all councils should have a community strategy – re-organises the image of the city as a *Healthy City*, a *Safer City*, a *Learning City*, a *Thriving City*, a *City of Culture*, an *Inclusive City* and a *Sustainable City*. Within each ‘branch’ of the city – a deliberate metaphor to reflect the fractal-like nature of the city – a group of related agencies are explicitly connected to one another to work together towards a common future goal. For example, within the *Safer City* branch, agencies such as the Criminal Justice Group, the Crown Prosecution Service, the Domestic Violence Forum, the Drug Action Team, etc. are all grouped together to lower the crime rate and help make York be a safe place to local residents and visitors. The city of York, therefore, is growing by actively re-organising its key components to work collectively as specialist entities, thus increasing the city’s complexity and probably its socio-economic robustness also (Cowan *et al.* 1994).

A fourth reason as to why I think the mid-1990s is a significant period of time along York’s socio-economic trajectory is that the actual boundary changes to ‘York’

64 See complexity glossary in Appendix A.
came into effect in May 1996. Thus, on the one hand, it is possible that the variations observed in the mid-1990s (shown in the aforementioned Table 8, Figure 22 and Figure 23) are simply due to the different geographies being measured. On the other, however, as also noted, boundary changes do not simply come into effect haphazardly but are instead the collective and purposeful result of people from different agencies coming together and deciding that it is more meaningful to consider a different spatial zone precisely because of the changing social phenomena being observed at the local level. As also noted and as argued by Guérois and Paulus (2001), new terms used to define new geographies are generally referring to some real phenomenon taking place at the local level. Could it be that this is the case here also?

Fifthly, and importantly in terms of the argument put forth in this study, three bridges between the quantitative data and the qualitative data of the documents and the children’s interviews support the view that York has recently begun a new path along its historical trajectory around. Firstly, in terms of change, the local key informants and especially the ‘chance key informants’ (see Chapter 4) would frequently comment on the sheer extent of the changes which are visible primarily on the outskirts as housing and construction developments ‘invading and taking over any bit of land they get their hands on’ (as one person stated). Shopping and leisure developments such as the Monks Cross Shopping Park and the McArthurGlen Designer Outlet Village, each constructed in 1998 (with extensions to them almost every year since), have transformed the sense of place just as people seemed to be more used to the Clifton Moor complex which was constructed in the late 1980s. For example, Sir Ron Cooke, a member of Without Wall’s Local Strategic Partnership, and former Vice Chancellor of the University of York until 2002 – and interestingly, I think, in terms of the possible implications of York’s image as a Science City, appointed in 2004 as Chair of the Joint Information Systems Committee (JISC) – was quoted in the Evening Press of 26 November 2002 as saying:

Ten years ago we had 11 per cent unemployment, the railway works had gone, Rowntree’s had been taken over, and so on. People were not optimistic. We’ve had a revolution since then.
There has been a revolution in the Internet, massive growth of financial services, huge development of the building industry and the university, and a unitary authority.

(see also Falk and King 2003:12; Lewis 2002)

In addition, as will be seen in the next chapter in which I explore the physical changes of the city, I argue that the city centre remains frozen relative to the changes around it but that whenever relatively important physical change does take place in this area of the city (i.e. change that is more than pedestrianised streets or pavements etc.), it would seem as though it is happening in response to socio-economic changes that occurred a few years before. As I will indicate, there have been recent relatively radical changes in 2004 whereby a large chunk at the Clifford’s Street end of Coney street – an important city centre street – has been completely demolished. My suggestion – though at this stage only tentative – is that this physical change is directly connected in time, space and cause to the socio-economic changes shown here in the quantitative data.

Finally, but importantly, another empirical bridge connecting this quantitative data to the qualitative data produced through the interviews with the local schoolchildren, is that the children did mention the York University yet they made no reference to Rowntrees or Nestlé, or to York’s railway past. Of course, this is not evidence in itself of anything as significant as another phase-change but juxtaposed with the other traces (Byrne 2002) of change, it would certainly support the suggestion that York is in a new stage of transition. In any case, time will tell but it will certainly be interesting to see if retrospectively York’s trajectory of change and continuity does seem to indicate that the mid-1990s was a particularly significant turning point or not.
<table>
<thead>
<tr>
<th>Year</th>
<th>Manufacturing</th>
<th>Construction</th>
<th>All Services</th>
<th>Distribution, Hotels &amp; Catering</th>
<th>Transport &amp; Communications</th>
<th>Banking, Finance &amp; Insurance</th>
<th>Public Admin, Education, Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>%</td>
<td>Total</td>
<td>%</td>
<td>Total</td>
<td>%</td>
<td>Total</td>
</tr>
<tr>
<td>1951</td>
<td>20,240</td>
<td>38.0</td>
<td>3,250</td>
<td>6.0</td>
<td>-</td>
<td>-</td>
<td>8,318</td>
</tr>
<tr>
<td>1981</td>
<td>1,875</td>
<td>25.9</td>
<td>521</td>
<td>7.2</td>
<td>4,637</td>
<td>63.9</td>
<td>1,444</td>
</tr>
<tr>
<td>1991</td>
<td>1,498</td>
<td>19.6</td>
<td>522</td>
<td>6.8</td>
<td>5,277</td>
<td>66.1</td>
<td>1,171</td>
</tr>
<tr>
<td>1995</td>
<td>7,462</td>
<td>8.90</td>
<td>5,495</td>
<td>6.50</td>
<td>69,664</td>
<td>82.90</td>
<td>21,433</td>
</tr>
<tr>
<td>1996</td>
<td>12,523</td>
<td>14.90</td>
<td>3,502</td>
<td>4.20</td>
<td>66,731</td>
<td>79.30</td>
<td>21,451</td>
</tr>
<tr>
<td>1997</td>
<td>12,120</td>
<td>13.30</td>
<td>5,356</td>
<td>5.90</td>
<td>71,226</td>
<td>78.20</td>
<td>22,135</td>
</tr>
<tr>
<td>1998</td>
<td>8,711</td>
<td>9.40</td>
<td>8,485</td>
<td>9.10</td>
<td>73,541</td>
<td>79.20</td>
<td>23,072</td>
</tr>
<tr>
<td>1999</td>
<td>9,786</td>
<td>10.50</td>
<td>5,624</td>
<td>6.00</td>
<td>76,162</td>
<td>81.60</td>
<td>22,985</td>
</tr>
<tr>
<td>2000</td>
<td>9,245</td>
<td>9.90</td>
<td>5,636</td>
<td>6.00</td>
<td>77,034</td>
<td>82.20</td>
<td>25,120</td>
</tr>
<tr>
<td>2002</td>
<td>9,223</td>
<td>9.30</td>
<td>4,009</td>
<td>4.00</td>
<td>84,990</td>
<td>85.30</td>
<td>28,227</td>
</tr>
<tr>
<td>1951-2002 change</td>
<td>-11,017</td>
<td>-28.7</td>
<td>-9,759</td>
<td>-2.0</td>
<td>-</td>
<td>-</td>
<td>+19,009</td>
</tr>
</tbody>
</table>

**Note:** 1981 figures for those involved in Mining are included in Manufacturing.

**Note:** 1981 and 1991 figures are for 10% statistics.

(Sources: (1) 1951 National Census of Population; (2) Research & Information at City of York; (3) National Statistics from Nomis website)

65 The sources used and the data included in this table were each chosen because together they each allowed for the best comparison of Employment by Type of Industry over time to be made. For example, a possible source (4) (i.e. the 2001 National Census of Population) could have been used. This would have allowed comparisons between all the above Types of Industry and also included ‘Agriculture, Forestry, Fishing and/or Mining’ and ‘Energy & Water’ and in turn allowed for comparisons for 1951 (taken from source (1)), 1981, 1991 (taken from source (2)) and 200. However, source (3) was chosen instead of possible source (4) because: a) it allowed for annual analysis between 1995-2002 even though it did not include ‘Agriculture, Forestry, Fishing and/or Mining’ and ‘Energy & Water’ and b) the annual analysis between 1995-2002 was significant in terms of the overall conclusions leading to understanding change of time; c) the proportions of people involved in ‘Agriculture, Forestry, Fishing and/or Mining’ and ‘Energy & Water’ for 1981, 1991 and 2001 using sources (1), (2) and possible source (4) ranged only between 1.2% - 2.2% and did not therefore alter the most significant observations relating to changes in proportions of those working in Manufacturing and Service Industries; and d) to have included 2001 figures simply to allow for the addition of these two extra categories of Industry was not considered worthwhile because all 2001 figures between possible source (4) and source (3) differed slightly, as did the categorisations of Type of Industry, and would have therefore complicated the Table unnecessarily.
### Table 9: Employment in York, 1981-2001

<table>
<thead>
<tr>
<th>Population Count</th>
<th>1971 (1)</th>
<th>1981 (2)</th>
<th>1991 (3)</th>
<th>2001 (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>104,780</td>
<td>159,029</td>
<td>166,040</td>
<td>181,094</td>
</tr>
<tr>
<td>Total Economically Active (Males and Females)</td>
<td>77,423</td>
<td>83,641</td>
<td>93,000</td>
<td></td>
</tr>
<tr>
<td>- In Employment (%)</td>
<td>93.7</td>
<td>94.0</td>
<td>61.4</td>
<td></td>
</tr>
<tr>
<td>- Unemployed (%)</td>
<td>6.3</td>
<td>6.0</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Total Employees (Males and Females)</td>
<td>67,234</td>
<td>69,321</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Full-time (%)</td>
<td>77.4</td>
<td>74.5</td>
<td>63.4</td>
<td></td>
</tr>
<tr>
<td>- Part-time (%)</td>
<td>22.6</td>
<td>25.5</td>
<td>36.6</td>
<td></td>
</tr>
</tbody>
</table>

(1) Relates to population within boundaries of York as County Borough.
(2) Relates to population within boundaries of York as a District.
(3) Relates to population within boundaries of York as a Unitary Authority.

(Sources: 2001 Population of Census; Research & Information at City of York 1997)

### Table 10: York’s largest employers 2001

<table>
<thead>
<tr>
<th>Estimate No. of Employees</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,500+</td>
<td>City of York Council</td>
</tr>
<tr>
<td>3,000-5,000</td>
<td>Nestlé York Health Services Trust</td>
</tr>
</tbody>
</table>
| 1,000-3,000               | British Telecom
|                           | CGU Life Insurance
|                           | Shepherd Building Group (which includes Portakabin Ltd.)
|                           | University of York
|                           | Railways (of which the largest operations are Railtrack North East, GNER, Northern Spirit, and Jarvis Facilities Ltd.)
|                           | Norwich Union Life
|                           | CCP Card Protection Plan |
| 300-1,000                 | Asda Stores Ltd.
|                           | Central Science Laboratory (MAFF)
|                           | College of Ripon and John
|                           | CPP (Card Protection Plan)
|                           | M.A. Craven & Son Ltd., Craven Keller, Trebor Bassett
|                           | Marks and Spencer Plc.
|                           | Ministry of Agriculture, Fisheries and Food
|                           | McKechnie Plastic Components Ltd.
|                           | MoD Headquarters Eastern District
|                           | Monroe Europe (UK) Ltd.
|                           | Northern Electric
|                           | Police Headquarters
|                           | Royal Mail
|                           | R.R. Donnelly Ltd.
|                           | Terry’s Suchard
|                           | Tesco Stores Ltd.
|                           | York and County Press
|                           | University College of Ripon and York St John
|                           | York College of Further & Higher Education
|                           | Monk Cross Shopping Park (around a thousand people on site and growing)
|                           | BAA McArthur Glen Designer Outlet Village (7-800 people and expanding) |

(Source: York Data File 2001)
Figure 22: Number of employees in York by type of industry, 1995-2002
(Source: National Statistics from Nomis Website)

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Figure 23: Total employee jobs by service industries in York, 1995-2002
(Source: National Statistics from Nomis website)
So what about Dijon? Has it too changed in the same socio-economic and socio-spatial ways as York? In many ways, yes, it has changed similarly. It is worth noting, before saying more, however, that whilst socio-economic Census data is available, it generally appears *after* the demographic outputs; at the time of my fieldwork in Dijon which was in 2002, the 1999 ‘recencement vert’, as it is referred to, was not yet published. Later, the data that was available to me free of cost was obtainable through the INSEE website but this was limited and only a small part of this is produced at the city level; most of the census data is produced at the ‘Côte d’Or’ regional level. Therefore, many of the 1999 figures in this section are omitted.

Instead, I draw upon a variety of different sources, primarily those which were suggested by the various key informants and people working at the AGIUD, which also includes the work of Christine Baumont and Françoise Bourdon who are key authors in this field and who specifically focus on Dijon’s recent changes (see Baumont 2004; Baumont and Bourdon 2002a; Baumont and Bourdon 2002b; Baumont *et al.* 2003a; Baumont *et al.* 2003b; Baumont *et al.* 2004). Whilst I think that this different material gives a slightly different ‘texture’ to the quantitative representation of Dijon’s urban change compared to that of York inasmuch as it allows for the local *spatial* changes (which are directly related to the socio-economic changes going on across the city as a whole) to become more visible to us than they are in the representation of York, it is nonetheless possible to obtain a general understanding of socio-economic change and continuity in this place also – see Table 16 below for an overall summary of the city changes and the main spatial changes therein.

Like York, Dijon’s identity has shifted in various ways. Internationally famous for its mustard industry that has been in full swing since the fourteenth century, and nationally renown for its *cassis* blackcurrant, ginger bread and snail production, today Dijon’s main employers include mechanical engineering and pharmaceutical industries, power stations and car production plants (see Table 11 for a list of Dijon’s top twenty most represented jobs and Table 12 for a list of Dijon’s main service companies). Following the general postindustrial trend witnessed in cities and urban
regions around the world, Dijon’s socio-economic structure shows a decrease in employment in the industry and construction sectors and an increase in service related employment. Thus, we see, for example, in 1954 that 39.1% of those economically active employed in Industry and Construction and 60.5% in the tertiary sector shift to 17.6% and 75.4% respectively by 1990 (see Table 13 below). That said, in many respects, due to Dijon’s traditionally high rate of employment in service and administration sectors because of its historical role as a regional administrative centre, Dijon has not been hit by deindustrialisation to the same extent as many other cities.

Simple counts across Dijon by commune tell us that more people are working throughout the city in 1990 than in 1975 (see Table 14). But more interestingly, like the rest of France, most people work in the agglomération itself, with over 50% of jobs located within the COMADI boundaries, although today we also see more people move to the city suburbs, which in turn are becoming more densely populated (Hoffmann-Martinot 2004). Indeed, from Table 15 below we can see that since 1975, even though the number of people working in the COMADI has not increased significantly (84,777 economically active in 1975 compared to 83,704 in 1990), more people are living and working outside the COMADI area than ever before. Of particular significance is the increase in the number of people living outside the COMADI but travelling into work there (13,905 in 1975 compared to 29,020 in 1990). Similarly, the increase in the number of people both living and working outside the COMADI marks an important change to the way people interact with the city interact over time (9,579 in 1975 compared to 20,103 in 1990).

Indeed, looking closer at the local level of change, Dijon tells an interesting story about a number of different socio-spatial changes across the cities, which together signal the metamorphosis of Dijon’s urban trajectory since the 1970s. For example, Baumont et al. (2003a) show that between 1990-1999, economic activity is extremely concentrated spatially, with 25% of jobs located in just 6% of the COMADI area; 50% of the jobs still just cover 15-16.4% of the COMADI and just 29%-34% of the area captures over 75% of the total employment. Yet despite this, if we zoom in closer still, we see even more dynamic socio-economic spatial patterns emerge (and thus
reminding us about the ways in which complex places emerge from the micro-level behaviour of local agents which compose them). Using a range of different sources which effectively tell a similar story, we see Dijon changing from being a place with a ‘central business district’ (CBD) at the centre of the city to one which has multiple economically important districts scattered around the city outskirts; interestingly in terms of this thesis argument, as we shall see in Chapter 9, this new city structure is echoed in the children’s discussions about Dijon as well. From around the mid 1970s to the present, the spatio-economic distribution has transformed Dijon from a monocentric urban region to a multi-polar city with significant edge-cities located on the outskirts of town (see Figure 13 above).

Baumont and Bourdont (2002) also analysed the spatial distribution of housing prices in the COMADI found that this created two urban areas, each at opposite extremes from one another: the old, attractive downtown Dijon versus the socially and economically poor and disadvantaged districts in some of the suburbs (which are referred to as ‘D-Districts’; see Figure 38). They differ from one another in important ways, they explain:

the Conservation Area is characterized by an high percentage of senior executives and professors (28,4% against 15,8% for the COMADI and less than 7% for the D-Districts), a low percentage of employees (22% against 31% for the COMADI and more than 32% for the D-Districts), a very low ratio of foreign people (4,7% against more than 8,7% and rising up to 17,6% in the D-Districts), a high percentage of old buildings and apartments (82% of the apartments have been built before 1949) and a very low percentage of social housing (5,3% against 22% for the COMADI, more than 51% and rising up to 78% for the D-Districts). The Conservation Area concentrates a large part of the employment whereas the D-Districts are poorly developed.

(Baumont and Bourdon 2002a:11)

On the other hand, Baumont and Bourdont continue, both the Conservation Area and the D-Districts are highly populated (on average 50 inhabitants per acre compared to less than 6 inhabitants per acre for the COMADI), they both share similar numbers of

66 The disadvantaged districts each have very high immigrant populations, which in turn creates ethnic and racial issues within the COMADI which are not present in York. Although these are very much part of the qualitative sense of space in Dijon, I do not cover these issues here, mainly because of limiting space but also because my view is that these issues are best represented through a combined quantitative-qualitative description rather than the quantitative one exposed in this chapter.
middle executives (which are lower on average than those observed for the COMADI) and similar rates of unemployment (10% on average excepted for the disadvantaged district in Chenôve which is 19%).

More importantly in terms of their medium-term knock-on effects on residential patterns across the COMADI, Baumont and Bourdont (2002) found that these two contrasting areas are important because of their significant influence over house-prices. House prices increase the nearer the conservation zones the housing is and house prices decrease the nearer the disadvantaged districts the housing in. As a consequence, most of the urban policy and planning in the late nineties has been aimed at re-developing the disadvantaged districts in an attempt to economically revive these areas.

Thus we can see Dijon’s socio-spatial change from different angles. For example, using socio-spatial econometric procedures, Baumont and Bourdon (2002a) and Baumont et al. (2003a) argue that in today’s Dijon, instead of one employment area located in the CBD, there are three: one located in the North, one in the South and the other less important in terms of its number of employees is the business district of Quetigny. Likewise, through a comparison of floor space surface area between 1993 and 2001, we see these different economically important districts grow to various degrees respectively (see Figure 27 and Figure 28). Alternatively, by examining the change in economic density in 1975 and 1990 (see Figure 24 and Figure 25), we again see these areas become more significant also. In this way, we can see the metamorphosis of the city, thus also supporting Baumont and Bourdon’s (2002) findings.

In terms of the changes to the CBD, there are two important phases: the first in the 1980s and the second in the 1990s. In the 1980s, as if to set up the change that was to come in the future, a relatively important proportion of construction work took place. This involved building and, in turn, adding to the number of offices in the CBD. Building conversion also took place around this time, most notably the conversion of flats to offices and medical units (see Figure 29 below).
In the 1990s, employment in the CBD becomes more specialist with regards to its service sector employment, with 88% service employment in 1990 to over 93% by 1999 (Baumont et al, 2003). 98% of the CBD service employment stems from just four types of economic activity (Baumont et al. 2003a): a) personal services which represent over 33% of the CBD employment; b) business services, i.e. 13% of the CBD service sector in 1990 next to 6% in 1999, which is the equivalent of 29% of COMADI jobs in this sector in 1990 compared to just 10% in 1999; c) transport and communication services (growing from 26% in 1990 to nearly 40% in 1999); and d) and finance, property and insurance services, i.e. 12% of the CBD service sector in 1990 next to 11% in 1999, which nonetheless represents around 50% of finance, property and insurance service employment of the COMADI as a whole.

In contrast to the CBD’s proportion of employment by type of industry, the Northern urban pole of the city holds a high concentration of construction and industrial employment, although there is also a slight decrease in these industries over this time (i.e. between 1990-1999). In 1990, construction related employment represents 16% of the workforce in the Northern urban pole, decreasing slightly to 15% in 1999. The proportion of employment in the industry sector, on the other hand, represents 40.6% in 1990 but decreases considerably to 24.8% by 1999.

However, despite these changes, Baumont et al. (2004a, 2004b) argue that these different ‘subcentres’ do not significantly influence the population density distribution in the COMADI. Instead, housing price distributions, which are influenced by both the distance to the CBD and by the distance to these employment subcentres are key to understanding Dijon’s socio-spatial dynamics.
## Table 11: Top twenty most represented jobs in Dijon 1990/1997 (1)

(1) Dijon as defined by the boundaries of the ‘zone d’emploi’ at that date.

(Source: Agiud 1999a:32)

<table>
<thead>
<tr>
<th>Type of Industry</th>
<th>Number of employees</th>
<th>Change 1990-1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public services, security, cleaning</td>
<td>10,200</td>
<td>+25</td>
</tr>
<tr>
<td>Commercial</td>
<td>7,900</td>
<td>+20</td>
</tr>
<tr>
<td>Industrial</td>
<td>7,800</td>
<td>-38</td>
</tr>
<tr>
<td>Public services</td>
<td>7,200</td>
<td>Not available</td>
</tr>
<tr>
<td>Administration, Office work</td>
<td>5,200</td>
<td>-27</td>
</tr>
<tr>
<td>Secretarial</td>
<td>5,000</td>
<td>0</td>
</tr>
<tr>
<td>Teaching</td>
<td>4,900</td>
<td>Not available</td>
</tr>
<tr>
<td>Army, police, fire service</td>
<td>3,800</td>
<td>Not available</td>
</tr>
<tr>
<td>Sales Reps/Management</td>
<td>3,500</td>
<td>+15</td>
</tr>
<tr>
<td>Teaching (secondary and higher)</td>
<td>3,300</td>
<td>0</td>
</tr>
<tr>
<td>Public service/Middle Management,</td>
<td>3,300</td>
<td>Not available</td>
</tr>
<tr>
<td>Administration/Senior management</td>
<td>3,100</td>
<td>+10</td>
</tr>
<tr>
<td>Long-distance drivers, Public transport</td>
<td>3,000</td>
<td>0</td>
</tr>
<tr>
<td>Construction &amp; Building</td>
<td>2,900</td>
<td>-36</td>
</tr>
<tr>
<td>Agricultural</td>
<td>2,800</td>
<td>Not available</td>
</tr>
<tr>
<td>Doctors and medical management/admin</td>
<td>2,700</td>
<td>+10</td>
</tr>
<tr>
<td>Nursing</td>
<td>2,700</td>
<td>+12</td>
</tr>
<tr>
<td>Sales posts</td>
<td>2,300</td>
<td>-20</td>
</tr>
<tr>
<td>Hotel, Restaurant, and tourism</td>
<td>2,300</td>
<td>-40</td>
</tr>
<tr>
<td>Transport/Heavy Goods</td>
<td>2,200</td>
<td>-35</td>
</tr>
</tbody>
</table>

## Table 12: Main service companies in Dijon conurbation, 2002

(Companies employing 200 or more people as of August 1st, 2002)

(Source: CCI)

BERICAP - (215) Longvic – Plastic caps
SMURFIT SOCAR - (221) Longvic – Manufacture of corrugated containers and other paper-based packaging products
PECHINEY EMBALLAGE FLEXIBLE EUROPE – (280) Dijon – Packaging
SUEZ – LYONNAISE DES EAUX – (260) Dijon – Water distribution
SUNETEC INDUSTRIES FRANCE – (208) Longvic – Design, manufacture and sale of fuel oil pumps
WESTFALIA – JAPY – (241) Saint-Apollinaire – Food industry equipment
TRW – (240) Longvic – Valves for power steering
ESSILOR INTERNATIONAL – (397) Dijon – Corrective lenses
PAPIERIES DE DIJON – (330) Longvic – Packaging
PARVEX – (300) Dijon – Electronic Servo systems
SANOFI – SYNTHELABO – (300) Quetigny – Pharmaceutical products
SCTP – (Société Nouvelle Construction Travaux Publics) (334) Dijon – Civil engineering

NESTLE FRANCE – (494) Dijon – Chocolate
LABORATOIRES URGO – (515 in Dijon and Chenove) Dijon – Chenôve – Medical dressings
PLASTO – (530) Chenôve – Adhesives for industry and DIY
SPIE TRINDEL – (520) Saint-Apollinaire – Electrical and HVAC engineering
TPC – (508) Saint-Apollinaire – Electronic components

AMORA – MAILLE – (830) Dijon – Chevigny-St-Sauveur – Condiments
KOYO STEERING DIJON SAINT-ETIENNE – (912) Dijon – Steering and transmission for automobiles
LABORATOIRES FOURNIER – (934 in Daix, Chenove and Fontain les Dijon) Daix-Chenôve-Fontaine les Dijon – Pharmaceutical products
SCHNEIDER ELECTRIC – (875) Dijon – Longvic – PLC’s
GROUPE FOURNIER – Groupe fournier is divided into three companies, which have diversified but complementary activities:
LABORATOIRES FOURNIER, specialized in pharmacy for prescription drugs
This field accounts for 70% of the turnover of the group and 65% of the employees
(see Laboratoires Fournier presentation page)
PLASTO, specialized in the transformation of polymers for consumers and industries (see Plasto presentation page)
URGO specialized in first aid care, family medication, wound healing products and traumatology (see Urgo presentation page)

Dijon conurbation – Pharmaceutical products
<table>
<thead>
<tr>
<th></th>
<th>1954 (1)</th>
<th>1968 (1)</th>
<th>1975 (1)</th>
<th>1982 (1)</th>
<th>1990 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>%</td>
<td>Total</td>
<td>%</td>
<td>Total</td>
</tr>
<tr>
<td>Industry and Construction</td>
<td>11,628</td>
<td>38.1</td>
<td>26,908</td>
<td>35.3</td>
<td>29,690</td>
</tr>
<tr>
<td></td>
<td>24,944</td>
<td>28.6</td>
<td>17.6(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary sector of which</td>
<td>18,473</td>
<td>60.5</td>
<td>48,528</td>
<td>63.7</td>
<td>59,955</td>
</tr>
<tr>
<td>Commerce</td>
<td>4,678</td>
<td>11,304</td>
<td>12,135</td>
<td></td>
<td>11,312</td>
</tr>
<tr>
<td>Transport &amp; Telecommunication</td>
<td>4,473(3)</td>
<td>8,740</td>
<td>8,850</td>
<td></td>
<td>9,332</td>
</tr>
<tr>
<td>Banks, Finance &amp; Insurance</td>
<td>525</td>
<td>2,000</td>
<td>2,870</td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td>Trade Services</td>
<td>1,640(4)</td>
<td>7,084(4)</td>
<td>15,340</td>
<td></td>
<td>18,592</td>
</tr>
<tr>
<td>Non-Trade Services</td>
<td>5,781(5)</td>
<td>16,700</td>
<td>20,760</td>
<td></td>
<td>22,712</td>
</tr>
<tr>
<td>Total Economically active</td>
<td>30,556</td>
<td>100</td>
<td>76,212</td>
<td>100</td>
<td>90,180</td>
</tr>
<tr>
<td></td>
<td>90,420</td>
<td>100</td>
<td>108,500</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 13: Employment by industry in Dijon conurbation, 1954-1990

(3) Transport only; (4) Services excluding public services and administration. Incomplete figures for 1954; (5) Includes Public services and administration. (6) Excludes (6.7%) construction. (7) Includes Banks, Finance & Insurance. Note that the different categorisation of services renders it problematic to compare 1954 and 1968 figures with those after 1975.

(Source: (1) Cadet et. al. 1988:44; (2) Agiud 2000)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Employed</td>
<td>Unemployed</td>
<td>Active</td>
</tr>
<tr>
<td>Ahuy</td>
<td>231</td>
<td>226</td>
<td>5</td>
<td>419</td>
</tr>
<tr>
<td>Chenôve</td>
<td>9,035</td>
<td>8,768</td>
<td>267</td>
<td>8,560</td>
</tr>
<tr>
<td>Chevigny-St-Sauveur</td>
<td>2,696</td>
<td>2,631</td>
<td>65</td>
<td>3,476</td>
</tr>
<tr>
<td>Dax</td>
<td>228</td>
<td>222</td>
<td>5</td>
<td>372</td>
</tr>
<tr>
<td>Dijon</td>
<td>68,535</td>
<td>66,390</td>
<td>2145</td>
<td>65,038</td>
</tr>
<tr>
<td>Fontaine-lès-Dijon</td>
<td>2,186</td>
<td>2,135</td>
<td>51</td>
<td>3,439</td>
</tr>
<tr>
<td>Longvic</td>
<td>3,475</td>
<td>3,376</td>
<td>100</td>
<td>3,955</td>
</tr>
<tr>
<td>Marsannay-la-Côte</td>
<td>2,548</td>
<td>2,476</td>
<td>72</td>
<td>2,800</td>
</tr>
<tr>
<td>Neulilly-lès-Dijon</td>
<td>598</td>
<td>583</td>
<td>15</td>
<td>627</td>
</tr>
<tr>
<td>Ouges</td>
<td>613</td>
<td>603</td>
<td>10</td>
<td>411</td>
</tr>
<tr>
<td>Perrigny-sur-Dijon</td>
<td>337</td>
<td>331</td>
<td>6</td>
<td>491</td>
</tr>
<tr>
<td>Plombières-îles-Dijon</td>
<td>878</td>
<td>853</td>
<td>25</td>
<td>815</td>
</tr>
<tr>
<td>Queugny</td>
<td>2,035</td>
<td>1,982</td>
<td>53</td>
<td>3,485</td>
</tr>
<tr>
<td>Saint-Apollinaire</td>
<td>1,631</td>
<td>1,593</td>
<td>38</td>
<td>2,360</td>
</tr>
<tr>
<td>Sennecey-îles-Dijon</td>
<td>386</td>
<td>375</td>
<td>5</td>
<td>446</td>
</tr>
<tr>
<td>Talant</td>
<td>1,797</td>
<td>1,730</td>
<td>67</td>
<td>5,903</td>
</tr>
</tbody>
</table>

| COMADI                       | 97,210 | 94,755 | 2,924  | 101,890 | 93,977  | 7,921  | 106,833 | 95,802  | 11,031 |

| Unité urbaine de Dijon       | Total  | 96,979 | 94,055 | 2,924  | 101,890 | 93,977 | 7,921  | 106,833 | 95,802  | 11,031 |
| City-centre                  | 68,535 | 66,390 | 2,145  | 65,038 | 59,831 | 5,207 | 66,597 | 59,460 | 7,137 |
| Suburbs                      | 28,444 | 27,665 | 779    | 30,862 | 34,164 | 2,714 | 40,236 | 36,342 | 3,894 |

(Source: INSEE and Recensements Général de la Population)

(1) Active Population: Total number of economically active people, independent workers, all salaried and unemployed people (i.e. looking for work / on equivalent of 'job seekers allowance'). (Note that this excludes members of the military.) The 1975 Census included all persons aged between 17 years and age of retirement; the 1982-1999 Censuses Census included all persons aged between 15 years and age of retirement.

(2) Employed: Total number of active population in employment.

(3) Unemployed: Total number of economically active people who are out of work, looking for work (on equivalent of 'job seekers allowance').

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Figure 24: Employment distribution and density across Dijon conurbation, 1975

(Source: Documentation Agence Intercommunale d'Urbanisme)

Figure 25: Employment distribution and density across Dijon conurbation, 1990

(Source: Documentation Agence Intercommunale d'Urbanisme)
Figure 26: Distribution of employment and population density 1990-1999

NB. ‘Employment’ refers to the number of jobs per Km²
(Source: adapted from Baumont and Bourdon 2002a:10-11)
Table 15: Area of employment by location of residence in Dijon conurbation, 1975 – 1999
(Sources: Agiud 1999a; (1) Recensement Général de la Population)

<table>
<thead>
<tr>
<th>Employment by location of residence</th>
<th>1975</th>
<th>1982</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of economically active persons in COMADI</td>
<td>91,319</td>
<td>90,925</td>
<td>92,917</td>
<td>111,028</td>
</tr>
<tr>
<td>Total number of economically active persons working within COMADI</td>
<td>84,777</td>
<td>82,079</td>
<td>83,704</td>
<td>-</td>
</tr>
<tr>
<td>Total number of economically active persons working outside COMADI</td>
<td>6,542</td>
<td>8,846</td>
<td>9,213</td>
<td>-</td>
</tr>
<tr>
<td>Total number of economically active persons resident outside COMADI but working inside the conurbation</td>
<td>13,905</td>
<td>21,238</td>
<td>29,020</td>
<td>-</td>
</tr>
<tr>
<td>Total number of economically active persons resident outside COMADI but working in outskirts of conurbation</td>
<td>9,579</td>
<td>14,914</td>
<td>20,103</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 27: The COMADI’s commercial poles, 1993
(Source: CCI)

Figure 28: The COMADI’s commercial poles, 2001
(Source: CCI)
Figure 29: Conversion of office buildings in Dijon city-centre, 1982-1992
(Source: AGIUD)
<table>
<thead>
<tr>
<th>Area of City</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBD % of CBD</td>
<td>% of COMADI</td>
<td>% of CBD</td>
</tr>
<tr>
<td>Northern Urban Pole</td>
<td>Narrow Urban Pole</td>
<td>Southern Urban Pole</td>
</tr>
<tr>
<td>Construction</td>
<td>1.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Industry</td>
<td>9.0</td>
<td>8.8</td>
</tr>
<tr>
<td>Services</td>
<td>88.0</td>
<td>34.4</td>
</tr>
<tr>
<td>Total Employment</td>
<td>18,270</td>
<td>15,157</td>
</tr>
</tbody>
</table>

Table 16: Employment by Industry in Dijon city areas 1990-1999

Note that these areas are specifically defined according to the type of methodology used, which in this case is based on spatial econometric techniques. However, see Baumont et al. (2004) for a discussion about the variation in findings and the different weights assigned to the different spaces when using exploratory spatial data analysis techniques used to classify the city spaces instead.

(Sources: adapted from Baumont et al. 2003a)
Discussion: Detecting Micro-Macro Patterns of Change

There is clearly a lot more that could be said about change and continuity in York and Dijon drawing upon various official statistics to tell us a story about ‘what happened when?’ in these places. We could have explored floor surface area and the types of industry that have literally filled up the urban land to learn about which industries are moving where and perhaps, in turn, explore why those industries are moving to those places. Alternatively, we could have examined the micro-spatial changes in types of sale in and out of the city centre in order to explore the extent to which local consumption patterns have changed in type relative to space. Simple counts of the units of construction by type of industry would also have allowed us to literally consider the ways in which our two cities have been built differently over the recent decades also. We could have considered the demographics of the cities, such as the changing age structure of the population, the changes in male and female percentage of full-time and part-time employment, the proportion of lone-parents, etc. and considered each of these aspects spatially over time too. All this secondary data is available primarily through the national censuses and administrative statistics; some of it was also collected for this research.

I have presented a general overview of the population levels and socio-economic change that has taken place in these cities; much of it was to be expected given the global nature of these transformations. However, in so doing, I have also attempted to show that even for expected trends, the ways in which different patterns of change and continuity emerge vary according to the level of observation adopted. That is, I have illustrated the importance of breaking up large aggregate, macro-level zones into smaller case-study micro-zones as a way of allowing for a more in-depth understanding of what may be occurring behind general trends such as ‘an overall population increase.’ More often than not, zooming in closer to the micro-level reveals a more dynamic and nonlinear interpretation of local events.
Indeed, from a policy point of view, it becomes especially important to know about the micro-level nonlinear dynamics of change behind what often appear as linear macro-level trends. This is because where change occurs quantitatively and qualitatively in relatively significant proportions, this often indicates that a system is undergoing the relatively volatile phase which occurs before a phase-shift – the chaos before the order in complexity language (Casti 1994; Cohen and Stewart 1994; Goodwin 1997/1994; Kauffman 2000; Prigogine 1997; Prigogine and Stengers 1984). During this period, the system is more easily ‘moulded’ to bring about desired change. Take, for example, a relatively young area of a city. Building, say, reasonably priced housing in these young areas will almost inevitably attract new households to live in them; setting up a school is likely to attract family households etc. Areas such as Quetigny, Ahuy, or la Toison d’Or in Dijon, for instance, presently show immense potential for future prosperous development.

Conversely, however, a mistake in the early stages can negatively affect the area and surrounding neighbourhoods for decades to come. This can be seen in the case of the Grésilles, for example, in Dijon, where city planners are faced – and indeed have been since the 1960s – with an almost impossible situation of unravelling the combined (and complex) effects of poverty, unemployment, drugs and addiction, crime, regular sabotage and adolescent delinquency, ethnic segregation. The fact that the tower blocks house hundreds of households packed closely together – producing ‘a town within one building,’ as one key informant put it – further complicates the task of loosening the tangled interactions of cause and effect. In other words, the degree to which agents can impose change upon these younger, more dynamic spaces is often greater than for those more robust (often older) areas. Hence, studying aggregate-level observations juxtaposed with micro-level descriptions allows for the macro-micro interactions to be explored. Whilst clearly they each effect one another, at least if we begin to build up a picture of these interactions we may also begin to untangle the reasons and causes behind why the observed changes appear.
That said, when it comes to obtaining quantitative measurements of a dynamic entity over time then we will inevitably confront issues such as the ones encountered here in relation to the York’s city boundaries. Nevertheless it is important to bear in mind that the thing we are trying to measure is still (something of) that thing that we might also have measured in the past. The very fact that longitudinal comparisons are attempted at all despite the difficulties suggests that, at some level, there is a recognition that something of that thing continues to remain in the present (Auyang 1998).

The problem is when a thing changes qualitatively as well quantitatively. It then becomes increasingly difficult to know what to measure. Think about a caterpillar, for example, which is very different from the butterfly it becomes. Yet it nonetheless continues to remain part of the life-cycle of that thing which is identified as a caterpillar or as a butterfly. So long as we recognise that a) the caterpillar and the butterfly are intrinsically related to one another, b) we recognise that whilst related, they are also qualitatively different, c) we adapt our methodological approach to studying either of the caterpillar and/or the butterfly, then we can, potentially at least, learn a lot about the ‘How?’, ‘When?’, ‘What?’ and ‘Why?’ about each of these things. And so it is with cities and urban regions, except of course that we must also account for reflexivity within the causal dynamics that produce them. But the point is the same: we are dealing with complex entities, which undergo radical qualitative change.

The very fact that in York there have been so many changes to the number of wards, the names of the wards, to the city boundaries themselves, etc. reflects something of the methodological challenge that researchers face in exploring the complexity of social life. The point, I argue, is to build up a series of different representations in much the same way as a hologram is built except that here we are using multiple different images, which is as it should be considering that we are dealing not with three-dimensional entities (as in the case of holograms) but n-dimensional entities (as in the case of social life). In the next chapter, I adopt a very different approach to studying our two cities, namely the use of photographs and other visual sources. As we will see, this very different method offers us quite a different representation of change and continuity in these two places.
Chapter 7 considered a quantitative representation of change and continuity of York. This chapter puts the visual back into the urban and explores change and continuity using maps, photographs and other images. It summarizes not only how the images have been used but also what is learnt about change and continuity in York and Dijon through using them. As we will see – and seeing is meant literally here – from a complex and critical realist perspective on the social, the use of visual representations provides a methodologically important way of studying complex places. After all, this approach assumes that that we are dealing with multi-dimensional causality as well as the issues of agency. We must assume, therefore, the possibility that causal mechanisms and agency may be empirically available to us through different dimensions of the emergent social world. Images allow us to explore both these things. On the one hand, they can offer partial descriptions of actual changes as they are available to us empirically. On the other hand, the images also offer us clues as to where agency may lie and where the forces driving the generative mechanisms behind these changes may be. Hence, this chapter also highlights the need for multiple methods for researching the social world because were it not for this visual examination of York and Dijon, the extent of the continuity in certain pockets of these cities would probably have been missed altogether. Yet, as will be discussed, the implications of this added aspect to York and Dijon’s evolution are particularly important to how we might understand urban change more generally.
In sum, this chapter aims to tell a ‘then and now’ story about York and Dijon. It illustrates the ways in which parts of the cities were then in the past and how they look now in the present. It highlights visible changes and visible areas of continuity. It shows that change is dramatic both in quantity and quality in some areas of York and Dijon yet in other areas, it is as though time has stood relatively still. In turn, it argues that whilst change may be an intrinsic feature of modern urban form, it would appear that continuity might also be. For instance, from the maps and other images, we see similar patterns of change in York and Dijon: both urban regions have spread outwards, the city-centre streets have changed less than the outer-city suburbs in both cities, both York and Dijon have streets, buildings and monuments that have stood the test of time whilst their surroundings have altered more or less significantly. We also see differences: there is an overall impression that there are more areas of continuity (that are captured through the available photographs and postcards) in York than there are in Dijon.

I draw conclusions about York and Dijon from the images based upon two overlapping levels of thought. On the first level, thinking about what the images actually show, I obtain simple descriptions of the way the cities were in the past and how they are in the present. I do this very simply by comparing past and recent images, be they maps, photographs or other graphical representations. To this extent, I take the images as representations of the cities at particular time-slices. On the second, more abstract, level, I comment on the photographs as social constructions. This means that the images are seen as representational traces (Byrne 2002) of the built environment that actors have deliberately produced, collected, preserved and archived as if they were ‘precious documents.’ These documents are not only the products of one actor intending to capture something of the time and space which he or she experienced, but of many actors intentionally acting to preserve and archive them over time as well. Moreover, the whole process of image construction, production and preservation is carried out within a specific cultural context which itself is located within time and space. This second perspective considers, among other things, the construction of the images in terms of the possible levels of agency that they represent.
Both these levels help us to obtain important information about the ways that York and Dijon evolved in the past and how they may continue to evolve in the future. Whereas the first level provides what is essentially a descriptive understanding of change and continuity, the second invites the researcher to raise explanatory questions about these descriptions. Combining both levels opens up the possibility of obtaining causal explanations of the dynamic and evolving complex social world which are valid at the level of cause and meaning. The chances of forming an adequate and valid understanding of change and continuity are further increased when we consider the observations along with the quantitative representations of the previous chapter. Moreover, as we will see in Chapters 9 and 10, both the findings of statistical data and the images become even more interesting in light of the sorts of things that the children voice about each place also.

This is a three-part chapter and it is organized according to the different types of visual sources that were drawn upon, systematically reporting the main observations derived from each type. Interestingly, the different types of visual sources can themselves be organized in terms of what they highlight. That is, some types of images highlight the issue of change more than they do that of continuity, and vice versa for others. Hence, I have grouped the images according to these two broad themes. Thus, in the first part of the chapter, the focus is on change, namely as it is represented through aerial photographs and maps. In the second part, the focus is on continuity as it appears through old and recent ground level photographs and postcards depicting areas of the city-centre. The first level of thought drives these two parts inasmuch as I provide simple descriptions of the contents of the images. The third part of the chapter considers the significance of the contents with respect to thinking about the images as representational traces of attractors in sight.

It is important to note that the images used to document this chapter do not, nor are intended to, reflect all the visual materials that I have studied whilst in the field. Instead, the images included here must be thought of as an unrepresentative sample of examples of the sorts of images that have contributed to my thinking about change and continuity in York and Dijon rather than show the complete collection of visual
sources that have shaped it. The reasons for this are primarily to do with the practical problems involved in reproducing the images that were accessed. Most of the maps are simply too cumbersome to include in the body of the text. Similarly, whilst I was able to examine old and new photographs of the cities, for most of them, I was not able to scan or photocopy them for conservation reasons. Nevertheless, enough material has been included to illustrate both the methods employed, the observations inferred from them, and the way that they contribute to my overall argument regarding the methodological implications involved in adopting a critical realist and complex systems perspective to urban change.

**Focusing on Change**

This first part groups together two types of visual sources: aerial photographs and maps. Both types provide excellent top-down perspectives of the spatial ground below. They offer a view of the ways that the urban spaces of York and Dijon have changed. Their strength lies in capturing an overall understanding of the shifting, expanding boundaries that demarcate the two cities. Indeed, where the urban and is and where it is not is what becomes most visible through these images. In contrast to the spaces indicated by administrative boundaries, which are always imposed as a result of local socio-spatial change that has already occurred, aerial images and maps present a picture of what the city spaces actually are from a particular view point at the time that these documents were produced. They provide, therefore, an understanding of the whole city space, which whilst not containing the detail that other measurement systems allow, offer a somewhat less reified representation of that social entity which is ‘York’ or ‘Dijon.’ Let us consider each type of document in turn.

**Aerial Photographs**

Aerial photographs provide excellent macro-level spatial images of the landscape and compared over time, they give us a unique representation of the aging city region. Unfortunately, however, aerial photographs are relatively expensive to produce and not readily available to the public. Therefore, I was very much dependent on the few that
were available to me. In this chapter, there are more examples of aerial photographs of York than of Dijon. However, during the fieldwork, I not only had access to more aerial images of Dijon but in terms of this research, they were also more informative for Dijon than for York. This is partly because the York aerial photos were not as easily comparable with one another, partly because they tended to focus on the Minster (see, for example, Figure 30) or on particular sections of the city (see, for example, Figure 31 and Figure 32) rather than the general cityscape, and partly because I simply had less of them to look at. Even so, those that were available still present us with important information.

In terms of obtaining a description of form from the images, we can see, for example in Figure 33, York city-centre taken in the early years of the twentieth century. This is a picture of York, which has as its focal point the Ouse River. It is taken from above the city just outside the City Walls near St George’s Field. The River Ouse runs through the city, essentially splitting the city-centre into parts; in terms of important landmarks, we have the Minster to the north of the river (which features in the right-and corner of the frame of this photo), and the railway station to the south of the river (which does not actually feature in this particular image). Although there is no physical photographic evidence of the same viewpoint representing the city as it appears to us today, it is still possible to envisage what a modern image might highlight. The additional buildings that have appeared in York since the photo was taken would certainly be captured. Likewise, the lack of motorized traffic congestion in the photograph shown in this image stands in stark contrast to what a modern day picture would show. (Indeed, it is something of an irony that the early twentieth century photo highlights two bridges, Skeldergate bridge in the foreground and Low Ousegate. These are two of three very important bridges in York city-centre and around which much of the local traffic system is based. This image shows off the sheer lack of traffic that circulated these bridges compared to the regular traffic jams that these bridges witness every weekday rush-hour.)
Two other aerial images, shown here in Figure 34 and Figure 35, portray more of the general city. One is taken in the early 1900s (Figure 34) and the other in 1999 (Figure 35). Although these are not directly comparable with one another because they are not taken from identical viewpoints, and indeed, strictly speaking the earlier photo shows only a portion of what is captured on the later photo (i.e. the portion sectioned off by with River Ouse which also shows the Minster), it is still apparent from these images that there has been a vast amount of construction work in York over the past one hundred years. According to the 1900s image, Tang Hall and Osbaldwick housing estates, which are important residential areas in today’s York, had not yet been built. In contrast, by 1999, we see quite a different version of York, which depicts the city space within York Inner Ring Road, and thus includes not only Tang Hall and Osbaldwick, but also areas such as Heslington, Fulford, Clifton and Huntington.

We see a similar development when we look at the Dijon aerial images. I had access to about five different large wall sized Dijon aerial photographs, which were part of a series of images taken at different points in time, from around the 1950s to around 1996. They provided an excellent way of tracking physical change from a macro-level perspective. Unsurprisingly, what is most visibly captured through these pictures is – as in York – the growing city space along with the diminishing green land of fields and forests. (I will come back to this point later with reference to the observations made from the maps.) The images had been mounted for an exhibition specifically about Dijon’s local urban evolution but many now decorate the walls of the offices of l’agence d’urbanisme dijonnaise, including many of key informants’ offices, which was how I came across them. These images form the basis of my findings about Dijon through aerial images. However, they are not the ones included as examples in this chapter because of the practical issues involved in obtaining copies of these particular images. Thus, ironically, despite these being more readily available to me and being more informative, it has not been possible to provide examples of them all here. That

67. The exhibition was conceived and organized by ICOVIL and AGIUD respectively and was held at La Maison de Cariatides, 28 rue Chaudonnerie, Dijon, in 1996.
68. The original versions of these photographs are held in archives that I was not able to access and I was told that even if I had gained access I would not have been able obtain copies, either because of copyright legislation or strict rules concerning the preservation and conservation of historic materials.
said, some of the images were reproduced in two small books: *Dijon: Histoire Urbaine* (1999) and *Dijon: Toutes les Epoques* (2000) so I have used what I can from them also.

Zooming in a little closer to look at the skyline of rooftops of the cities also provides another useful representation of change in these places Figure 39, Figure 40 and Figure 41. Again, this perspective suggests that York and Dijon have grown in similar ways. The differently aged rooftops show the way the more modern physical infrastructure has been added within and especially around the older historic original city contour. The contrast between the old and new from this perspective is more noticeable in Dijon than in York. This is for two reasons. On the one hand, Dijon’s old rooftops are very much red in colour and stand in stark contrast next to the new buildings which are mostly white and pale. On the other hand, York planning permissions are such that new buildings that are added to the older city space must (at least attempt to) ‘blend in’ with the old yellowy stone of the Minster and Walls.
Figure 30: Aerial Image of York, focus on the Minster
(Source: http://www.yorkarchaeology.co.uk/piclib/photos.php)

Figure 31: Aerial view of York’s Rowntree’s factory, pre-1930.
Wigginton Road, busy with factory workers, is in the foreground. (Source: Imagineyork.co.uk)

Figure 32: Aerial view of York’s Marygate, around 1930
The River Ouse is at bottom right corner of the frame. The church in the centre is St Olave’s on Marygate. (Source: Imagineyork.co.uk)

Figure 33: Aerial view of York city-centre, early 20th Century
(Source: Imagineyork.co.uk)
Figure 34: Aerial view of York, taken in the 1900s
The River Ouse runs along the right edge of the frame. On the top left is Hull Road, just below is the road to Osbaldwick. Note that this image shows only the Minster portion of York city compared to the image below, which also displays the city on the other side of the River. (Source: Imagineyork.co.uk)

Figure 35: Aerial view of York, July 1999
The river Ouse runs through the middle of the frame, splitting the Railway station, which situated to the left of the river, and the Minster, which is to the right of the river. (Source: Global Mapping Ltd.)
Figure 36: Map of York showing outer (in green) and inner (in red) ring roads

By comparing this map with the above aerial photos of York, we can better understand the growing urban areas showing in the photos. (Source: Crown Copyright Ordinance survey: An EDINA Digimap/JISC supplied service)

Figure 37: Port du Canal, Dijon
What is interesting, however, is that both cities have in fact made distinct efforts to preserve the old, as if to protect it against the new. Both have a particularly historic centre, which is encircled by an inner ring road, which itself is held within an outer ring road. More specifically, in Dijon, the highly protected old city-centre was officially designated as ‘l’espace sauvegardé’ in 1966; the term literally means ‘the area saved and guarded.’ One insider from l’agence d’urbanisme informed me that nowadays ‘planning and construction permits are near to impossible’ within this area and have been for four decades. Officially, construction work was forbidden by 1971 within this ancient centre and for the 3,000 buildings that also have special heritage status, there are also strict regulations limiting any possible future reconstruction or renovation work.

Conservation efforts in the city-centre have rendered transport and access to and within a particularly contentious issue within local politics. Slowly but gradually, some important main streets within l’espace sauvegardé have become almost entirely pedestrianized. By the mid-1990s, around 58,000m² was reserved solely for
pedestrian use (Cete De Lyon Pour Le Certu 1997). This took place over three decades but three important stages leading to this situation were: 1973 with the market area, 1978 with the rue de la Liberté, and then between 1992-1993, a main north-south bus lane (Bosquet-Godrans/Château-Chapeau Rouge) was constructed and many of the pavements were widened (Cete De Lyon Pour Le Certu 1997). Similarly, during this time, immediately outside l’espace sauvegardé, important factory related constructions were converted to flats and city housing as many industrial and commercial sites move to the outskirts. Specifically, the area of le Petit Citeaux appears between 1975 and 1980, the large area of Clemenceau from around 1977, the much sought-after area of Port du Canal (Figure 37) from 1980.

Moving still slightly further out from l’espace sauvegardé, dozens of tall tower blocks dominate Dijon’s skyline (see Figures40-42). Many of these towers are part of the ‘grands ensembles’ of social housing, such as the Grésilles, Chenôve, la Fontaine-d’Ouche, Talant, etc. which were built primarily from the late 1940s through to early 1970s as the answer to the housing crisis resulting from the widespread immigrant population. We see, for example, the huge Billardon tower built in 1956, which alone accommodated around 875 people; then came the Epirey, the Lochères, Paul-Bur, Réaumur, etc., all part of the Grésilles. Other towers mark the large industrial zones, which begin to appear in the late 1950s and are still growing today, the most important of these being St. Apollinaire, Quétigny, Chenôve, and Longvic (see Figure 42) (Cadet et al. 1988:22).

It is fitting that these towers mark their presence in amidst the skyline of old and new rooftops. They are symbolic of more than simply the extensions of the city-centre but of the ‘edge cities’ that Garreau (1992) describes. To the west of Dijon, Fontaine-d’Ouche, for example, took in its first residents in 1969 and today houses over 13,000 people. Like the areas of the Grésilles, Mansart, and the Bourroches, Fontaine-d’Ouche has its own ‘mairie’, commercial centre, school groups, etc. and is aptly referred to as ‘a town within the town’ by one of the local key informants.
Overall housing in Dijon has increased considerably since the early 1970s. According to the AGIUD (1999b) between 1971-1980, an average of approximately 2,100 residences a year were built. These were mostly to do with the 'grands ensembles' of towers built on in the suburbs of Dijon as a rapid response to the large housing problems Dijon was having at the time, primarily due to the large influx of immigrants to the region. Housing construction slowed down between 1981-1990, with approximately 1,300 residents per year being built. Since 1991, the rate of housing construction has yet again increased with approximately 1,860 residences a year being built, the most important type being small lodgings as a response to the increasing student population entering the region.

Essentially, two main types of urban policy have shaped the residential pattern of modern Dijon (Baumont and Bourdon 2002a). The first in the early 1960s was mainly as response to the rapid economic and demographic expansion following WW2 'where land-use zoning and gigantic proportions were the rule: residential districts in some places, large industrial or commercial areas in other places and major public services and urban amenities in some other places' (Baumont and Bourdon 2002a:9). The result was the development, on the one hand, of large high-rise social housing (e.g. in Fontaine d'Ouche, Talant, Chenôve and Quetigny – see images of some of these areas in the next chapter) and, on the other hand, the main industrial and commercial districts in the North in Chenôve and in Quetigny (Baumont and Bourdon 2002a). The second type of urban policy, the Conservation and Improvement Area Plan, instituted by the Malraux Law in 1962 as if a response to the first type of policy, was aimed at preserving the Vieux Dijon, i.e. 295 acres in downtown Dijon (the largest French conservation area) corresponding to the medieval town. This area hosts many major administrative buildings (e.g. Dijon City Hall, COMADI Council, Regional Council, Prefecture, etc.), Notre Dame Cathedral and other churches, the covered market and many old buildings with rich architectural features.

69 See Baumont and Bourdon (2002a) for further details of these urban development plans.
In York, the aim has been of a similar nature inasmuch as there has been a concentrated effort by planners to preserve the old historic image of the city. Like Dijon, York’s city-centre has become increasingly pedestrianized (see Figure 43) to the extent that today it claims to be one of the largest pedestrian zones in Europe. This has been achieved largely due to planners following Lord Esher’s (1967) influential report on the conservation of the historic city which laid down five main objectives: a) the commercial heart of York should remain alive and competitive; b) The city space
Figure 38; York skyline of change and continuity
(Source: www.dcs.napier.ac.uk)
Figure 40: Dijon skyline of old and new, around 1998
View taken from Phillipe le Bon Tower.
(Source: postcard produced by Alliance carterie)

Figure 41: Dijon skyline of old and new rooftops, 2002
View taken from Phillipe le Bon Tower.
(Source: Uprichard)
Figure 42: Aerial views of some of Dijon's 'edge cities'  
(Source: BP-LD IMATEC cited in Frizot)
should be an attractive place to live in for families, students, single people, and the retired; c) land which conflicts with these aims should be removed or altered; d) the historic character of the city should be conserved and where possible economically self-conserving as well; e) within the walled city, construction of anything but the highest standards should cease (Nuttgens 2001:334-335). Another of Esher’s proposals was ‘that no building should be erected in York with a roofline higher than the aisle of the Minster’ (Nuttgens 2001:335). (The schoolchildren in York were aware of this last proposal also.)

Large-Scale Maps

A more commonly used form of spatial imagery, and certainly the best alternative to aerial photos for a bird’s eye view of the landscape, is of course the map. Here, we look not to numerical description to inform us of the changes over time but to pictorial representation of what is there at different time points. Maps were available for both cities and also relatively cheap to obtain. Although they are not produced at regular time intervals, the ones I had access to nevertheless provided important information about the general spatial change that had taken place when comparing one map with one another. Different observations were made possible using the different scales available. I compared street plans of the city-centres, which show building for building,
street for street how the physical environment has changed, which are discussed in the next section. The specific dates and scales were recommended to me by York City Library and l’Institut Geographique. For York, the first map was dated 2000 and was at the scale of 1:25,000 (Ordinance Survey 2000b); the second was dated 2002 at the scale of 1:50,000 (Ordinance Survey 2002); for Dijon, the dates were 1980 (Institut Géographique Nationale 1980), 1987 (Institut Géographique Nationale 1987) and 2001 (Cartographie Agence Intercommunales D’urbanisme 2001) all at the scale of 1:25,000.

From these large-scale maps, there are three main findings worth noting. Firstly, the overall change in the landscape is especially noticeable outside the immediate city-centre with the core city space appearing to gradually ‘grow’ outwards at the expense of the surrounding green-land. The city gets bigger and the green spaces become ‘engulfed’ by buildings and concrete: the process of urbanization is real and there to be easily seen in the maps shown Figure 45 and Figure 46. In York, less than one-fifth of the population now lives inside the walls. Immediately following the Esher Report (1967), a relatively important expansion of housing took place within the walls (from 2,500 to over 6,000) but since the 1970s most of the housing development has been on the edges of the city walls or in nearby villages (Falk and King 2003:12). This trend is set to continue. Among many other smaller plans, two particularly important sites of future construction are: York Central shown in Figure 44, a brownfield developable area of about 30–35 hectares (equivalent to around one-third of the size of the city) to the west of the railway station; and Joseph Rowntree Foundation’s plan for a 217,000m² housing development of approximately 550 homes in New Osbaldwick on the east edge of the city (Joseph Rowntree Foundation 2001).
Similarly in Dijon, the growth reflected in the aerial photographs is shown more graphically through the maps. Thus we see the addition of relatively large clusters of built-up areas around the core city from the 1940s onwards. Like York, development plans are expected to continue outside the core city-centre, particularly in the areas of St Apollinaire, Quétigny, Chevigny, Sennecy, and Longvic; Talant is expected to absorb most of the future housing plans.

To some extent, the growing urban space is an intrinsic feature of modern city development and was of no great surprise. However, the second main finding was surprising to me. When looking at urbanization process in both places, we notice that there is a lack of any particular order to the growth of the urban space. Indeed, the extent to which there is no clear pattern of growth is significant. As Ball (2001:243) remarks, ‘[i]n spite of the efforts of planners to impose a simplistic order, most large cities present an apparently disordered, irregular scatter of developed space, in which residential areas, business districts and green areas are mixed haphazardly.’

Figure 44: Future growth: York Central
construction site, west of train station
(Source: Falk and King 2003:25)
We might have expected that the urban growth would be evenly spread around the whole city but this is not the case. Or perhaps the ‘urban branches’ that had ‘sprouted’ would have grown at an equal pace? Yet this is not the case either. The maps show that some parts of the outer city landscape spontaneously appear, as if from nothing. What starts as a little speck on the map, which might be a hamlet or a small neighbouring village, later turns into larger spaces, which are unmistakably urbanized and connected to the inner core city—often through one clearly visible road. Of course, this might simply be akin to a visual effect that is due to the maps not adequately capturing the rate of change over time.

It might be argued that if the maps depicted the landscape, say, at six-month intervals, the gradual incremental change in the outer city landscape would be better captured and this seemingly ‘spontaneous’ growth would not be observed. This may be the case. However, others have also argued that the urbanization process involves an irregular organic growth (see Batty and Longley 1994) that cannot be easily described whereby ‘[l]ocal areas of development commonly spring up around the verges of the city, creating little satellite clusters of population’ (Ball 2001:247). Therefore, although more maps taken at smaller time intervals may show less dramatic changes and also lessen the extent to which spontaneous growth seems to appear, it is nonetheless likely that all this would do is provide a sort of ‘slow-motion’ effect of the irregular but rapid change in some areas and the slower, smaller, more restricted change in other areas.

This leads us onto the third main finding which is that this ‘irregular organic growth’ appears to be very much like the fractal patterns described by a number of authors writing about complex systems, including those describing urban patterns of growth (see, for example, Batty and Longley 1994). Kelly and Allison offer a simple but useful explanation of these complex patterns. ‘Fractal structures,’ they write, ‘are those in which the nested parts of a system are shaped into the same patterns as the whole.’ Cities and urban regions certainly seem to be fractal in character, as Pumain explains more fully:

[the urban space] is fragmented, self-similar in the sense that the same patterns, like the dilution from a centre towards a periphery, can be observed at several
scales, and hierarchical, including many more small centres than large ones, as well as a [sic] many more small narrow roads than very large ones, or many more urban squares than very large plazas. The same differentiation processes have produced more or less gradients in building, population and activities densities around the centres towards the peripheries, at local scales as well as at regional or higher scales, according to various degrees of accessibility.

(Pumain 2003:11)

With fractal systems, the fractal dimension\(^{70}\) remains the same throughout the growth process (Ball 2001) – as the city extends outwards, the density of the new urban clusters remain the same as the older parts of the city. And indeed, it would seem that the large-scale maps and the street-plans resemble and differ from each other according to these rules of self-similarity also. For instance, although brand new areas spring up at certain parts of the extremities of the older urban space that already exists, and although the actual building work may be fashionably different looking and even serve new purposes, in terms of the street layout, there is very little difference between the old and the new. In addition, as I now go onto show, in terms of some of the actual spaces in the city-centres, there is also very little difference between the old and the new.

**Focusing on Continuity**

Much of the literature about contemporary social order focuses on understanding and describing the radical changes that have taken place over the past three or four decades. Bauman (2003:3), for example, argues that ‘change [in modern cities] is so profound and the pace of change so mind-bogglingly quick, that we can hardly believe our eyes and find our way amidst once familiar places.’ And indeed, so far, the issue of change has also been much the focus in the thesis. However, based on observations drawn from images that capture the city from a ground level perspective, I argue that this is not the whole story. What has so far been neglected or overlooked is that some things appear not to have changed very much at all. It is precisely this contrast between what has changed and what has not changed that I want to draw attention to in the remainder of this chapter.

\(^{70}\) See Glossary in Appendix A.
Figure 45: York's urban evolution, 1853, 1929, 2003
(Source: Falk and King, 2003:11)
Figure 46: Aerial images of Dijon’s urban evolution, 2nd Century to 1962
(Source: Ville De Dijon 2000:4-5)
To be clear, I am not suggesting that ground level changes have not also been dramatic. Spatially, some changes have also transformed areas of most modern cities. Socio-economically, York and Dijon are new places compared to what they once were fifty years ago and the new landscapes on the outskirts of the cities reflect this metamorphosis.

In Dijon, for example, despite efforts to minimize the construction of, what were described by one key informant, as ‘cardboard shoe box shopping centres and office complexes’, this went ahead anyway. Thus, like many of France’s towns and urban regions, we find large retail complexes such as ‘Casino Géant’ and ‘Bamboo’ (see Figure 47, Figure 48 and Figure 49) scattered around the outer area of the city. Similarly, in York, large shopping and leisure complexes, such as ‘Clifton Moor’, ‘Monks Cross’ and ‘The McArthur Glen Designer Retail Outlet’ have appeared over the past twenty years. Moreover, the growth has not stopped but has become intrinsic to the general character of the modern city. All but two groups of children interviewed considered the vast amount of construction going on around them, particularly housing construction, to be part and parcel of the city character – as one child put it, ‘it’s like they’ve been building for ever.’ But these modern contraptions are in fact brand new relative to the history of the cities. In contrast to the children who saw the construction as part of the city, almost all the adults I approached during the fieldwork seemed almost overwhelmed by what they saw around them.

In terms of the physical infrastructure, some streets and buildings have hardly changed at all for over a hundred years. The fact that some spaces have remained ‘frozen’ in time is important, particularly amidst all the change. As Miles et al. (2000) note, contemporary urban form is not just about change:

To talk of the postmodern city, the post-industrial city or the electronic city is to mythologize a transformation that in reality is far less complete or apparent and which is far more mundane than might be somewhat imagined. To outline grand transformations or universal models of future cities is as reductionist as it was to imagine all industrial cities conformed to Burgess’s concentric zone model earlier this century. It is more helpful, and a far closer approximation to
reality, to think of the diverse trajectories different cities are taking and to realise that even within individual cities these trajectories of urbanisation will have distinctly different impacts in different places. [...] While there are many ‘new’ cities and spaces emerging around the world it is worth remembering that many old cities and spaces also remain. (Miles et al. 2000:4, italics added)

I argue that this is the case in York and Dijon where there are areas that have remained steadfast throughout the spatial and socio-economic changes around them.

**City Street Plans**

The street plans of the city-centres show building for building, street for street, how the physical environment has changed. For York, the street plans used most were dated 1847 (Joseph Rowntree Foundation 2001) and 2000 (Ordinance Survey 2000a); for Dijon, they were dated around 1960 (Publicité 1960?) and 2000 (scale 1:16,500. Blay-Foldex 2000?). There are two main observations I want to highlight here. Firstly, with regards to the local layout of buildings and streets in both York and Dijon city-centre as presented in the city plans, there is hardly any change at all over the past century. Physically, there is a real sense that the centres have been frozen in time.

Secondly, there is a distinct pattern of punctuated equilibric change and continuity that is shared in both cities. More precisely, three particular time points stand out: the mid-1950s, the 1970s, and mid-1990s onwards. At these points, change ‘jumps out’ from the continuity that otherwise sets a precedent. In the mid-1950s, some buildings merge together, others are demolished to widen some of interconnecting alleys and snickleways. This is then followed by another period of relative stability until the 1970’s when relatively huge areas are
Figure 47: Dijon's Casino outer-city retail outlet
(Source: Uprichard)

Figure 48: Dijon's 'shoe-box' outer city-centre buildings
(Source: Uprichard)

Figure 49: Fontaine d'Ouche shopping centre
(Source: http://www.dijon-fontaine-ouche.com/html/parking.htm#batiment)
completely destroyed, and they are done so for the sole purpose of car parking. Through the 1980's and 1990's the car parks that had already been laid down expanded; a few small ones were added. In Dijon, for example, between 1975-1995, we see the construction of five important car park facilities: the Dauphine, Clemenceau, Condorcet, Grangier, and the parking de la Trémouille. The earlier mid-1950s changes are minimal next to what happens in the 1970s but looking back, they seem to signal that further change was imminent along that path.

Afterwards, only small renovations take place, such as pavement re-fitting or the front of certain buildings being modernised a little, except that is until in mid-2004 in York, when a relatively important portion at the corner of High Ousegate and Coney Street, was demolished (see Figure 50). Whereas previously, the need for car parking was a sufficient reason for the destruction of city centre physical space, in the current climate, it is worth demolishing this area for thirteen residential flats and six small shops and/or food and drink units – an event symbolic perhaps of the price / ‘currency’ (see Chapter 9) of change in the city centre.

Figure 50: Making room for flats and leisure units in Coney Street, York, 2004

71 This finding is identical to what I found in 2000 during my MA Dissertation on change in Darlington.
Ground Level Photographs

The reader will notice that this section only includes images of York. However, it is still important to think of the images as examples of the images of both York and Dijon that I observed during the fieldwork. The main reason that only York images are presented here is that I have selected images that: a) were easily reproduced for the purpose of the thesis (i.e. copyright issues or scanning or photocopying difficulties were easily overcome); and b) facilitate the direct comparison of local spaces (i.e. images depicting a street taken at roughly similar vantage points over time were preferred to images depicting the same street but from different vantage points). These two criteria eliminated much of what I could meaningfully present for Dijon. Although these kinds of images exist for both York and Dijon, the nonlinear nature of the research process along with the practical issues involved in cross-national fieldwork made the images that I was after more difficult to obtain in Dijon than in York. Some of the Dijon images that were collected are included in Appendix G in which I also briefly describe the specific problems that I confronted. Those knowing Dijon will recognize the local spaces from the old photos, suggesting as this section argues, that many city-centre spaces have remained remarkably similar over the past century. All that said, let us look at some of the pockets of continuity in York.

York is famous for its historic image, and as we will see in the next chapter, the local schoolchildren were very sensitive to this portrayal of the city. The place certainly has a wealth of historic buildings and streets to show off to its visitors. The Minster, Clifford’s Tower, the Bar Walls, its city-centre streets (e.g. the Shambles, Stonegate, Petergate, etc.), the castles, the abbeys and the churches are but some of the icons with which York sells itself through the thousands of WebPages, local guidebooks, and postcards. Past photographs of almost all of these historical sites have been taken and are now stored in the city library archives. Thanks to ‘Imagine York’, a project funded by the National Lottery and City of York Council since 2003, many of these
photos are available online and it is from this source that I have chosen many of the images presented here.

‘The immediate impression when looking at old photographs of York,’ Howard (1995:7) writes, ‘is one of surprise at how little some of the scenes have changed over the years,’ and the images presented here support this observation too. The local city-centre spaces of York pictured in the past and more recently are the following: the Minster, the Walls, Clifford’s Tower, Clifford’s Street, the Shambles, Low Petergate, High Petergate, High Ousegate, Micklegate, St. Helen’s Square, Coney Street, Goodramgate, Parliament Street and Stonegate (see Figure 51 through to Figure 64).

Importantly, with the addition of the River Ouse, these were also all the answers given to me by the children I interviewed in response to my question ‘What sorts of things make York York?’ Essentially, the pictures show the extent to which the local spaces have remained the same over time. The exterior view of the Minster, for example, photographed here in 1910 and in 2003 (see Figure 69), shows only minimal change form this perspective.

We do see change, however, in the foreground of the image, where the area immediately next to the Minster has been slightly developed. Likewise, the Bar Walls, pictured here in Figure 51 in 1910, 1998 and 2003, have changed very little. There are large sections of the Walls that consist of the original Roman walls that used to encircle ‘Eboracum’, the original Roman settlement from which York later developed. Like the change visible in the Minster photos, where change is visible, it is not so much to the Walls themselves but to the immediate areas adjacent to them. Thus, we see the addition of the six-storey building along the street which today is the site of various estate agents and a Pizza Express restaurant. Another more subtle but nonetheless interesting change concerns the broadening and renovation of the path running along the Walls themselves, as if attempting to constantly adapt to the increased numbers of visitors walking along it.
Figure 51: York City Walls (near railway station) 1921, 1998, 2004
(Sources: *Anderson 2000:41; **Imagineyork.co.uk; ***Uprichard)
Figure 52: Clifford's Tower, 1890s, 1940, 1998
(Source: imagineyork.co.uk)
Figure 53: Clifford's Street, 1905, 2004
(Source: Nutgins, 2003:247; *Uprichard)
Figure 54: Top end of the Shambles viewed from King's Square, 1910-2003
(Sources: ImagineYork.co.uk; *Uprichard)
Figure 55: The Shambles, 1890-2004

Source: Imagineworx.co.uk, (copyright)
Between 1939-1945

Figure 57: Low Petergate 1939-1945, 2004
(Sources: Imagineyork.co.uk; *Uprichard)
Figure 58: Low Petergate, 1950, 2004
(Sources: Imagineyork.co.uk; *Uprichard)
Figure 59: High Ousegate early 1900s, 2004
(Source: Imagineyork.co.uk; *Uprichard)

Figure 60: Corner of Lendal and St. Helen's Square, 1940s, 2004.
(Source: Imagineyork.co.uk; *Uprichard)
Figure 61: Different Views of Coney Street, 1909 - 2004
(Source: *Francis Frith; **Imagineyork.co.uk; ***Uprichard)
Figure 62: Goodramgate, 1870s, 2004
(Sources: Imagineyork.co.uk; *Uprichard)
Figure 63: Parliament Street 1889, 1964 and 2003
(Source: Imagineyork.co.uk)
The reader will notice that for each city-centre space presented here, very little has changed between the time of the oldest and most recent images. This is the same observation for all of these spaces and it raises particular issues to how we might understand cities and urban regions as complex systems.

**Discussion: Attractors in Sight?**

So far, this chapter has shown that using multiple methods can highlight different aspects of the emergent social world. More precisely, it has shown that using different visual sources can capture different social processes. On the one hand, aerial photographs and large-scale maps capture changes in the outskirts of the city-spaces. On the other hand, city-centre street plans and ground level photographs capture spaces where continuity has occurred. Obtaining a description of this kind is of interest in itself. However, if we focus more on the disparity between change and continuity, then I think that the description becomes even more interesting than this. In the same way as outliers become significant to causal understanding in statistical explorations, comparing change and continuity together helps us to delve deeper into why radical change may occur sometimes in some places and why it may not occur at other times in other places. In other words, a comparison of the contrasting observations moves the investigation towards considering possible explanations of cause. This is also the direction taken in the discussion that follows.

Thus, we might ask: Why have the city-centres not changed to the same extent as the outskirts? Why has there been resistance to change in York and Dijon city-centre more than the outskirts? Why is this the pattern of change and not another? After all, there is no logical reason why, if left to chance alone, the city-centre of each place would not also show the degree of change that seems to be present in all the other areas of the city. This would suggest that something is going on to prevent change in some areas and allowing it in others; or vice versa, something is producing change in some areas and not in others. So what is going on? How does it manifest itself empirically?
In fact, there are many possible theories explaining the observed disparity of change and continuity in York and Dijon. Following the principle of Ockham’s Razor, one possible explanation is that continuity is as much a part of change as transformation is. Although paradoxical, this explanation is in line with two important recurring themes within complexity theory, which we also saw in Chapter 2. The first is that complex systems are self-organising and autopoietic systems. For Kauffman (2000:85), such systems ‘create novelty and diversity as fast as they can manage to do so without destroying the accumulated propagating organization that is the basis and nexus from which further novelty is discovered and incorporated into the propagating organization.’

Given that this research assumes that cities are complex systems, it follows that York and Dijon will show properties of such systems. Thus, we might assume that the reproduction of certain parts of the city-centre is an important part of the overall reorganization of the cities. (Indeed, following Kauffman’s (2002) argument about ‘autonomous agents’, this is perhaps precisely because of the constraints that the ‘freezing’ of spaces within the city-centre implicates on how the city adapts and evolves over time.)

Interestingly, Bhaskar also writes something that echoes strongly with some of Kauffman’s (2000) work on ‘autonomous agents’. Bhaskar writes that changes are explained in terms of unchanging things, which can also be causal powers. He continues:

If there are ultimate entities they must be unchanging... [U]ltimate entities must be powers; that is, individuals [or cities] characterized solely by what they can do. [I]f one could describe the changing states or conditions [of things] in virtue of which their powers were exercised they could not be ultimate (unchanging).... In this way a complex thing such as a person (or a society) [or a city] could come to be the cause of its own transformation.

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72 Kauffman’s (2000) notion of ‘autonomous agents’ is based on the argument that constraints must always be present for the agent to reproduce itself such that it is both similar and different from its original self; along with new emergent structures, constraints are therefore re-produced as well.

73 Although normally known for critical realism, Bhaskar’s (1997) A Realist Theory to Science is included in the London School of Economics’ (LSE) ‘Complexity Bibliography’ (Lse Complexity Bibliography) which further highlights the overlap between critical realism and complexity.
The second theme that supports the idea that continuity is as much a part of change as transformation is that complex systems exist ‘on the edge of chaos.’ Goodwin explains:

The conjecture, for which there is extensive evidence but as yet no proof, is the following. For complex non-linear dynamic systems with rich networks of interacting elements, there is an attractor that lies between a region of chaotic behaviour and one that is ‘frozen’ in the ordered regime, with little spontaneous activity. Then any such system, be it a developing organism, a brain, an insect colony, or an ecosystem will tend to settle dynamically at the edge of chaos. If it moves into the chaotic regime it will tend to ‘melt’ back into dynamic fluidity where there is rich but labile order, one that is inherently unstable and open to change. (Goodwin 1997/1994:169, italics added)

Again, because here we take cities to be complex systems, we can also assume that cities may exist on the edge of chaos too. In addition, however, I suggest that if we could see the attractor of a complex city, it would look something like the change and continuity observed though the data collected in this research. I am drawing directly upon Dendrinos’ (1996) argument that we consider phase space as physical space. He proposes that we can think of sites of human settlements, and the roads connecting them, as basins of attractors. From this perspective, the socio-spatial patterns of streets and alleyways, which create the city-space, emerge as part of the dynamic interactions of the components that constitute them – components that are themselves the products of people actively interacting with their environment. Dendrinos’ comparison is useful because abstract concepts (such as basins of attractors) become more visual, and therefore, more easily grappled with. That is, we can think of the city attractor as something that is physically apparent. Furthermore, it is possible to empirically access this attractor by obtaining representational traces of it through our tangible, visible data, such as quantitative data, maps, photographs and, as I will argue shortly in the next chapter, people’s narratives.

This begs yet another question worthy of sociological attention: how might the dynamics that cause and effect such an attractor of change and continuity manifest
themselves in everyday life? I argue that we get clues to possible answers in considering the images as representational traces, the second of the suggested levels of thought used to interpret the images. Both the contents of the image and the construction of the image itself become important from this perspective. Each image is considered to be a possible source of information about the intentionality of social agents (be they at the level of the individual author or systems of institutions) acting to bring about change and continuity (Bhaskar 1978; Byrne 1998a; Outhwaite 1987). Each image is a trace from which 'we can reconstruct a version of the real entities and of the relationships among those entities and of the emergent forms which are the product of and producers of the relationships among those entities (Byrne 2002:36).

Here, what matters is the way the representations of the city have evolved over time, even within the same genre of images. Differences in the availability of certain types of image, or how particular types of image tend to concentrate on certain aspects in one city compared to the other become significant inasmuch as we learn about differences in what is deemed important or significant (by the authors and archivers of the image who are themselves culturally bound) within time and space. This level of thought raises questions about the past and present traces of the social world as they are represented through data. For example, we might ask, why are these images 'the traces' that I came across and not others? Why are these traces formed as they are? Why one angle of the city and not the other? Why are particular buildings chosen among so many? Why are some streets photographed repeatedly yet others not at all? Why were old images of the cities available to me as archived photographs stored in the city library in York but in Dijon, old images of the city were mostly available to me as old collectors’ postcards? Why were old images of York often depicted in the local newspaper over the past thirty years yet hardly any were shown in Dijon’s local newspaper? And what might be the effects of these issues on the sense of place that is lived and experienced everyday by the people who constitute these places? How might we interpret these differences and what might they tell us about what is deemed important or significant (by the authors of the image who are themselves culturally bound) within time and space?
I argue that it is significant that the photographer's viewpoint of 'York' shifts as the city changes. It is important that older photos of York home in on the Minster whereas modern images of York depict the area within the Inner Ring Road; the images of the Minster that we do find today are mostly to attract visitors and are concerned with its presentation as a tourist city. Similarly, when thinking about the images as traces, it becomes very relevant that in Dijon, whereas the photographer's viewpoint changes very little, the overall grand view of the city is reserved mainly for the eyes of but a few and in the control of even fewer. Whilst the Dijon images were taken more systematically over time and provided therefore a rich portrayal of evolving urban space, these images had been arranged as part of a public exhibition but that since then, public access to them was far more limited, and that the remnants of this past exhibition now decorated the offices of some of the city's most important urban planners and policy makers.

Similarly, it seems highly relevant that the available photographs concentrate especially on city-centre areas, and it is particularly in the city-centre that these same spaces appear to have been frozen in time. Conversely, the fact that the areas of continuity are especially located in the centres of these cities is, I think, not a coincidence either. After all, what we learn from the city plans is that planners have not been wholly reluctant to destroy the city-centre physical infrastructure. The building clearance for car parking informs us that planners are willing to do so under certain circumstances. Therefore, we can conclude that there is at least as much choice in not transforming the city infrastructure as there might be in transforming it.

But why not change the city-centre physical infrastructure more often? Why is there such resistance to change in this area? Indeed, why and After all, both cities experience real access and transport problems precisely because the old structures restrict modern vehicles and functions. Yet there seems to be more effort going into preserving the old historic centres even though the pressures of maintaining them are considerable as well. Indeed, one of the central elements to preserving part of old city landscapes is of course that of heritage. Heritage here is seen as:
the preservation or reconstruction of material objects, which isolates them
from the flux of history through a process of recontextualization in which
abstract qualities (the nation, the people, the locality, the past) are attributed
to, or embodied in, narratives of material culture and localities, narratives that
emphasize the continuity of the past in the present
(Meethan 1996:325; emphasis added)

It is possible that through successful heritage planning and policy, the 'aestheticization
of the past' (Cooke 1990:54) could produce a city-centre that appears to have been
frozen in time. In turn, we might conclude that the frozen city-centre is the direct
product of heritage planning. However, from a realist perspective, to conclude that
urban features are preserved by heritage efforts is not an adequate causal explanation.
'What we would like,' Sayer (1984:97; original emphasis) reminds us, 'is a
knowledge of how the process works. Merely knowing that 'C' has generally been
followed by 'E' in not enough: we want to understand the continuous process by
which 'C' produced 'E', if it did.' This also requires an understanding of why some
urban features may not survive the test of time despite the 'heritage industry'
(Hewison 1987). After all, it is equally possible that the 'heritage industry' (Hewison
1987) is itself but the emergent result of some other causal mechanisms at play, in
which case there are further layers to unpeel before understanding what has caused
parts of the city to freeze at all.

Either way, Meethan (1996:324) points out that successful heritage requires 'the
active deployment of a set of values that are embodied in and can be read from the
urban environment.' Therefore, even if we accept that processes of urban heritage are
at play, this still does not resolve a) what set of values are embodied in and can be
read from what is York and Dijon, b) how those values are embodied, c) why those
sets of values are embodied as opposed to others, and d) why the heritage industry
(Hewison 1987) has only kicked in over the past two or three decades even though
legislation protecting buildings, monuments and landscapes has existed since the late
19th Century (Meethan 1996)?

One place to start asking what these underlying mechanisms might be is to look
further at what these 'common values' might be. And how might they manifest
themselves in daily life? Indeed, why go to all this effort to preserve the city-centres at all? Why not preserve other areas of the city instead? Or move old parts of the city out to the suburbs? Will heritage planning efforts continue to in the future? Will they be successful given the rate of change elsewhere in the social? How might York and Dijon continue to evolve? In the next chapter, I argue that we discover clues to what the answers might be by listening to what children have to say about their experiences of these two cities today and the ways that they imagine them in the future.
Reflections on Change and Continuity: Using Children’s Voices

Having used official statistics and images to represent York and Dijon, this chapter turns to children’s narratives74 to provide yet another representation of these places. In so doing, it departs from the previous chapters in three main ways. The first is that so far the thoughts, perceptions and feelings of people living in York or Dijon today have been neglected. Yet it is arguably the people living locally who make up one of the most important components of any city. In this chapter, we turn directly to some of these people to learn more about change and continuity in York and Dijon. The vast majority of the children I spoke to had lived in their respective city all their lives and could therefore speak knowledgeably about it. As one child explains, ‘I was born here so I’ve been living here for nearly eleven years so I really know it [Dijon].’

The second way this chapter differs from the previous two is implicit in the first but worth highlighting further. Whereas issues of agency have been largely implicit in the data used up until now, here they are explicit inasmuch as the data comes directly from young agents living in the city who also speak about their experiences and views about ‘their’ city. As Sennett remarks:

74 Whilst I recognize that the literature on narrative is vast and that the term ‘narrative’ is loaded with historical changes of meaning, it is used here more simply to refer to an individual’s attempt ‘to tell interesting personal stories with plots, protagonists, beginnings, middles, and ends’ (see Sewell 1992: 481). In addition, it is assumed that knowledge about the context of time and space and social relations are embedded in the text (see Franzosi 1998; Ricoeur 1984, 1985, 1988).
narrative differs from the sheer unfolding of the life-course or the chronicle of historical events in that storytelling supposes a narrator who comments on or interprets the passage of time. In fiction, the narrator has complete freedom to do so, whereas in real life he or she obviously does not. This is why, in studying real-world narratives, we are interested in the question of voice of the person who, in an interview, tells us a story. We ask ourselves how this person struggles with events beyond his or her own making and incorporates them into a story which implicates the narrator as an active participant. Technically, the study of real-world narratives focuses on agency – in other words, on the act of narrating. (Sennett 2000:123, original emphasis)

The third difference is precisely because the data presented here focuses on present and future representations of York and Dijon rather than past and present ones.

Essentially, this chapter is structured around the seven main themes that emerge from the interviews.75 I later discovered that many of these themes were also those found in two waves of a larger project conducted by Wooley, Rowley and Spencer (Woolley and Rowley 1994-1995; Woolley et al. 1995-1996) involving 1648 children in twenty one towns and cities across Britain.76 Although what is said during the interviews is in itself interesting, I argue that it becomes even more important when considered alongside the findings of the previous chapters. Indeed, as we shall see, much of the interview material echoes some of the observations made thus far. Without further research, it is not possible to explain why these connections exist in this way. Therefore, in drawing attention to these connections, I postulate questions to take us further in our causal reasoning.

Overall, then, this chapter not only complements the previous descriptive representations of our two cities, they also explore issues of cause by attempting to understand the emergent social world from the bottom-up perspective of some of the young agents that constitute it. Furthermore, in thinking about the children's responses, I am not only considering how their responses inform what is found through the other methods, I am also thinking about the ways that they may help us think about the possible futures of York and Dijon. As Chawla and Malone

75 The structure is also very tightly linked to the questions asked to the children during the interviews (see Appendix J which includes the interview guide for further details).

76 I met Chris Spencer and Helen Wooley at a conference and we compared my findings with theirs.
noted: 'When it comes to the future, the child of today is the city-maker of tomorrow. To predict the probable future outline of the city, it is necessary to look, again, at the condition of its children.'

This chapter first sets the scene in terms of situating the child in the city. I begin with a summary of the children's responses to the question 'What is a city?' Secondly, I examine the different ways that the children talk about each city and suggest that the children are in fact signalling differences in the city structure, which have not yet been fully picked up in the previous chapters. Thirdly, I consider the children's responses to another question: 'What makes York 'York' and 'Dijon 'Dijon''? Fourthly, I discuss the desired changes and continuities that the children voice in terms of York and Dijon in the future. In contrast, the fifth section examines the sorts of changes that the children imagine will take place in the future. I then revisit the theme of 'being and becoming' specifically vis à vis the way that the children's inter-relational and inter-generational everyday lives in a changing city which is part of a wider social world that is also being and becoming as a way of highlighting the dynamic between children and cities. Finally, I bring out the issue of agency as it traversed the interviews specifically in the way that the children spoke about 'their' city and the related issues of power that come from these discussions.

Before venturing any further, however, a note about the material that will be covered. Typically, irrespective of the question asked, there were three types of answers. The first includes answers that were said in almost all groups, either between or across countries albeit with variations in the strength of opinion. For example, in all York groups, the Minster was mentioned; most children explained that they 'like it' but in some groups some children said that they 'love it.' The second kind of answer includes those responses that were said in only a few groups but nonetheless stand out. They stand out partly because of the way they both relate to and contrast with the first type of answer (that is also so widespread). They also stand out because they relate in some way to the observations shown up by the official statistics or the visual representations discussed in previously.
The third kind include idiosyncratic answers that I did not consider relevant to this study because they were more to do with the child either losing attention, trying to get my attention or test me, etc. For example, in all groups, to a greater or lesser extent, in the midst of other children answering, a child would intercept with something which would change the direction of conversation in a way that was not necessarily conducive to gathering data relevant to this study. We see this in the following where a girl (referred to as ‘R’) in the group intercepts two boys (‘J’ and ‘L’) describing the York crest:

J: it’s like a really really big piece of hmm, stone, like in a strange shape  
EU: is it? like what?  
J: well like York’s kind of shaped like a dragon isn’t it?  
EU: oh yeah  
J: so York is a really big hmm, stone, with lots of different squares on the bottom  
L: like buildings  
EU: like bricks?  
L: except England doesn’t breathe fire coz it’s not really a dragon  
R: I, outside I saw a dog with only one leg  
EU: did you? only one leg?  
R: yeah  
L: that’s because it probably had a really bad accident  
R: yeah, it’s got three legs now, one leg gone at the back  
EU: oh right, could it walk?  
R: yeah, coz what it does is it goes like this (hops about like a three-legged dog)  
EU: oh right, it kind of hops on the back, but hmm, all the dogs in York just got three legs?  
All: no! (laughing)  
J: some have  
R: the first dog went like this (hops about like a three-legged dog)  
J: one leg off  
EU: one leg off, not three legs off?  
All: no (laughing)  
J: it would be going like this wouldn’t it? (crawls to show me a one-legged dog)  
EU: yeah it would be crawling a bit  
R: no coz you couldn’t even move if you had no legs or arms or anything  
J: it might be doing forward rolls (laughing)

Thus in this extract, I consider the reference to the York crest as relevant data of the second type because only this group mentions it but the mention of the one legged dog is an example of the third type of answer and is not considered relevant data. As important as the third types of answers were to both the child and facilitating group dynamics, I discuss only the first and second type of answers here in order to
concentrate solely on those answers that relate to change and continuity in York and Dijon both in the present and the future.

Note also that issues that appear only a small number of times within the data are considered as significant as those that appear across all or most groups. Ethically, the fact that particular issues emerge at all is worthy of attention – hence why during the interviews I would respond to a child’s response even if I was aware that it was detracting from the topic under discussion. Furthermore, sociologically, especially from the point of view that the children are informed experts (see Bateson 1984) of the urban space they inhabit, what the children say matters. Therefore, whilst a particular issue may stand out in part precisely because it seldom occurs throughout the data, I still consider it to be valid and explore it together with the more common responses. Just as outliers cause the quantitative researcher to further explore the patterns within the data, so too do these sorts of answers here. Hence, the small number of times that a particular issue arises does not necessarily suggest that no attention be paid to it.

**What is a City?**

What is a city? This was often the first question I would ask the groups of children. (Later, as it became clear that this question generated the same answers, I spent less time on it and introduced another one, which was to do with what they liked and disliked about where they lived – the answers to this question are explored in discussing how they saw York and Dijon. By the end of the series of interviews, I had abandoned it altogether to save time and started with this alternative question instead.) As this was potentially too abstract a question to ask young children (below seven years old), I elaborated the question a little to make it more tangible to them. That is, I asked them what kinds of things they would say to an alien (who didn’t know about
<table>
<thead>
<tr>
<th>Type of Answer</th>
<th>The Children’s answers to: ‘What is a city?’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Answers to do with size</strong></td>
<td>it’s a big place...</td>
</tr>
<tr>
<td></td>
<td>hmm, it's a big town</td>
</tr>
<tr>
<td></td>
<td>it's not small.</td>
</tr>
<tr>
<td></td>
<td>I’d describe it’s a big place</td>
</tr>
<tr>
<td></td>
<td>I reckon it’s just sort, sort of a big sort of, big</td>
</tr>
<tr>
<td></td>
<td>it’s a sort of emm... country and it’s got lots of buildings</td>
</tr>
<tr>
<td></td>
<td>it’s big and small buildings, it’s kind of a landmark</td>
</tr>
<tr>
<td></td>
<td>big houses and hmm, flats.</td>
</tr>
<tr>
<td></td>
<td>G: I imagine a city to be really big, big with loads of things with traffic built up everywhere.</td>
</tr>
<tr>
<td></td>
<td>D: tower buildings</td>
</tr>
<tr>
<td></td>
<td>H: yeah, sky scrapers.</td>
</tr>
<tr>
<td></td>
<td>J: Loads of tourists</td>
</tr>
<tr>
<td></td>
<td>N: Loads of litter</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Answers to do with People</strong></td>
<td>There’s lots of people.</td>
</tr>
<tr>
<td></td>
<td>Lots of people live there</td>
</tr>
<tr>
<td></td>
<td>Lots of people work there</td>
</tr>
<tr>
<td></td>
<td>It’s a big place where people live</td>
</tr>
<tr>
<td></td>
<td>A city is, has a lot of people in.</td>
</tr>
<tr>
<td></td>
<td>there’s people old and there’s people young... and babies...</td>
</tr>
<tr>
<td></td>
<td>There’s always bad people.</td>
</tr>
<tr>
<td></td>
<td>You can’t go out on your new bike ’coz you’ll get it nicked off ya.</td>
</tr>
<tr>
<td></td>
<td>J: You get pushed about by big people when you’re in town, and like whenever you go into a shop...</td>
</tr>
<tr>
<td></td>
<td>someone always like starts looking at you just in case you nick something.</td>
</tr>
<tr>
<td></td>
<td>G: There’s always loads of police.</td>
</tr>
<tr>
<td></td>
<td>Eyes. Lots of eyes.**</td>
</tr>
<tr>
<td></td>
<td>Nose.</td>
</tr>
<tr>
<td></td>
<td>Hands.</td>
</tr>
<tr>
<td></td>
<td>Teeth.</td>
</tr>
<tr>
<td></td>
<td>Feet.</td>
</tr>
<tr>
<td></td>
<td>Lots of feet</td>
</tr>
<tr>
<td></td>
<td>Lots of hair.</td>
</tr>
<tr>
<td></td>
<td>Clothes.</td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Answers to do with the Built Environment</strong></td>
<td>it’s where there’s lots of buildings and things.</td>
</tr>
<tr>
<td></td>
<td>it’s got lots of sort of like buildings.</td>
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<tr>
<td></td>
<td>a city’s a place where’s there’s lots of houses.</td>
</tr>
<tr>
<td></td>
<td>N: it has lots of houses and schools.</td>
</tr>
<tr>
<td></td>
<td>L: yeah, schools... and there’s lots of different ones.</td>
</tr>
<tr>
<td></td>
<td>P: yeah and there’s big buildings with lots and lots and lots of medium people called children...</td>
</tr>
<tr>
<td></td>
<td>with a few big people called adults...</td>
</tr>
<tr>
<td></td>
<td>there’s pavements.</td>
</tr>
<tr>
<td></td>
<td>i would say that a city has a big sky-scraper and then you can like you can go in it...</td>
</tr>
<tr>
<td></td>
<td>There’s always a major church, like the Minster or Cathedral or something.</td>
</tr>
<tr>
<td></td>
<td>T: My dad told me it’s something about if one of them had a cathedral or not...</td>
</tr>
<tr>
<td></td>
<td>N: oh yeah, a city has a cathedral.</td>
</tr>
<tr>
<td></td>
<td>P: yeah, that’s it, that’s why we’re a city. Towns have churches.</td>
</tr>
<tr>
<td></td>
<td>T: and villages have chapels.</td>
</tr>
</tbody>
</table>
V: a city is a place, it's only claimed a city if it's got a cathedral.
J: and if it's big. It would be a town if it was about in the middle without a cathedral.
H: oh and pollution.
F: and there's big factories.
H: that's the same as pollution.

Lots of shops. there's loads of shops.
there's shops, shops and more shops.
pet shops

F: big cars.
H: loads of shopping marts
M: loads of houses where people live and it's very big

It's a big place and what they do is they sell all the things to the people in houses... makes money to build little roads and stuff...

lots of shops and lots of people who are very busy and most people haven't got any hair (others laugh) no, most people have got hair but some people wear a top-cat.

there's lots of shops
shops and Supermarkets and sweets

EU: what's a city?
J: arm shops
T: with lots of shops
EU: yeah
J: and lots of people buy things

Well it's a bit boring 'coz there's nothing really to do and you're just walking round in shops going 'oh, I think I'll buy this'

Sometimes when you've walked for four hours you get so bored you just want to go straight home.

it's very busy.

it's a bit cramped.

Museums.

Different things can like happen in different, in... different cities... Like concerts and stuff.

L: There's lots of things to do.
A: Entertainment.
EU: Like what?
L: things like cinema, swimming pools.
A: you can go there with friends just to hang out.

G: food.
EU: in what way?
G: junk food – Macdonald's.
H: yeah, fish and chips.

there's big green place with lots of trees and stuff called parks...

a park.
a river.
lots of trees.

there's lots of plants, trees and lots of parks like you can run and get some exercise.

* Answers to do with the size, the many people living there, the built environment and shops or shopping were mentioned in all groups in York and Dijon that I asked the question ‘What is a city?’.

** Although these series of short answers were among the most abstract answers, and at first I did not know what the children were referring to or whether these were serious answers, after further discussion it was clear that the children were referring to the fact that there were lots of people in a city. It seems that the answer ‘Eyes. Lots of eyes.’ triggered the other children to name some other body parts. I was alone in not grasping this immediately and felt very much like the adult outsider that I actually was.
things on Earth) if the alien asked them 'What is a city?' Often I would use a nearby object to represent the alien and put on a silly voice as if impersonating an alien (see Waterman et al. 2001; Wilson and Powell 2001). All groups replied that it was a big place, with many people living in it, that there were lots of houses and buildings, and also shops and shopping; mostly, these things were mentioned in that order as well. Typically, one person would start by explaining that it was 'a big place', another would add that 'there's lots of people', which would trigger someone else to add that 'there's lots of houses' etc. Sometimes, one child would capture more than one thing in a sentence as this child does below in this sentence:

Well, I'd say it's, it's like, quite a busy place and it's got tall buildings and lots of people and roads and streets with cars and, it's busy and there's lots of shops and everything, there's not like, it's not like a big grassy area it's quite a lot of cement and buildings and stuff.

The children's answers to this question are shown in Table 17. Identical or similar responses have been grouped together. In this way, eight categories emerge from all their different answers. That is, answers to do with: size, people, the built environment, shopping, feelings or moods invoked, culture and leisure, services, and the environment. Some of the answers overlap but are located in one category in the table if, for example, one sentence includes more than one category description. Taking all their answers together captures, I think, the essential components and activities of modern postindustrial cities. Indeed, it would be interesting to ask children in ten years time what they think a city is and compare their answers to these ones here from this study. Perhaps in the future, the city will become more a place of entertainment, of shopping or eating-out and spending your leisure time.

Two outlying issues stand out from the rest of the answers, which otherwise pretty much all follow the above pattern as given in Table 17. The first issue concerns the mention of 'currency' and the second issue relates to the structure of the city as perceived by the children. Both issues stand out partly because unlike all the other answers which came up in almost all groups, these two issues only came up in five groups. But more importantly they also stand out because I think the content is
especially interesting, particularly about the findings discussed in the previous two chapters. Both issues were direct responses to the question ‘What is a city?’ Furthermore, the issues may well overlap with one another, although they only explicitly do so in one of the three groups. Let us look first at how specifically both issues were voiced and then explore what they might mean.

The mention of ‘currency’ was only voiced by two groups of children living in York. The first time ‘currency’ was mentioned was in the following:

I reckon it’s just sort of a big place where people live and they buy things. Basically it’s currency.

Thus, the word ‘currency’ mentioned here by York children is used to capture – in that one word – what a city is. The second time ‘currency’ was said was in York when the children were referring to something about their sense of the structure of York. More precisely, it was when they were identifying the city-centre as a distinctive part of the city which was also different from the rest of the city:

T: I reckon the part, you know, you know like Waterstones and Glamour [in York city-centre]? I reckon that part is town
N: yeah
T: and all around it is -
N: yeah
J: my, my dad works in Waterstones!
EU: oh right!
T: and all around it is sort of like: [uses his hands to show what he means]. Hmmm this is the city and town’s in the middle.
F: yeah, like the city’s the biggest bit and
N: yeah and
T: yeah, like the town is the currency.
N: yeah, the town is sort of where all the shops are.

This time then ‘currency’ is not only used in relation to a description of the city, it is to pinpoint a particular part of the city. That is, we learn from this excerpt that ‘the town is currency’ and that ‘town’ is in the middle, it’s ‘sort of where all the shops are’ and it also happens to be the location of where one of the children’s father works.
In Dijon, two groups responded to the question ‘What is a city?’ by using Dijon as an example and by elaborating on the structure of the city. Essentially, they distinguished the city-centre from the rest of the Dijon conurbation in much the way that the York children spoke about the ‘town’ in the above quote. The first group spoke of it in the following way:

P: there’s cities and then there’s the town
V: yeah, like in Dijon, there’s where there’s the rue de la Liberté and the shops and all that and then around it there’s Chenôve and Quetigny
A: the Grésilles
V: no, that’s in Chenôve emm... there’s St Apollinaire, Fontaine d’Ouche, well there’s lots of them.

The second group described ‘Dijon’ in a similar manner:

Well Dijon’s a city in Dijon, there’s Dijon-town, which is the middle, and then there’s Dijon, well the rest of Dijon and in Dijon-ville that’s where there’s lots of shops, it’s there where all the shops are, and the rest of Dijon is where people, well it’s where lots of people live.

Thus between the York and Dijon groups, we notice the children articulating their understanding of what a city is by describing something about the structure of the place. That is, they identify the ‘middle’ as being different from the rest of the city space. In addition, we learn through the York children that ‘the town is the currency’ – the ‘town’ here is the place in the middle of the city. Both York and Dijon groups also add that this place in the middle is ‘where all the shops are.’ Thus, shops, the middle of the city and the issue of currency are all connected to one another in terms of how the children describe what a city is.

So what might we make of their answers? A city, to the children interviewed, is typically a ‘big place’, ‘where there lots of people live’ and there are ‘lots of buildings’, ‘lots of houses’ and ‘lots of shops.’ Perhaps these are indeed the main components of a complex city? Perhaps instead of the key components that Wilson (2000) describes as key components of complex cities, it is possible to narrow them down to but this handful of five key points? I think it is. After all, it is interesting to
note that among the key quantitative indicators typically used to describe a city or an urban region include a measure of the space it takes up, the population count, the number of households and residences, and the socio-economic breakdown of the percentage of jobs by industry sector. This being the case, perhaps we can infer that the children’s descriptions of what a city is may also confirm the validity of these key quantitative urban indicators? Similarly, perhaps the representation of what a city is as depicted through the discussions with the children also increases the validity of the epistemology and the ontology underpinning such quantitative representations of urban space (despite the fact that each representation may reveal different aspects about the same place)?

Also included in the answers is the notion that ‘the town is the currency.’ What does this actually mean? Might shops be likened to the currency of a place? Indeed, are shops intrinsic to modern city-centres? Are shops necessarily intrinsic to the socio-economic and spatial re-generation of city-centres? How might shops or shopping be related to the underlying generative mechanisms re-producing postindustrial cities more generally? Or perhaps the children are picking up on something that will increasingly be the case in the future? Or perhaps, playing the devil’s advocate, what the children said actually bears no relevance to the theoretical understanding of how complex cities and urban regions change? This is certainly a possibility, which I dispute throughout the remainder of the chapter. In other words, I argue that the children’s descriptions matter both in relation to the representations of York and Dijon that emerge from the data that they provide and in relation to the methodological challenge of representing cities and urban spaces more generally. All that said, I want to move directly to the next section where we will explore these two issues precisely because the structure of space came up more often when the children began talking specifically about York and Dijon.
Different City Structures?

There are four points to do with the city structure which emerge through the children’s discussions about York and Dijon that I want to briefly present here. They are important for a number of reasons, which are discussed at the end of the section.

First, York and Dijon resemble one another inasmuch two different parts of the city are identified by the children: the middle of the city and the rest of the city. Among the responses to the question ‘What is a city?’, only a few children identified this point but in discussions about ‘What makes York ‘York’ or ‘Dijon ‘Dijon’?’, not only did the children continue to distinguish these two parts, they did so more frequently. Furthermore, the middle of the city in both places is associated with old and new buildings, shops and lots of people shopping, and walking through its pedestrianised and non-pedestrianised streets.

Second, York and Dijon resemble one another in that the children identify both places as components nested within larger places. This is explicit in the following conversation between three children:

O: used to be kind of the capital.
M: it used to be divided into pieces coz of the hmm, war.

In another group, the children argued over the size of York: some argued that it was small but others disagreed because ‘there’s the north, south, east and west Yorkshire so York is quite big really.’

Similarly, in Dijon the children would often comment that Dijon was in France and part of Burgundy and two of the children’s drawings also depict the city in relation to other places (see Figure 65 and Figure 66).

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77 This increase in frequency may be to do with the framing of the question and children’s developmental capacity to access and articulate abstract descriptions if provided with more tangible cues within the question itself. It is possible that the direct reference of York and Dijon within the question may have facilitated their discussions about these different spaces (see Bronfenbrenner 1979; Waterman et al. 2001).
Figure 65: Drawing of Dijon

Figure 66: Drawing of (the different areas of) Dijon
Third, York and Dijon resemble one another in the way that the children refer to ‘other parts’ of ‘the city’ to describe them. As seen in Chapter 7 the administrative boundaries of ‘York’ and ‘Dijon’ include ward areas as in the case of York and commune areas in Dijon. In their descriptions of the respective cities, the children also refer to these other parts. For example, in a discussion about the size of York, one child says that ‘York is quite a big place coz it does have like all the other places kind of like outside like Fulford and New Earswick and stuff. Similarly in their discussions and pictures of ‘Dijon,’ the children refer to these areas as constitutive parts of Dijon.

However, York and Dijon do not resemble one another inasmuch as the children speak about these areas differently in relation to ‘what makes York ‘York?’’ or ‘Dijon ‘Dijon?’.’ In York, only once were these ‘other areas’ mentioned but in Dijon, they were mentioned in almost all the groups. Furthermore in York, the children spoke more about the middle part of the city than did the children in Dijon. Indeed, relative to the way that the children spoke about Dijon, York was described as one big place which had a distinctive middle part to it – a middle part, as we have seen, which is ‘currency.’

In contrast, in Dijon there was a general agreement that these ‘other areas’ were certainly strongly linked to ‘what makes Dijon ‘Dijon’ but they were not ‘Dijon.’ The exception to this was the area of Chenôve, which raised a lot of confusion and was a strong and frequent point of contention in these discussions because rarely could the children agree as to whether or not Chenôve should in fact also be considered as ‘Dijon.’ Interestingly, the census data explored earlier revealed that Chenôve is the commune most like Dijon in terms of its population trends. That is, although the rates of change differ between the Chenôve and Dijon communes, the direction of change is often the same. Similarly, the census data revealed that the most meaningful boundary of ‘Dijon’ was in fact the COMADI, a ‘conurbation’
of a collection of communes. Indeed relative to the way the children spoke about York, Dijon was described more as a collection of places. One particular drawing of Dijon (see Figure 66) identifies the different parts of the city by also clearly writing the name of each area, yet the word ‘Dijon’ is itself entirely absent from the drawing.

Hence when we compare how the English and French children each talk about where they live, further details about the structure of these places emerge which have not yet been fully picked up through the census data or visual sources. Yet the children may be pointing to fundamental similarities and differences to the structural representations of York and Dijon as evolving complex places.

Let us continue to explore how the children talked about each city, this time with specific reference to their awareness of how their views were bound by time and space.


Whether in York or Dijon, when asked ‘What makes York ‘York’?’ or ‘Dijon ‘Dijon’’, the children repeatedly responded with the particular buildings, streets and icons that they felt represented that city. I have displayed the answers to ‘What makes York ‘York’?’ and ‘What makes Dijon ‘Dijon’?’ in Table 18. Interestingly, it was a lot more difficult to categorize the children’s responses to this question than for the question ‘What is a city?’. The responses to ‘What makes York ‘York’?’ (and Dijon ‘Dijon’) were more detailed than those relating to ‘What is a city?’ However, the extra detail made the overall collection of responses more complex as well. This in turn meant that I had to be more vigilant about the various meanings attached to what was being said. For instance, the following three excerpts taken from three different groups, the children are talking about what makes York a nice, safe place to live in. However, the reasons behind what they are saying are quite different. That is,
in the first example, York is ‘a nice place’ because no one’s unhappy and there ‘ain’t much criminals’:

J: er... but it is, it’s a nice place York. No one’s not, like really like that unhappy in there.
L: there ain’t much er... like criminals...
J: yeah, yeah.
EU: yeah
J: not as much as some places.

In the second example, York is described as a safe place. However, the reasons are not to do with whether or not there are criminals but whether or not there are ‘enemies’:

F: well York’s got people, animals and living things like trees and even us.
P: and it’s very safe, coz you know you know the walls? If hmm, some, some enemies came they wouldn’t be able to get over the walls.

In the third example, York is described as a safe place again. However, this time it is not because of the absence or presence of criminals or enemies but because there are no volcanoes, nor much litter or therefore any risk of plague:

R: and safe
EU: and it’s safe
R: coz no volcanoes go
J: and there’s not a much litter so there’s won’t be the plague, plague won’t be in York coz there’s not much litter on the floor, coz when there’s a lot of litter -
R: It used to --
J: coz rats like litter

Therefore, whilst the children are all talking favourably about where they live, their reasons are quite different and I wanted to account for these differences.

In sum, however, in York the most frequent answer related to ‘its history’, followed by a list of items such as: the Minster, the Roman Walls, Clifford’s Tower, certain city-centre streets (e.g. Parliament Street, Coney Street, Stonegate), the Stonegate Red Devil (see Figure 67), the river Ouse, local residents and tourists. In many instances, as captured by the following quote, some children voiced that ‘York’
could be captured by just one of these features, most notably the Minster or the City Walls:

EU: Why is York, York?
J: Because it's got the City Walls
EU: Yeah
J: They're just York.

Many other answers were also given as can be seen in the following extract taken from one group:

EU: What else makes York 'York'?
- the Barbican
- there's clubs
- the Minster
- my house
- concerts
- the Walls
- shows
- Grand Opera House
- York Dungeons
- pubs - loads of them
- there's a lot of restaurants
- yeah, Betty's
- Royal Theatre
- Clifford's Tower
- MacDonald's
- City Screen
- Fellini's [restaurant]
- El Piano [restaurant]
- there's lots of gold shops and things like Doll Houses
- shops
- yeah there's loads of hairdressers
- violin places
- music workshops
- Bank Music shop
- Emma, I play the violin and that's why I said violin places.
- music teachers.
<table>
<thead>
<tr>
<th>Answers to do with History and Culture</th>
<th>YORK</th>
<th>DIJON</th>
</tr>
</thead>
<tbody>
<tr>
<td>It's historic very historic, one of the most historic in the world</td>
<td>—</td>
<td>There's la Tolson d'Or</td>
</tr>
<tr>
<td>It's big, historical</td>
<td>—</td>
<td>La chouette78</td>
</tr>
<tr>
<td>Vikings</td>
<td>—</td>
<td>Notre Dame Cathedral</td>
</tr>
<tr>
<td>The Minster</td>
<td>—</td>
<td>La rue de la Liberté</td>
</tr>
<tr>
<td>The City Walls</td>
<td>—</td>
<td>The Eglise St Bénigne</td>
</tr>
<tr>
<td>Museum Gardens</td>
<td>—</td>
<td>L'Ourse Pom</td>
</tr>
<tr>
<td>J: it's got old buildings in it V: yeah, EJ: yeah yeah, J: it's got new buildings in it</td>
<td>—</td>
<td>It's got the Tour Philippe-le-Bon</td>
</tr>
<tr>
<td>F: Yeah if kind of stands out between coz everywhere else is really modern and has got something else M: and also York never gets picked on coz most of the walls are taken out in other countries but York is just, York and the rest of England is just left alone</td>
<td>—</td>
<td>Porte Guillaume</td>
</tr>
<tr>
<td>H: peace! It's just peaceful, totally</td>
<td>—</td>
<td>The Palais des Etats</td>
</tr>
<tr>
<td>You can never can just like walk around if you're in town, you always have to bump into a tourist</td>
<td>—</td>
<td>Le parc de la Colombière</td>
</tr>
<tr>
<td>Answers to do with Size</td>
<td>—</td>
<td>Le lac Kir</td>
</tr>
<tr>
<td>It's quite big</td>
<td>—</td>
<td>Place Darcy</td>
</tr>
<tr>
<td>I think it's aitty little town... compared to, London</td>
<td>—</td>
<td>That fountain with flowers in town, the Place Wilson. I like that... it's really pretty and when it's hot it's nice to put your hand in the water coz it cool you down.</td>
</tr>
<tr>
<td>Answers to do with Moods/Feelings invoked</td>
<td>—</td>
<td>There's those painted walls, like with the murals. It looks like a real window.</td>
</tr>
<tr>
<td>It's nice place — it is</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Compared to some places</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>It's brilliant!</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>I call it home!</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>It's just bo-nin', there's nothing to do.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Answers to do with the Environment</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>It's got lots of well it's kind of evened out, half of it's grass and half of it's city</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>There's lots of land.</td>
<td>—</td>
<td>There's lots of parks, like the parc de la Colombière</td>
</tr>
<tr>
<td>— Not too much park</td>
<td>—</td>
<td>It's flowery and pretty, Not like some other towns.</td>
</tr>
<tr>
<td>— Chutes! [referring to daffodils]</td>
<td>—</td>
<td>There's always lots of flowers and that's beautiful.</td>
</tr>
<tr>
<td>H: it's a nice place J: it is L: compared to some places...And it's got loads more green places.</td>
<td>—</td>
<td>I don't like the dog droppings – they're everywhere.</td>
</tr>
<tr>
<td>— there's lots of land.</td>
<td>—</td>
<td>There's loads of greenery, with big parks.</td>
</tr>
<tr>
<td>Not too much park.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Not too much sun.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C: it's got lots of well it's kind of evened out, half of it's grass and half of it's city H: well there's the newer York which used to be like woodland and the inner York which is the whole historic bit, but the woodland does have like castles and stuff</td>
<td>—</td>
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</tr>
</tbody>
</table>

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Interestingly, but I think very significantly, there was no reference at all to York’s historical identity of its chocolate industry or of its railway past. It would seem that to the children, today’s York is therefore different to how it might have been to children less than twenty years ago. And indeed, York’s famous Rowntree factory, although physically still there, is now owned by the Swedish company, Nestlé and not as it used to be by a local entrepreneur such as the likes of Joseph Rowntree, signalling perhaps to the qualitative feel of the local effects of globalization.

In Dijon, these ‘city icons’ were the ‘Lac Kir’, St Bénigne church and Notre Dame cathedral, the Place Darcy, the porte Gillaumé, rue de la Liberté, the Palais des Ducs,
la Chouette, the city’s association with wine, mustard, gingerbread, blackcurrant and, last but not least, local residents and visitors. However, in contrast to York, large shopping malls were also considered to be important city symbols (see Figure 70). Indeed the Toison d’Or shopping centre was mentioned frequently across the groups.

I want to suggest that these items listed by the children which were each voiced as a response to the question ‘What makes York ‘York’ and Dijon ‘Dijon’?’ are part of the active deployment of a set of values that are embodied in and can be read from the urban environment’ intrinsic to the heritage industry (Meethan 1996:324). After all, almost all of these items can be found together in the guidebooks on each city. In addition, we saw earlier in Chapter 8 that old photographs of York were not only readily available and easily accessible online, they also focus frequently on the city-centre. Moreover, many of the items captured in the old and new photographs and postcards such as the Minster, the Walls, Clifford’s Tower in York, and Notre Dame cathedral, Place Darcy, the rue de la Liberté in Dijon, are also found among the items listed by the children. Also in Chapter 8, I argued that York city-centre has been frozen in time relative to the rest of the city.

Furthermore, let us assume, for the sake of argument, that we do interpret the middle of York as ‘currency’ as it was suggested above. Then drawing on Simmel’s (1907/1978) work in The Philosophy of Money, we might think of the middle of the city as a specific phenomenon that can be ‘saved’, ‘spent’, ‘invested’, ‘owned’ and ‘exchanged’, etc. Moreover, we might also consider that the middle part which is ‘currency’ reifies certain entities in the city which come to exert a controlling force on actors. Might these entities be monuments, buildings, streets etc. such as those captured through the images in Chapter 8 and those also listed by the children here? Might it not also be possible that these monuments, buildings and streets have

78 ‘La Chouette’ is famous owl carved in the stone wall of Notre Dame cathedral (see Figure 67). It is thought to bring good luck to anyone who rubs it. (‘La chouette’ is French for ‘the owl.’)

79 Interestingly, much of Simmel’s work stems from his observations about the visual interactions of modern culture.
become reified objects which can also be ‘saved’, ‘spent’, ‘invested’ etc. explicitly through urban heritage efforts?

What is particularly interesting is that there is an even more fundamental pattern that runs throughout the interview material that concerns the city-centre and the extent to which the children seem to have ‘invested’ in these particular monuments, buildings, streets, etc. This pattern relates to where the school is located and the influence this has on the children’s responses. As we shall see, the children’s narratives are affected by whether or not the school is located near the city-centre. In turn, this raises further questions about the importance of the city-centre not only in structuring the cities but in shaping the children’s responses about the cities also.

**Desired Change and Continuity**

I explored the possible future trajectories of York and Dijon by asking the children how they imagined the place were they to fast forward themselves in time and return as old people. Overall, the responses in York and Dijon were somewhat similar. Both change and continuity were desired possible futures. In contrast, what they wanted to change and what they wanted to stay as well as the extent to which they wanted a particular change or continuity varied. More precisely, the children’s preferences varied within York and Dijon but did so in similar ways. Within the cities, the responses varied according to where the school was located within that city; the desired changes and continuities across the groups within each school were remarkably alike.

It is worth noting that I only became aware of the importance of the link between the location of the school (as classified ‘inner city-centre’ or ‘outer city-centre’) and the children’s responses and preferences near the end of the fieldwork. Up until then, I had thought of York and Dijon as two different places and was anticipating, therefore, possible differences and similarities between what the children said in one place compared to what they said in the other. (Despite trying to approach the
children with a completely open mind as to what the data they provided might reveal, the very fact that I had to get on an airplane, speak another language to conduct interviews in Dijon made it impossible for me to feel, at least at some level, as though I was not in a different place from York.)

In order to verify that this pattern was really there, I explored the children’s perceptions of their respective city-spaces in three schools, each in York and Dijon. I then classified the schools based on their interpretations of what they considered to be ‘inner city-centre’ and ‘outer city-centre’ (see Table 1: Details of schools visited p.130) and reviewed the interview material accordingly. I found that not only did this classification of ‘inner city school’ versus ‘outer city school’ confirms the pattern that school location influenced the way that the children spoke about each city but it became even clearer than I had initially perceived it. Thus, for example, children attending ‘inner city-centre’ schools preferred the city-centre to the suburbs; vice versa, children attending ‘outer city-centre’ schools preferred the suburbs to the city-centre. To say that they ‘preferred’ one area over another masks the extent to which they disliked their ‘non-preferred’ area. In Dijon, for example, the two groups from the one inner-city-centre school that I accessed not only preferred the city-centre but voiced that ‘the suburbs, like there where there’s the Toison d’Or [a large outer-city shopping centre], it’s repulsive, it’s all new, all modern, it all looks the same. It’s completely ugly.’

The nearer the city-centre the school was located, the more the children spoke positively about the city-centre and negatively about the suburbs. In turn, in terms of the future changes to the city that the children said they wanted to occur varied similarly also. Children from ‘inner city-centre’ schools voiced a strong desire for the city-centre to remain almost identical; children from ‘outer city-centre’ schools voiced a stronger desire for the city-centre to change relatively significantly. However, whatever the city and wherever the location of the school, one thing was certain: change that would transform the city was definitely not wanted by anyone anywhere.
In York, in terms of the city as a whole, only two children were of the opinion that they ‘wouldn’t mind [the city] staying like it is.’ The rest did not want the place to stay completely the same. As one child explained, ‘it’s nice to have something different because you do get a bit sick of [the place] once you’ve been living there for many years’ and another said, ‘things really need to change because we can’t like stay like this forever.’ However, the children certainly did not want the city to change to the extent that it became unrecognizable either. Most wanted to keep some features the same as illustrated in the following extract:

J: well, you know they should sustain the city walls  
L: it’s the way everything looks  
J: yeah, yeah! keep it the same way, a bit like more variety for food and stuff but that’s about it.

D: but when you go like every week [into town] and you just, you’ve seen everything.  
G: yeah, there’s nothing else.  
D: and the shops just stay, stay the same.  
G: I mean some shops change but that’s, that’s just how it goes.  
H: yeah.  
G: it’s not everything drastic changes.  
EU: do you mind things changing?  
All: No  
G: no, everything’s better coz after you’ve seen everything once, you need a change.  
All: Yeah  
EU: Right  
G: but it depends if it’s your favourite shop goes then it’s different  
All: Yeah

Others wanted ‘to keep like all the features the same.’ However, whilst they wanted old features to stay, they recognized that this might conflict with the modern needs of the people today:

L: But hmm, the thing that’s bad about York is also, the Bar Walls which isn’t th’most efficient way of getting round York, well the city-centre  
J: hmm, they, they’re like having to be repaired every like two months or so, so they’re closed for a long time... that’s a bit of a pain

It was particularly the strength of their opinion that was interesting. In order to explore how strongly the children held these views, they were presented with
hypothetical reasons as to why it might be necessary or beneficial to knock down, say Clifford's Tower80 or Notre Dame or why certain icons might have to change with time. Yet they always came up with alternatives – and very good, creative ones too! – as to why these things should and could remain. For example, many York children asserted that Clifford's Tower should never be destroyed because 'it's history' and that taking it away would transform York's 'identity', as one girl sums up in the following:

No, it's history! People come to York for history. It's here for the tourists. So they can come to see us and can go back and people go 'Well, I went to York and it's all this history,' 'It's brilliant, you know! You should go sometime.' But if you build over it, it'll just be like all the other places and it won't be York.

H: I wouldn't like it to happen becoz that's like a really big change to York and just like a massive one. [child's own emphasis]

When asked to choose, say, between the Minster or Notre Dame Cathedral coming down or having more parks and green spaces, less traffic and pollution, which were among the features that most children stated as the one thing they would most like to change about the city, they always opted for the building to stay. Under no circumstances did the children want these things to be dramatically altered or destroyed. All but one child (in York) remained intent on keeping these iconic representations of the city intact both in the present and future.

When the location of the school is taken into consideration, this pattern appears to be stronger for the children in city-centre schools, and stronger still in York than in Dijon. Children going to schools out of the city-centre still held these views but were not against altering them a little bit. Thus, for example, although certain buildings and symbols had to stay, the children felt it was acceptable to paint them or use for different purposes and activities. The overwhelming opinion was that those

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80 Clifford's Tower was frequently entered as part of a recent art competition inviting all schools and young people in York as the best building in the city (see Without Walls 2003).
structures, which could be physical or symbolic, that capture the essence of the city must be maintained throughout time.

In both York and Dijon, the children attending ‘inner city’ schools described the city-centre as visually pleasing, exciting, busy and to be preserved. ‘New’ was seen as ‘beautiful’, ‘sunny’ and something that ‘makes you smile.’ Those attending ‘outer city-centre’ schools, however, found the city-centre visually displeasing and considered to be boring and in need of change. ‘Old’ was seen as ‘grey’, ‘dark’ and ‘depressing.’

On the other end of the spectrum, however, there were aspects of each city that children felt ‘must change’, and the sooner the better. For example, litter, graffiti, boarded-up houses and windows, were seen to be problematic to all York and Dijon children in the present and the future. (A particular concern mentioned by the French children were dog droppings on pavements and in parks.) Specific low socio-economic localities of the city such as the Grésilles and Chenôve in Dijon and certain areas of Acomb in York were also frequently mentioned. They were also concerned that ‘something should be done about homelessness’ and that there should be provisions for the elderly. On the whole, the children gave examples of things that they perceived as ‘ugly’ or ‘unsightly’ but their reasoning was that these ‘ugly things’ ‘make people feel sad.’ They also talked about how ‘ugly things’ would put off visitors and were therefore not beneficial to local economy. In addition, they associated spaces that they considered ‘untidy’, ‘dirty’, or ‘grey and sad’ with ‘drugs and crime.’ The image of the city — i.e. that which is visual and can be seen — was important to the children and those areas which were not ‘sunny and beautiful’ or ‘pleasant to the eye’ should be changed.

Overall, the children wanted some change and some continuity to occur. They explained that this was in the best interests of both local residents and visitors of the city. A bit of both was best as the following two excerpts imply:
I think [York] kind of should be like mixed, like some could be like really really new so some people think ‘oh look! A really really new modern things’ but like other people, like tourists and stuff think ‘Oh look at the old buildings and old houses! That’s a beautiful Minster and stuff.’

I want to keep all the features [of Dijon] the same, you know, they should sustain the cathedrals and things. But I think they should also build new things as well. Because it’s nice if you live near new things but it’s also good if you are wondering around and you feel like you are walking in a medieval town.

Welcome changes included shops, shops and more shops! Shopping malls, large sports and leisure facilities, cafés and restaurants were also high on their ‘wanted’ list. The general consensus was that ‘more was better’, particularly if they targeted the younger age groups. Children going to schools located out of the city-centres were more demanding of these things. Nonetheless, however much the children wanted these developments, they also voiced that they should not to be at the expense of the city icons mentioned above or parks and green spaces. They all took it as given that hospitals, schools, fire and police stations, and libraries should stay but that it did not matter where they were located so long as they were in the city somewhere.

So what about the projected changes and continuities? How do these compare to the desired trajectories of each place? We shall turn to explore these questions presently.
Figure 67: York's Red Devil and Dijon's Chouette

(Sources: Dijon Notre Ville 2002:3; In and around York 1997:20)

Figure 68: Dijon: Amora Maille mustard

Figure 69: Dijon: Amora Maille mustard, red wine and the Duc de Bourgogne

Figure 70: Dijon: Shopping centres and Lake Kir
Projected Change and Continuity

There are marked discrepancies between the city that children wanted and that which they imagined *would* or *might* occur in the future. Unlike the desired futures which vary within the cities in similar ways according to the location of the school, the children's projected cities are remarkably similar irrespective of the school location or the city described. The children were acutely aware that they would not necessarily get what they wanted and that 'you just can’t plan your future because you just don’t know.' However, what kinds of places did the children imagine would emerge over time? As Falk and King ask:

So what sort of place to live in and work in will York be in 20 years? What sort of place do we want it to be? Will it just change and evolve in response to all kinds of pressures and events? Or will there be a binding thread of imagination, a shared 'vision', that will give purpose and shape to the decisions that will create the York of the future? (Falk and King 2003:5)

Let us think about these questions in relation to York and Dijon. The children’s projections about the sorts of changes they expect to occur in York and Dijon are presented in Table 19. Overall, in both cities, the children predicted that the city’s ‘gonna have expanded a lot, and it’s gonna be much bigger than it is now’ and that

<table>
<thead>
<tr>
<th>Table 19: 'How do you think York/Dijon will be in the future?'</th>
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<tr>
<td>YORK and DIJON</td>
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<tr>
<td><strong>To do with Size</strong></td>
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<tr>
<td>It’ll have got bigger.</td>
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<tr>
<td>It’ll have expanded a lot.</td>
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<tr>
<td><strong>To do with Old and New</strong></td>
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<tr>
<td>Things will be more modernized, like it’ll probably be the same, with more things, so it’s changed as well changed.</td>
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<tr>
<td>They’ll probably want to knock down all the old things. But maybe keep one or two old things, like the main things.</td>
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<tr>
<td><strong>To do with Shops and Shopping</strong></td>
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<tr>
<td>There’s gonna be lots and lots more shops.</td>
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<td>There’s gonna be lots more car sellers.</td>
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<tr>
<td><strong>To do with the Environment</strong></td>
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<td>There’ll be lots more pollution.</td>
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'there will be quite a lot of sort of shops and shopping malls and things.' Whilst children across the ages imagined a different future city, which was also more technologically advanced than it is today, the younger children (under seven years) tended to imagine a city in which more radical change had occurred and in which 'there'll be nothing left. It'll be completely changed.' As two children put it:

I think York's going to be really really modern, like there's gonna be like nothing really historical, because everyone wants like really new things, like we want lots of new things, so it's all gonna be like really modern and everything and nothing's gonna be left from the past. It'll be rubbish! There'll be noting left [of Dijon]! Everything's changed.

In contrast, the future city of the older children 'will be pretty much as it is now with a mix of old and new.' For instance, in York, the prevailing view is described in the following:

there'll be two types of York. I think there'll be a bit of York which is just historical evidence from the past and I think there will be the modern bit which the people who actually inhabit the city who want the shops and things but I think, I think York is already kind of two places. But it will be just more of it.

Likewise, the children in Dijon imagined that the city 'will be just the same with a bit a old and a lot more new on the outskirts.'

The younger children seemed more excited about the future city whereas the older children spoke more of their concerns about it. Whereas the younger children paid a relatively large amount of time describing new and radically different transport systems, such as 'flying cars' and 'tubes and tunnels like in Futurama', the older children tended to focus on the vast amount of new housing developments and construction that they were witnessing in the present. This made them foresee a decrease in green spaces and more pollution, which they were very anxious about. They consoled themselves with the view that there would probably still be some old things and that 'the old would look older next to the more newer and newer stuff.'
Being and Becoming in a Changing Place

As the children were discussing each place, or more accurately, as the children were discussing themselves in relation to each place, they spoke about themselves 'being and becoming'—a theme discussed briefly in Chapter 3, which relates to time and change. By this I mean that the children voiced an awareness of time and change inasmuch as they showed an awareness of themselves as young agents situated in time and place. They recounted stories that their parents and grandparents had told them about 'the good olden days' which described a time and a place that were different from the present city. In turn, they took it for granted that 'when we're old, it'll [Dijon] have changed and we might not like it but it might be because it's changed but it might also be because we're just old,' to which another child responded that 'it'll be because of both.'

They spoke about 'being' young agents in the world in the present with tastes and perceptions shaped by that present world. Yet they also spoke about 'becoming' older agents in the world in the future with tastes and perceptions shaped by that future world. Indeed, all children across the ages in both cities voiced that perceptions and attitudes to change are relative to the tastes of the individual, where in the life course that individual was, as well as the general cultural fashion of that time. Likewise, although they anticipated some change in the future, they were sometimes reluctant to specify whether that change was for the better or for the worse. This was primarily because they recognised that what was considered as positive change by one group of people might also be considered as negative change by another group of people. For example, when asked if York was different or kind of the same when their grandparents were little, one girl responded with:

Well, it depends how old your grandparents are really but, but if it, if they were quite old, like a hundred and three or something, then it would be. It, it’s, it’s funny because when you see streets on TV you see streets like Parliament Street years and years ago and they do because the shops the people dressed differently like in quite fancy clothes like we would maybe use for shows at the theatre and there’s like hmm, sweet shops where you don’t get your own sweets, they get your hands and give them to you and the, it looks, there’s more old-fashioned, it’s, and the fashion is quite weird—we would think so but then if they were around here they would think we were really weird so it’s not
really... I mean maybe when all the modern stuff comes in, the new generation will like it because they’ve been brought up with everything like it, all the modern stuff, but I don’t think the older generations, like maybe we will be, like when we’re sixty, everything will have changed, I don’t think we’ll appreciate it as much as much as we appreciate York now.

Moreover, the children recognised that whilst they might consider something favourably today as children, they might not consider it the same way when they are old people precisely because you see things differently when you are older; vice versa, if an old person was young today, they might see things differently also:

A: it’s becoz older people, it’s coz – no offense to them, but they’re not up to date sort of thing coz when you’re young, like yo-yos were the greatest craze in the world but then
G: but at our age, we’re like them and they want what we want.
A: and they think ‘oh Game boy, Play Station, what a load of rubbish! But would they say that if they were our age now?
G: they wouldn’t want their yo-yos now.
D: it’s just how you would look at it if you were a child’s point of view, so you can’t, can’t say, you can’t, if he’s 50, he can’t say well things are rubbish becoz if he was our age he’d say they were good.

The children expected that by the time they were ‘old’, they too were likely to look back with nostalgia on the past because when you grow up, ‘you’ll just remember things when you were little.’ Thinking back to the ‘good olden days’ was an intrinsic part to being old:

When you’re old, you would remember everything when you were a kid... Like you would remember everything when you were a kid... Like you would like everything like it was and if it changed a bit different, you wish it was like when you were kids.

Moreover, it was suggested that being old actually means not wanting change:

When you’re a grown up, you like remember things like before and stuff, but when, like, like it makes you boring because you don’t like it when it changes, but I don’t keep remembering things, like my mum’s always saying ‘Don’t you remember that?’ but that’s why I like it when things are like different.

Interestingly, in a study conducted by Mori (2004) on behalf of The Boundary Committee for England, in which 311 interviews with York adults residents were conducted to explore the views of local people’s preferences regarding boundary
changes, there was found to be clear preference for no change (68%) and of those
preferring no change, 89% did so very or fairly strongly. This would seem to not only
be in line with how the children perceived adults, but it bears interesting questions
concerning the differences and similarities to how children and adults ‘being and
becoming’ in changing places experience the change world around them. Furthermore,
it raises the need to account for a notion of agency throughout the life-course and the
ways in which people’s tastes and preferences vary also over time, and in turn the
feed-forward and feed-back implications these differences make on the structuring
structures around them (Bourdieu, 1984, 1992).

The children’s accounts are important because how we navigate through life is partly
affected by our interpretations of the past, present and future (see Brannen and Nilsen
2002; Callaghan 1998). Therefore, exploring the ways that children see themselves in
the future (as adults) might help us to learn about how issues of empowerment and
agency vary throughout the life course. Investigating the reasons behind different
perceptions of change and place allows us to consider how different people may react
to change and in turn produce more change and/or continuity in the future. Moreover,
the notion of children as knowledgeable agents being and becoming active agents in
the world is especially important in a study concerned with change and continuity.

After all, if the social is a process undergoing constant transformation (Freire
1970:56) then perhaps agents who know about themselves changing and growing up
in that constantly changing world might also being able to act in such a way that
change and/or continuity is a chosen and desired possible future outcome? Hence, we
might also ask how people and their environment may interact differently together
throughout time and what the implications of these dynamics are to implementing
long and short-term change. Furthermore, as we shall see in the remainder of this
chapter, the children also express a sense of ownership towards ‘their’ present and
future city, which I suggest underscores the potential reflexive power and agency
about the process of change of which they are part and which they imagine will occur.
Whose city? 'It’s our city and we’re proud of it!'\textsuperscript{81}

Throughout the discussions across the groups in both York and Dijon, the children claimed the city as ‘theirs’ often remarking that ‘it’s our city’ or ‘it’s our town.’ Here we see the paradox noted by Castells (1997: 61) that despite increasingly global processes, the local remains firmly at the forefront of people’s sense of place. In studying people’s narratives about the local, we also notice ‘the production of meaning and identity: my neighbourhood, my community, my city, my school, my tree, my river, my beach, my chapel, my peace, my environment.’

Furthermore, not only was the tone in which they claimed their city ‘theirs’ both confident and assertive, it also resonated a sense of pride in it being ‘their city.’ Woolley et al. (1999) also report in their study exploring children’s experiences of the city-centre that overall, the children’s feelings were broadly positive. Falk and King (2003:21) also report that with regards to the local adults they interviewed about the city, their ‘views expressed show great pride.’\textsuperscript{82} In this study, the children’s sense of pride generally accompanied statements referring to other people coming to ‘their’ city, whether it is for business or pleasure. Indeed tourists and visitors were especially welcome to visit in part because it ‘helps the local shops make money’ but also ‘because it shows that it’s like a nice place and well it’s our city.’ The following conversation also captures this:

\begin{quote}
H: Yeah, it’s [York] quite famous as well.
D: Yeah great, there’s always a load of Chinese and Japanese tourists coming over.
EU: Do you like them coming over?
All: Yeah
EU: Why?
D: coz’ you pretend to be someone else and ask them for the time\textsuperscript{83} [All laugh]
\end{quote}

\textsuperscript{81} The title and theme of this section is taken from the Whose City? Conference recently held at University of Northumbria (see Whose City? 2003 for more details).

\textsuperscript{82} That said, Falk ad King (2003:21) also add that the local adults in York also spoke about their concerns about change in York.

\textsuperscript{83} Although issues of self-identity do not appear as a theme from the interview material, this excerpt suggests that it would have been interesting to pursue it further. For example, did they pretend to ask the time as a form of resistance to all the tourists coming to the city? Or were they in fact underscoring their own local identity by paradoxically ‘pretending to be someone else’?
A: you get used to seeing them walking around York, with these cameras, taking pictures and you think `Yeah, that’s our city.’ [child’s emphasis]

Unless I prompted the children by asking them directly what they did not like about York/Dijon, they rarely described ‘their’ city negatively. Interestingly, the children in York were slightly more negative about their city compared to the Dijon children; the Dijonnais seemed a little more proud of their city than the York children. For example, in both places, the children noted that ‘it’s boring.’ However in York, it was also often said that although the tourists were welcome and seen to be an intrinsic part of the city’s character, it was important that ‘there’s not too many’ because ‘you can never can just like walk around if you’re in town, you always have to bump into a tourist’ ‘which is a bit annoying.’ It seemed that York children felt more conflict towards the visitors and tourists than the Dijon children did. Whilst they recognised that ‘it means our city is famous,’ ‘it gets annoying when they stop and ask you for directions all the time,’ although interestingly, some children had fun with this by pretending to be foreigners themselves and asking locals for directions themselves.

It is difficult to know whether this difference is a result of the questions I asked or due to other reasons. Perhaps it was a reflexive but intrinsic part of the group interaction, which came about because I was ‘an outsider’ asking them about ‘their’ city. Perhaps their sense of ownership has implications on their own sense of identity, which then leads them to speak positively about it also? After all, ownership or possession of something necessarily suggests a strong relation between the ‘owner’ and that thing which is ‘owned.’ In turn, it is possible, then, that the children in Dijon may have been responding to the fact that in most groups I explicitly came across as a visitor, sometimes also telling them that I was not French and that I would be returning to the UK very soon? In contrast, in York, I sometimes confessed to having once lived there but that I had since moved elsewhere. Was there, for example, an unspoken pressure felt by the Dijon children to speak more favourably about their city to the ‘foreign visitor’ which was not experienced by the York children? Although I was unable to explore this fully, it would be interesting to learn if and how my own presentation and identity might have affected the way that the children presented their ‘own’ city.

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Interestingly, in a study exploring the implications of young people’s affinity to school spaces which they also identify as ‘my place’, Swaminathan (2004) argues that this sense of ownership promotes ‘a sense of identification, commitment, integration, and alliances among students and faculty at the school.’ Thus, I would argue further, with Woolley et al. (1999) and Hart (1997b), that a sense of pride in ownership is relevant to the children’s sense of agency within the city and their sense of loyalty and involvement as a local citizen within ‘their’ city.

The question of ‘Whose city is it?’ is certainly a complex, political one. It has yet to be resolved but has received a great deal of attention in recent years as the effects of globalization have become more apparent at the local level (see, for example, Harloe et al. 1990; Harvey 2000; Massey 1993b, 1996; Purcell 2003; Sassen 1991, 1994, 1998, 2003; Whose City? 2003; Wilson 1987). As Lefebvre notes:

[...]he analysis of any space brings us up against the dialectical relationship between demand and command, along with its attendant questions: ‘Who?’, ‘For whom?’, ‘By whose agency?’, ‘Why and how?’ If and when this dialectical (and hence conflictual) relationship ceases to obtain – if demand were to outlive command, or vice versa – the history of space must come to an end. (Lefebvre 1974/2003:117)

In contrast to the many recent debates, however, the children’s reasoning was straightforward: the city belongs to them and others who live in the city. Most children simply stated that the city was theirs without elaborating why it was:

B: you can’t really believe it’s city really.
EU: really?
B: ‘coz it’s just our area. [child’s emphasis]

Others affirmed that it was ‘theirs’ ‘because we live here and we know what the local people want.’ Indeed, it is the very fact that they live in the city, the children suggested, that they should – and have a right to – be consulted about changes that are implemented to it. Although they were accustomed to not being approached because they are ‘just kids and so they [adults] don’t care and don’t think we
[children] know anything’, the children frequently expressed that ‘it’s not fair! Because we live here too.’

In fact the children’s reasoning about their claim to the city is completely in line with Lefebvre’s (1968; 1996) argument that ‘The Right to the City’ belongs to citadens – a term he uses to incorporate both the notion of citizenship and the local inhabitant. According to Lefebvre, citadens must be central to any policy or decision making process about the present and the future production of urban space. In contrast to Lefebvre’s citadens, however, the children that took part in this study frequently voiced that they enjoyed the interviews precisely because ‘no one ever asks what we want to change. They just go ahead and do it without even ever asking us.’ Yet as one Dijon boy remarked, ‘it’s us who live here. It’s our town and they should ask us what we want.’

When the possibility of radically changing the city was put to them, the children assumed that those who were implementing those changes were not of the city and that they did not know what was best for the local residents or for the future of the city, as is captured in the following:

No but, no but, these people [who might propose the development of sky-scrapers], they’re just new to the whole town and so they come and they think ‘This isn’t like my town’ and ‘Yeah, this is rubbish’ and they don’t actually learn to like it, do they?... But it’s our city! No, but the people who live here, it’s their city, they might not want it! They might just want things to basically stay the same with a few new things, just because that feels a bit exciting but you can’t change it completely.

R: I think York will be totally different [when I grow up]. I think it will be totally taken over unless somebody does something about it now!
U: Taken over by what in what way?
R: Taken over by businessmen and people who just want money.
H: Taken over by the future!
R: No, by really modern people, taken over like -
H: yeah well I’d take a machine gun and blow their brains out and there’d be lots of blood!

Thus, as was also found in Byrne and Doyle’s (forthcoming) study investigating the views of local residents in South Shields, whilst the children spoke about ‘their’ city, ‘our’ town because ‘it’s us who live here’, when it came to talking about who is
in power to implement change in the city, it quickly became a question of ‘they’, ‘them’, ‘those people’, i.e. people ‘Other’ than the children. For the children, therefore, ‘they’ are not only ‘adult others’ whose ‘brains’ and ‘blood’ they would like to spill, they also fail to recognise the needs of the local people. Indeed, whenever the children would impersonate one of ‘those’ people, they would also put on a ‘posh voice’ whereas one of the things that makes York ‘York’ in one group was that ‘it has its own kinda culture.’

Just as Lefebvre argues for the production of urban space which should meet needs of urban inhabitants so too do the children argue for a more democratic process in which more local people are consulted about the changes. One group made the following suggestion:

P: I think that they should have graphs and things that tell a graph to show like hmm... they’re’d be loads of different things and, like categories and then you can like put tally marks for how many people there are . . . I think they should be like some children and grown ups.

M: I think they should like, the council should go and ask what the grown-ups would like, ask the children, and ask people in different categories what they would like and then they could like, think about that, and make something that’s all of those together.

Discussion: The Influence of School Location

There are a number of points I want to highlight in relation to the children’s responses and how we might interpret them. For instance, many specific descriptions about York and Dijon, both in the present and future, entailed a visual component. Paradoxically, whilst the act of seeing is non-tangible, the children’s descriptions render the future imaginary cities ‘real’ precisely through that which is visual. There are several possible reasons for this. The most simple explanation is that children tend to use visual descriptors when they talk. However, in their descriptions of their ‘ideal/fantasy city’, not only do they describe that which can be seen, they also refer to the smell, the sound, the touch and the texture of those places. In contrast, York and Dijon were described as ‘noisy’ in only five of the groups (four of which were in Dijon schools)
and the ‘smell’ of the city is only mentioned once by one group talking about ‘York when there was Vikings’; neither touch nor texture were referred to at all. Therefore, the simple explanation that children tend to use visual descriptors does not adequately explain the children’s responses. It does not explain why visual cues were by far the sensory expressions most relied upon when describing York and Dijon and yet when describing their ‘ideal/fantasy city’, the children used other sensory descriptors.

What is interesting about this is that in Byrne and Doyle’s (forthcoming) study which explores the people’s understanding of ‘postindustrial transformation’ from the past through the present to the future, adults also used many visual cues in their discussions. Whilst it is also possible that this merely highlights our need and capacity to think and express ourselves ‘visually’, I propose that this is not the only reason and that instead the ‘visual’ references voiced by the informants both in this study and in Byrne and Doyle’s are pointing to something more significant. I suggest that these visual references are not simply coincidences or a reflection of our cognitive capacities but that they reflect something that is being picked up through our interactions in the urban world precisely because of our everyday interactions with the urban. As Lefèbvre points out:

> [an] important aspect of spaces of this kind [i.e. historical spaces of village and city] is their increasingly pronounced visual character. They are made with the visible in mind: the visibility of people and things, of spaces and of whatever is contained by them. The predominance of visualization (more important than ‘spectacularization’, which is in any case subsumed by it) serves to conceal repetitiveness. People look, and take sight, take seeing, for life itself. We build on the basis of papers and plans. We buy on the basis of images.

(Lefèbvre 1974/2003:75-76)

Whilst to some extent this may seem obvious, within extant urban literature there is very little explicit discussion concerning the role that visual cues may play in producing urban places. However, I argue that the children’s responses (and probably also the adults’ responses in Byrne and Doyle’s (forthcoming) study) were mirroring the importance that the visual plays both in the world and our perceptions of

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84 The exception to this is perhaps Crang’s (1996) work.
the world. Moreover, I suggest the visual plays a particularly important part in the generative mechanisms shaping the urban change and continuity in York and Dijon as observed through the data collected for this study.

Next, it must also be noted that these answers were not a reflection of the children's lack of imagination. When asked to describe what their ideal city would be like, their answers were imaginative, creative and fantastical. This was one of the most animated parts of the interview as they excitedly described a place so different from the current city that it seemed to belong in another world. They described cities made of chocolate and sweets, where there was no pollution or war, where the city was 'all pink and then purple' and where its colours changed at will, where transport systems eliminated all traffic pollution and congestion, travel time and distance. However, when asked specifically about how they imagined York and Dijon in the future, the scope of their answers decreased dramatically. Even though there seemed to be no end of possibilities when it came to imagining what an ideal city might be like, it did not seem possible for them to consider the city dramatically different from what it already was. Relative to the possibilities regarding their ideal city, change in York and Dijon was strictly limited to a small range of possible futures.

It could be argued that the children were acknowledging the difference between the real and the non-real, whereby the real must involve 'more realistic future possibilities'; they were simply answering the question accordingly. In fact, I believe this to be the case. Importantly, however, and crucial to my argument which will be elaborated in the next chapter, the extent to which something is a 'realistic' future possibility depends heavily upon the extent to which change is perceived to be possible in the present. As Bourdieu notes:

Agents shape their aspirations according to concrete indices of the accessible and the inaccessible, of what is and is not 'for us, a division as fundamental and as fundamentally recognized as that between the sacred and the profane.

(Bourdieu 1990b:64)
The children’s narratives imply that present context is fundamental to future change and that whilst change in York and Dijon is contingent, it is neither deterministic nor is it limitless. Instead, change in these places is strongly dependent upon the kind of path it is on now. As Bourdieu continues:

The pre-emptive rights on the future that are defined by law and by the monopolistic right to certain possibles that it confers are merely the explicitly guaranteed form of the whole set of appropriated chances through which the power relations of the present project themselves into the future.

(Bourdieu 1990b:64)

This being the case, I also wanted to explore, if not understand, the ‘Why?’ and ‘How?’ behind the responses. Why were the responses those ones and not others? Why were they shaped as they were? How were they formed? How were they generated? How can we be sure that their views and opinions really were what they thought? In order to investigate these questions, I needed to control for a number of issues that might have influenced their responses. Although any number of possible factors may shape their responses, based on theoretical and empirical literature in this field, I followed up the following six possible explanatory hypotheses: a) I, the researcher, influenced the children’s responses; b) their parents’ views and attitudes did; c) their teachers or schooling affected their answers; d) the children’s responses were shaped by their own views and experiences and no else’s; e) some or all of these influenced the children’s responses to a greater or lesser extent; f) none of these issues were causal factors. Based both on the data and the contingent nature of the social, it is not possible to completely disprove any of these options. Therefore, by implication, we must also rule out the last possibility that none of these hypotheses applies. Similarly, by implication we must also assume that some or all of the hypotheses are causal factors.

In terms of exploring if I was a possible influence, I considered the possibility that the children were simply responding as they thought I wanted them to. However, I argue that even if I was a source of influence with respect to their answers, this was not significant for three main reasons. First, the very fact that I approached the children at
all for this study was because my basic premise was that children are capable social informants (Bateson 1984). That is, they are competent social actors who are also capable of voicing and articulating their experiences in the world and about the world (see, for example, Alderson 2001; Corsaro 1997; Hart 1997a; James 1998; James et al. 1998a; James and Prout 1995, 1997; Mayall 2002; Pole et al. 1999; Qvortrup 1991; Wyness 2002). Their responses merely confirm the view that children are capable of autonomous thought (at least as much as adults are).

Second, I did not have any clear pre-conceptions as to what their responses might be. At most, I imagined possible differences and similarities between their responses but I did not know what those patterns might consist of. Since I had little knowledge of what I might have wanted the children to say, it is very unlikely that they were being influenced in this way. As far as I was concerned, the children were the experts and I was approaching them to learn from them. Indeed contrary to the argument that the adult interviewer is in a more powerful position than the child interviewee (Alanen and Mayall 2001; Christensen and James 2000b; Mandell 1991), because the children held knowledge that I wanted to access – and could only access it if and only if they chose to share it with me – my view is that as far as knowledge was concerned, the children held the more powerful role.

Third, in all groups, I stressed that whilst I was interested in what they had to say, there was no ‘right’ or ‘wrong’ answer to the questions I was asking. In addition, I frequently asked the children whether they were ‘just saying that ‘coz you think that’s what I might want to hear?’ which they vehemently denied on every occasion. Whilst it is not possible to know the extent to which this might have been influenced their answers, given the first assumption, i.e. that children are competent social actors, we must at least consider that they were being honest and were merely reflecting on their experiences of the world around them.

Similarly, even if parental or educational circumstances played some part in understanding their responses, it is difficult to gauge the extent to which they did, or did not as the case may be. Although I did not question any parents in this
investigation to explore this issue, I did talk to the teachers to learn about whether they were being taught to respect, and protect the older city-centre features. One of the first teachers I approached did indeed explain that in York, the National Curriculum requires teachers to select one of three tracts from the subject of ‘History.’ The ‘local history’ option was a popular choice with local teachers in part because ‘it’s easy to teach history when it’s just outside your window’ and short half-day trips can be easily organised and are relatively cheap because it is possible to get everywhere by bus or by foot. However, I later discovered that not all teachers had selected this ‘local history’ option and that the children’s responses did not differ depending of whether or not they had.

Furthermore, in Dijon, local history is not part of the curriculum and is only taught if a teacher is especially motivated to do so; in France, children are taught about French history. Except for one school, none of the teachers or Head Teachers I spoke to taught local history. Yet the children’s responses in Dijon also show a similar pattern to those in York whereby the extent to which ‘history’ must be preserved in the future is influenced by the location of the school in relation to the city-centre. In fact much to the despair of the teaching figures at the school where local history was being taught, the children explained that they were positively for historical aspects of the city-centre to change in the future because they are ‘too old and too dull.’

More importantly, my reasoning is based on the fact that I directly questioned the children about whether they thought that I, their parents, their teachers or their schooling were influencing their answers. The children always denied (often in unison) these supposed ‘allegations’, protesting that ‘we’re just saying what we think’ and that ‘no, we can think for ourselves.’ Certainly, if we consider the principle of Ockham’s Razor again, the simplest explanation is that the children were saying what they were saying because that is what they thought (as opposed to what their parents,

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85 The Head Teacher proudly explained to me that the only reason local history was being taught at this school was because she was passionate about the ‘Patrimoine’ and was personally horrified at the recent changes to the outskirts of the city that had taken place in recent years. The teacher leading the class of children I spoke to also confirmed that it was the Head Teacher’s influence that motivated him to engage the children with Dijon’s local history.
their teachers or I might or might not have wanted them to think). This possibility is also in line with one of the main presuppositions of this research concerning children as competent social actors capable of expressing their own views and experiences about their everyday lives.

At the very least then, we can say that the children’s responses were probably greatly influenced by their experiences of being-and-becoming in the local world around them and to a much lesser extent, that they were also influenced by me as the researcher, by their parents, teachers and schooling. The remaining questions to be explored, then, are concerned with understanding what it is about the local world that might explain the children’s responses, precisely in relation to that present and future local urban space that they described.

Asking why the children’s descriptions about the urban correspond to the urban condition around them may seem like a meaningless circular argument. After all, asking why a white rose is described as a white rose is nonsensical. Yet as Lefebvre (1974/2003:74) notes, quoting Heidegger, whilst a rose does not know that it is a rose, ‘a city does not present itself in the same way as a flower, ignorant of its own beauty’ since it has ‘been ‘composed’ by people, by well-defined groups.’ Therefore, in asking why the children describe the cities as they do, the underlying questions are: a) why has the city been composed in that way? b) Who is composing the city? c) what are the mechanisms by which those people or those groups of people are composing the city in that way? We shall now turn to consider these questions in the concluding chapter, in which I argue that traces of (some of) the generative mechanisms, which produce the city spaces of York are Dijon, are revealed in each of the empirical chapters. Moreover, by considering the chapters together, I formulate a possible theoretical understanding, albeit a tentative one – which is also based on empirical data – that serves both to explain the change and continuity observed in York and Dijon and understand the children’s responses about these places.
Integrating the Findings:
Re-representing Change and Continuity

The use of methodological triangulation\(^{86}\) (Denzin 1970; Miles and Huberman 1994; Patton 1990) in this study has provided windows through which different descriptive representations of change and continuity in York and Dijon can be observed. But what are we to make of these different descriptions? How are we to understand and interpret the different empirical findings? In Chapter 7, the census and administrative data revealed that population levels and socio-economic measures have fluctuated spatially at the local level over the past two to three decades. In Chapter 8, the visual sources revealed changes but also some frozen spaces. Whilst the frozen spaces may only be there thanks to heritage efforts, these efforts still signal a dynamic that is set up specifically to preserve those particular pockets of time and not others.

How are we to reconcile the conflicting forces, which, on the one hand, cause change to occur and, on the other hand, maintain things very close to how they have been for years? Is continuity maintained (e.g. heritage industry) or is change prevented (e.g. conservation efforts)? Is continuity a reflection of a resistance of change? Or is it more simply that because complex systems exist at the state of far from equilibrium there is always going to be some change going on? And maybe it is precisely because complex systems respond to whichever basin of attraction they are on that there will also always be some continuity going on? What if, for the sake of argument, all complex cities exhibit change and continuity throughout their trajectories, but the

\(^{86}\) Cf note 46 p.88 definition of term as it is used here.
extent to which one outplays the other varies depending on where in the trajectory that city is?

And what about the children's discussions? How, then, are we to understand the children's discussions in relation to the observations derived from the census and administrative data and those obtained from the photographs, maps and other images? What sorts of questions do they raise in relation to the ways we understand York and Dijon as complex places? In Chapter 9, we learnt that the children have distinctive notions of what a city is and that from their discussions it would seem that York and Dijon may be structured slightly differently. We also learnt about the children's desires and projections for the future city and the ways that they seemed to vary in degree depending on whether or not the children's school was located near the city-centre. How might we understand these findings? What possible causal processes might explain them?

Essentially, it could be argued that the methods employed have produced six empirical representations of change and continuity. That is, a story each for York and Dijon represented according to three main types of data. Each representation provides important information about these cities. Together, however, I argue that they provide an even richer story about urban change more generally. As Ekström (1992:117) writes, it is of 'central importance in social science to reconstruct the relevant social, temporal and spatial context, and furthermore to compare the import and effects of the mechanisms in different contexts.' Moreover, the constant questioning about the data obtained within and between the different methods used increases the validity of the emergent theory, which as Glaser and Strauss (1967) advocate, remains grounded in (all) the data.

We can organize these representations as a table in order to show the three elements of each representation, i.e. how each story is set around a place, a time and a type of data used to construct it (see Table 20). Doing so, also enables us to see the various possible ways of combining and comparing these stories. That is, we can compare different pictures of York, each depicted with a different type of data and we can do
the same for Dijon; or we can compare observations across the two places. We might also ask how those stories might be altered by changing say, the ‘beginning’, ‘middle’ or ‘ending.’ In effect, we can consider the multiple possibilities that each place might undergo in its evolutionary story. This has been one of the ways that I have combined the quantitative findings to the interwoven process of theory generation and qualitative data collection. It allowed the quantitative and different kinds of qualitative data each to ‘tell their own story/ies.’ The ‘statistical story’ was used to inform the ‘qualitative story’, and vice versa. Indeed, there was a constant iterative process going on as I reflexively moved to-and-fro between thinking about the quantitative data to understanding the different qualitative data, and in turn, the observations, hypotheses and further questions emerging from one data source and those emerging from another. Hence, I was able to create a rich description of qualitative and quantitative accounts from which to construct an overall theory. Although I considered quantitative data alongside qualitative data, this did not prevent engaging in a constant dialogue with the data until an end state of ‘adequate description’ was achieved (Byrne, 2002). In other words, I used grounded theory’s core principle of allowing theory to emerge from empirical data. In this case, the theory emerged though the integration of quantitative and multiple types of qualitative data.

In addition, I argue that the methods and the data employed invite themselves to causal questioning and reflection. On the one hand, the temporal-spatio nature of the data permits the development of a more substantial causal understanding than if, say, the methods merely explored a cross-section at one particular time in point. As Walker and Leisering (1998:18) note, the ‘distribution of a phenomenon within a population is intimately connected with its distribution over time.’ On the other hand, whilst the data used is not time-ordered in the usual sense, except perhaps for the Census and administrative data, it is nevertheless time-sensitive – a characteristic shared by complex systems generally (see Chapter 2). Each method explicitly explores each city in relation to a particular time frame (e.g. past-to-present or ‘present-to-future). Moreover, the interviews with local schoolchildren allow for ‘a reflexive return to informants to assess their views about qualitative descriptions of processes of change’ (Byrne 1997). Thus, not only does the data allow for an exploration of how urban
space has changed over time, it also (through the children’s discussions) allows for an insight into how the reflexive agent – individually and collectively – may interact within that space over time. In other words, by combining and comparing these representations, we can recount an overall story about urban change and continuity in York and Dijon. In so doing, we also raise crucial questions relating to causality.

<table>
<thead>
<tr>
<th>Place</th>
<th>Type of Data</th>
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<tbody>
<tr>
<td></td>
<td>Census / Administrative Stats</td>
<td>Photographs / Maps / Images</td>
<td>Children's Narratives</td>
</tr>
<tr>
<td>York</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Dijon</td>
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Table 20: Six empirical representations of York and Dijon

Whilst these different representations provide dissonant data that may appear to be incongruous and impossible to integrate in any meaningful way, I follow Perlesz and Lindsay’s argument that it is precisely through such findings that deeper reflections about the topic of investigation can be drawn:

Dissonant findings within a positivist framework would be viewed as evidence that one or more measures with the study have an error bias that reduces their validity... Within a post-positivist paradigm the researcher is invited to consider both the ontological and epistemological context in making sense of these findings. (Perlesz and Lindsay 2003:35-36)

After all, from a realist perspective, whatever the underlying causal dynamics of the complex city, there must always be generative mechanisms going on in the social world that make those dynamics possible; we might also expect to see those dynamics acting in the social in some way. Therefore, the ‘dissonant data’ presented in the preceding empirical chapters are perceived as representational traces of the generative mechanisms from which the York and Dijon emerge. Viewed from this perspective, I argue that the contrasting findings not only help to develop a general understanding of change and continuity in York and Dijon, but they also raise important questions
concerning the generative mechanisms underpinning the observed or imagined (as in the case of the children’s projections) urban change over time. I tentatively asked these kinds of questions at the end of each empirical chapter; the questions were necessarily tentative precisely because the isolated findings facilitated descriptive rather than explanatory reflection. In contrast, however, in this penultimate chapter, I propose a more assertive argument based on all the findings together.

Basically, I have joined together the notion that complex systems self-organize and are autopoietic with Bourdieu’s concepts of the field and habitus. I argue that the urban is a complex system (and therefore exhibits the characteristics of a complex system) and that this structure is re-produced through habitus (Bourdieu 1984, 1990a, 1990b, 1993, 1998; Bourdieu and Passeron 1977/2000). This explanation links both the processes of change and continuity observed in York and Dijon and provides a way of understanding the children’s discussions in relation to these observations. Conversely, I suggest that Bourdieu’s notions of the field and habitus can provide a language that can be employed to the complex dynamics of autopoiesis. In addition, by taking into account the nested nature of a complex city, we can also understand how different areas of the city manifest more change or more continuity depending on the lived individual and collective habituses of those areas. In other words, I propose a notion of the ‘complex habitus of the city’ based on a selective use of Bourdieu’s work, which I suggest, integrates the different findings derived from the various methods used in this study.

This argument stems directly from the empirical findings and would not have emerged without the different methods used here. The following argument is therefore an example of the kind of causal reasoning that is possible to obtain from the use of multiple methods. It illustrates the ways in which different methods allow different but inter-dependent insights into the workings of the social world. Indeed, I suggest that the argument put forth here is an example of Bhaskar’s realist program at work, which Blaikie (1993:169) sums up as ‘a process of description, explanation and redescription, in which layers of reality are continually exposed.’ In what follows, then, I integrate and extend the different descriptions and propose a possible
explanation, which provides a new way of understanding change and continuity in York and Dijon. This redescription is also more adequate at the level of cause and meaning.

The fact that this alternative description is based on an integration of all the findings makes it difficult to present here using conventional textual form because, of course, I did not arrive at this conclusion through a linear process. For this reason, I have divided the remainder of the chapter into three main parts as follows. In the first part, a brief overview of the complexity idea of autopoiesis is followed by that of Bourdieu's twinned notions of the field and habitus. Here, I also introduce my own concept of 'city field', which is developed from Bourdieu's own theory of fields. The second part forms the bulk of this chapter. Its overall aim is fourfold: a) to present an overview of my general argument; b) to inform the reader precisely where I derived this argument from; c) to illustrate the ways in which multiple methods allow for an understanding about how different aspects of the social (which are each highlighted precisely in the use particular methods, e.g. the census and administrative data tends to focus of the demographic and socio-economic whilst also considering how these things vary spatially; in contrast, the photographs and images tend to highlight the physical and spatial aspects of these places, etc.) actually interact with one another; and d) to illustrate the ways in which observations derived through different methods can be combined and compared such that they lead to a causal explanation of the empirical descriptions. I achieve these aims mainly by recalling some of my own thoughts and questions during the research process itself. In so doing, I present both an explanation of how and why I bring in the concepts of autopoiesis, habitus and city field in relation to understanding the empirical findings of this study.

**Autopoiesis, Habitus and the Field**

Whilst, each of the concepts of autopoiesis, habitus and the field are central to my argument, it is neither the place nor my intention to provide thorough reviews of either
of these ideas. Instead, I simply want to very briefly summarize the general essence of them. Later, I further draw out their main elements as a way of explicating my general argument.

Suffice to say, an autopoietic system is described by Zeleny (cited in Khalil and Boulding 1996:123) as ‘a system that is generated through a closed organization of production processes such that the same organization of processes is regenerated through the interaction of its own products (components), and a boundary emerges as a result of the same constitutive processes.’ In other words, an autopoietic system self-organizes in such a way that it also re-produces itself; its own components re-produce themselves such that the overall structure of the whole system is re-created. It is a process of self-reproduction. This is a simple but I think accurate way of summarizing the essence of autopoiesis.

As for Bourdieu’s work, the main strands of thought that I am drawing strongly on here are best summarized by Bourdieu (1998) himself in the Preface to Practical Reason. Firstly, Bourdieu summarizes ‘his work’ as a ‘philosophy of science.’ Most frequently, authors refer to Bourdieu’s ‘theory’ or ‘theories’ but I think the term ‘philosophy’ is more apt inasmuch as his work offers an ontological and epistemological understanding of the social world and how it comes to be as it is.

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87 I also refer the reader to the following texts for further in this area: Maturana and Varela (1992) and Mingers (1994). As for an entry point into Bourdieu’s work, there are many places to start; Jenkins (2000) and Waquant (2000) both have differing recommendations. My own view is that Bourdieu’s own work provides a good entry point, in particular The Logic of Practice (1990b) and In Other Words (1990a). I also recommend Jenkins (1992) for an accessible yet critical review of Bourdieu’s main theories, as well as the Special Issue of Science Humaines (2002) (in French) which was produced as a tribute to Pierre Bourdieu shortly after his death in 2002; it critically summarizes his main works and theories.

88 The terms ‘self-organisation’ (which refers to, as the terms suggests, a system’s ability to spontaneously re-organize itself; its structure causes it to self-organize) and ‘auto-poiesis’ are frequently referred to together (and often alongside the concept of emergence also) because all autopoietic systems are self-organizing (and involve emergent properties). Conversely, not all self-organizing systems are autopoietic. Therefore, it becomes useful to specify that the systems in question are a) self-organizing and b) autopoietic. It is also worth noting that there is an ongoing debate, which I do not want to get into, concerning if and how auto-poiesis can be applied to social systems at all (rather than biological or artificial) (see Luhmann 1995; Mingers 1994; Varela 1981; Zeleny 1980; Zeleny and Hufford 1992) Suffice to say that I follow Luhmann’s (Luhmann 1982, 1995) main aim in developing the notion of auto-poiesis specifically for social systems which is that the concept provides a way of perceiving social systems in general. That is, I suggest that the city is perceived as a self-organizing and autopoietic system. The city also consists therefore of self-organizing and autopoietic components.

89 See also glossary entry in Appendix A.
Secondly, Bourdieu (1998:vii) suggests that his philosophy is essentially ‘relational’ in that it accords primacy to relations’ – even though those relations may not be visible and must be ‘captured, constructed and validated through scientific work.’

Thirdly, Bourdieu (1998:vii) notes that ‘it is a philosophy of action designated at times as dispositional which notes the potentialities inscribed in the body of agents and in the structure of the situations where they act or, more precisely, in the relations between them.’ In other words, Bourdieu’s argument seeks to escape from the ‘individual versus social’ dichotomy by transcending the agency versus structure debate. (The extent to which authors believe Bourdieu succeeds in this task is variable and I will come back to this point shortly.) The way he sets out to achieve this is by illuminating ‘the social at the heart of the individual, the impersonal beneath the intimate, the universal in the particular’ (Bourdieu and Wacquant 1992:89). (As a parallel thought, note that one of complexity theory’s general fortés is arguably its ‘capacity for handling issues of micro/macro inter-relationships’ (Byrne 1998b:48)).

Fourthly, his philosophy rests on ‘a small number of concepts – habitus, field, capital – and its cornerstone is the two-way relationship between objective structures (those of social fields) and incorporated structures (those of habitus)’ (Bourdieu 1998:vii). It is this cornerstone relationship (i.e. between habitus and the field) that is particularly important to us here. In terms of explaining the notion of habitus, one of the many ways Bourdieu describes the notion of habitus, is as follows:

The conditionings associated with a particular class of conditions of existence produce habitus, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively ‘regulated’ and ‘regular’ without being in any way the product of obedience to rules, they can be collectively orchestrated without being the product of the organizing action of a conductor.

(Bourdieu 1990b:53)

Whereas the habitus is realized in ‘the feel for the game’, Bourdieu suggests that the ‘field’ (champ) is akin to a pitch or a board wherein agents are assigned with certain
forces and resources at any given moment (Bourdieu 1984, 1993). The concept of ‘field’ accounts for a relational and non-deterministic ontology between individual and collective agents who are necessarily situated in concrete social situations and contexts. As Johnson explains:

According to Bourdieu’s theoretical model, any social formation is structured by way of a hierarchical organized series of fields (the economic field, the educational field, the political field, the cultural field, etc.), each defined as a structured space with its own laws of functioning and its own relations of force independent of those of politics and the economy, except, obviously, in the cases of the economic and political fields... A field is a dynamic concept in that a change in agents’ positions necessarily entails a change in the field’s structure. (Johnson 1993:6)

Yet importantly, unlike real games, the agents who participate in Bourdieu’s metaphorical games are not consciously aware that they are playing the game.

...in the social fields, which are the products of a long, slow process of autonomization, and are therefore, so to speak, games ‘in themselves’ and not ‘for themselves’, one does not embark upon the game by a conscious act, one is born into the game, with the game; and the relation of investment, illusio, investment, is made more total and unconditional by the fact that it is unaware of what it is. (Bourdieu and Wacquant 1992:66)

Indeed, agents are so immersed and involved in the game despite being unaware of their ‘investment in the game’ that he or she is like a ‘fish in water.’ That is, ‘when habitus encounters a social world of which it is the product, it is like a ‘fish in water’ . . . it takes the world about itself for granted’ (Bourdieu and Wacquant 1992:127). The result of this dialectical relationship between habitus and the field is summed up by McNay:

The generative nature of the habitus is explained by what Bourdieu calls a ‘double and obscure’ relation between individual habitus and the social circumstances or ‘field’ from which it emerges. On one side, there is a relation of conditioning where the objective conditions of a given field structure the habitus. On the other, there is a relation of ‘cognitive construction’ thereby habitus is constitutive of the field in that it endows the latter with meaning, with ‘sense and value’, in which it is worth investing one’s energy. (Mcnay 1999)
In effect, I use Bourdieu’s notions of *habitus* and the *field* to understand the empirical observations found in this research. More accurately, I draw up Boudieu’s notion of *habitus* and my own concept of the *city field*, which is derived from Bourdieu’s notion of fields. The notion of ‘city field’ also extends Corsaro’s (1997) *Orb Web* model childhood touched upon in Chapter 3. Whilst Bourdieu explicitly describes the field as ‘an arbitrary social construct’ which is not identified by physical space, instead I argue that the *city space* — and the spaces which constitute it — work along the same lines as the ‘fields’ that Bourdieu writes about. This is not to say that Bourdieu’s notion of ‘field’ simply maps onto geographical space. Instead, what is being explored here is that the possibility of explicitly adding geographical space to Bourdieu’s notion of ‘field’ as social space. After all, from a less abstract perspective, one of the real features of being-in-the-world is that we are — *always and necessarily* — grounded in *physical* space and the inevitable spatial and physical distances between one another that physical geographical space entails. I am not arguing that physical space has more influence over social space. Rather, social and physical space might be combined because, for example, what it means to be ‘British’, ‘female’, ‘middle- or working-class’ may be manifest itself differently depending on whether the person is geographically situated in the UK, the USA or Africa etc. Indeed, what was deduced from the interview data is that the location of the school matters when it comes to the tastes, desires and future projections that the children have about the city as a whole.

That said, note the exploratory perspective of what is being proposed. I am not claiming to use all of Bourdieu’s philosophy but instead am drawing on parts of his philosophy in order to better understand the data collected for this research. For instance, I do not refer to Bourdieu’s other key concepts of symbolic power or the body, both of which are fundamental dimensions of *habitus*. Based on the data obtained in this research, it is not possible to integrate these concepts into this argument. However, it might be argued that just Bourdieu (1990:79) writes in relation to social class and the body, ‘all the products of a given agent, by an essential overdetermination, speak inseperably and simulateneously’ of the geographical space around him or her precisely because urban space is social *and* geographical space. Be
that as it may, what follows must be read as a tentative and exploratory argument and not one that is either finalised or comprehensive.

Therefore, I suggest that 'without the aid of a conductor', the city space (of York and of Dijon) reproduces itself through 'structuring structures', which are themselves written into and written by the 'city field.' Moreover, the city field acts as a Maxwell's Demon inasmuch as it also maintains the pre-existing frozen city-centre and changing outer city-centre.

In the same way as Bourdieu explains that a collective habitus is constituted in things and minds (1990, 147), we might also say that a collective habitus is constituted in the things which define the urban and the minds of the people inhabiting and interacting with the urban. In addition, I suggest that we also imagine the children interviewed in this study to inhabit habituses specific to those same city fields which shape and mould their habituses of the city. This being the case, it would also follow that those city fields re-produce themselves through the lived out desires and projections of the children (which are shaped by the local habituses they inhabit). In other words, as will be shown below, I argue that the children's responses mould, and are 'moulded' by, the habitus(es) of the city field.

The notion of city field is intended to extend Bourdieu's educational, cultural, economic, etc. fields by including a field which is explicitly related to spatial urban form. After all, the urban is similar to education or the economy (which Bourdieu work does explicitly consider) in that it consists of multiple institutions, each interdependently linked and hierarchically arranged together. Therefore, why can't there be a notion of a city field also? All agents and the social situations and contexts they experience in everyday life are also – necessarily – located in real space somewhere,

90 According to Bourdieu and Passeron (1977/2000) and reiterated throughout Bourdieu's own work (1984; 1993; 1998), the educational system acts like a Maxwell's Demon: 'it maintains the preexisting order... More precisely, by a series of operations, the system separates the holders of cultural capital from those who lack it' (Bourdieu 1998:20). Interestingly, the notion of there being a Maxwell's Demon somehow embedded and intrinsic to particular systems is also present in many of the discussions relating to complex systems (see in particular Kauffman 2003).
whether it is in a city or elsewhere. It would seem necessary, therefore, to consider the causes and the effects of the dialectical relationship between the social and the spatial.

It is interesting to note that Bourdieu frequently makes reference to time in his writing. Indeed, temporality is at the heart of his argument since it assumes that the habitus is a historical process. He explains it as follows:

The *habitus*, a product of history, produces individual and collective practices — more history — in accordance with the schemes generated by history. It ensures the active presence of past experiences, which, deposited in each organism in the form of schemes of perception, thought and action, tend to guarantee the ‘correctness’ of practices and their constancy over time, more reliably than all formal rules and explicit norms. (Bourdieu 1990b:54)

Bourdieu also frequently refers to *social space* because it too is at the core of his arguments. His argument about ‘symbolic capital’ — another important concept intrinsic to Bourdieu’s work — relies primarily on the idea that individuals live and experience social space(s) which, due to the effects of habitus, they re-generate through their practices (Bourdieu 1984, 1990b, 1993). He writes:

Social space is constructed in such a way that agents or groups are distributed in it according to their position in statistical distributions based on the *two principles of differentiation* which, in the most advanced societies, such as the United States, Japan, or France, are undoubtedly to the most efficient: economic capital and cultural capital. It follows that all agents are located in this space in such a way that the closer they are to one another in those dimensions, the more they have in common; and the more remote they are from one another, the less they have in common. (Bourdieu 1998:6)

Bourdieu does explicitly comment, though only rarely, on the importance of georgraphical space. For instance, he writes:

To account more fully for the differences in life-style between the different factions — especially as regards culture — one would have to take account of their distribution in a *socially ranked geographical space*. A group’s chances of appropriating any given class of rare assets... depend partly on its capacity for the specific appropriation, defined by the economic, cultural and social capital it can deploy in order to appropriate materially of symbolically the assets in question, that is, its position in social space, and partly on the relationship between its distribution in geographical space and the distribution of the scare assets in that space... In other words, a group’s real social
distance from certain assets must integrate the geographical distance, which itself depends on the group's spatial distribution and, more precisely, its distribution with respect to the 'focal point' of economic and cultural values, i.e. Paris or the major regional centres. (Bourdieu 1984:124)

Thus, all people live in the social but the ways in which the social manifests itself also depend upon where each individual is situated spatially in real space; vice versa, of course, how real space manifests itself also depends upon the social. Yet, surprisingly, Bourdieu does not comprehensively consider the important and differentiating effects of physical space, except insofar as social space becomes symbolically attached to the material or to demarcate the different places and rules of practice in the Kabyle household. But he does not, as far as I am aware, present a substantive argument which supports the effects of physical space or explains how it might interact with the other core elements of his philosophy, i.e. habitus, field and capital. Yet all human beings are first and foremost grounded – literally – in real physical space. Surely any social theory that concerns the re/production of historical social systems also needs to account for space? As Sayer (1984:132) notes, 'geographers apart, most social scientists ignore space. Yet space would seem to make a different to what happens in the world.' The notion of city field adds space to Bourdieu's philosophy. Furthermore, it also helps us to understand the different but integrated findings derived from the census and administrative statistics, the photographs, maps and other images, and the children's responses. Therefore, the concept of 'city field' is itself grounded in the empirical data from which it emerges.

What I find particularly revealing is that if we look closely at the children's responses, they do distinguish their city in relation to London or Paris depending on whether they live in England or France. They do recognize that where they live is 'not as famous' as the respective capital cities where 'there's more to do, more museums and theatres, like more entertainment and things.' Furthermore, in an endnote to the above passage, Bourdieu (Bourdieu 1984: note 20, p. 527) adds: 'A number of cultural properties are acquired by virtue of position in geographical space, partly through the quality of the social contacts favoured by spatial proximity. One of the most crucial is pronunciation, which unmistakably designates a stigmatized or prestigious origin.' As noted, the York also children did explicitly refer to those 'business people' with posh
accents as those in power who do not ‘belong’ to the city, who come from ‘outside’, who don’t know York’ and yet impose radical changes to the city that they have no say about. It would appear from the children’s responses, therefore, that the social and the spatial are intertwined in important ways and the notion of city fields, I suggest, is a way of exploring this issue further.

A final point about Bourdieu’s work in relation to what follows. Sometimes, Bourdieu’s work is criticized because it is thought to be essentially a deterministic theory of social reproduction and therefore, does not adequately account for the radical kinds of social changes witnessed in recent decades (see, for example, Chiou 1992; Jenkins 1982; Tooley and Darby 1998). This claim is made even though Bourdieu explicitly states that he does not consider there to be a ‘relationship of ontological complicity between the habitus and the field (Bourdieu 1998:79). That is, he argues that his philosophy is neither deterministic nor is it teleological. Agents do not always act according to goals which are also the end product of their goals and actions. I want to take up this argument because it directly relates to the way I understand complex places.

My own view is that Bourdieu’s philosophy is one of social reproduction. In contrast, however, I argue that his philosophy not only allows for small and gradual change (which is what Bourdieu argues is possible) but it also allows for radical change also. Rather than ‘reproduction’, I prefer the notion of ‘re-production’, i.e. something is produced again but may be produced differently in the process of its re-production. More accurately still, I suggest that Bourdieu’s theory of ‘social reproduction’ is actually a theory of ‘social iteration. whilst, intuitively, it might seem that iterative processes never change, in fact we find quite the opposite. The process of iteration allows for the growth and re-production of a thing without that thing staying the same.

From this standpoint, Bourdieu’s philosophy can and does account for both gradual and radical change. ‘Reproduction’ does not necessarily imply an equilibrial state, or

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91 An iterative process is one which its present state/value/code is used to obtain its future state/value/code; this information is fed-back into the system again and again such that cause and effect become inter-dependent with one another.
homeostasis, or stagnancy or that something like ‘cloning’ will occur. On the contrary, take a system that is dynamic, changing, exists in a state far from equilibrium, is sensitive to initial conditions, etc. – i.e. a complex system – and allow it to ‘reproduce itself’, then very quickly it can become something very different from what it used to be. In fact, over time, such a system will be very difficult to predict, with emergent features potentially cropping up and in turn, through their re-production, again new kinds of states may appear. Indeed, Bourdieu (1990a:116) himself points out, ‘habitus realizes itself, becomes active only in relation to a field, and the same habitus can lead to very different practices and stances depending on the state of the field.’ In turn, I suggest, those who argue that Bourdieu’s philosophy is deterministic or does not allow for radical change are not thinking about the reproduction of complex non-linear systems and the kinds of patterns that can and do occur in the world when these kinds of systems reproduce.

My view is that Bourdieu’s work in not incompatible with complexity theory. In fact, I think it allows for a way of understanding the ways in which real complex dynamics manifest themselves in our lived experiences of the world in the world at the empirical level (Bhaskar 1979). Similarly, I agree with Danermark et al. (2002:5) that ‘without explicitly taking their starting point in critical realism’ Bourdieu is partly consistent with the critical realist line of thinking also. All that said, let us now turn to how each of these concepts relate to my general argument and how the empirical observations have lead me to it.

The Complex City Habitus

Simmel (1950:10-11; italics added) reminds us that: ‘Society is merely the name given to a number of individuals, connected by interaction... If society is conceived as interaction among individuals, the description of the forms of this interaction is the task of the science of society in its strictest and most essential sense.’ Likewise, we can say that the urban is an emergent phenomenon which is produced by a number of individuals connected by complex interactions. This, in turn, begs the question: what might the ‘description of the forms’ of a complex city look like if the children’s
responses are anything to go by? Thus, I follow Bhaskar (1979) in his critical realist argument. What I mean by this is that Bhaskar's critical realism develops from an initial ontological question that he then goes about answering. He asks: What properties do societies and people possess that might make them possible objects of knowledge?' (p.31). He explains his questions thus:

It is the nature of objects that determines their cognitive possibilities for us... Thus it is because sticks and stones are solid that they can be picked up and thrown, not because they can be picked up and thrown that they are solid (though that they can be handled in this sort of way may be a contingently necessary condition for our knowledge of their solidity). (Bhaskar 1979:31)

Similarly, therefore, I too have considered: What might the implications be – ontologically and epistemologically – with regards to structure and form of a city? Theoretically, how might we imagine a city, which actively engages with the real descriptions of the desired and projected future cities of York and Dijon? It is primarily through this mental exercise that I have come to understand York and Dijon as self-organizing, autopoietic systems which are composed, produced and structured in part by the young local inhabitants who interact in the world à la Bourdieu. That is, I follow Bourdieu's philosophy of practical action with regards to understanding the children's interactions in the urban and I argue that a city based on the children's responses would be formed by individuals interacting through social fields and habitus (Bourdieu 1998). Why do I think this? Because the data suggests it. Let me explain this view through outlining a summary of the path and the key 'landmarks' along the path that have led me from the various empirical observations to the proposed theoretical explanation.

Among the many observations drawn throughout this study that I have been impressed or surprised about, I want to draw attention to two 'outlying observations.' By this, I mean an observation made during the research process which stands out in much the same way as an outlier does in statistical explorations; it serves much the same purpose also. One is to do with the photographs of York and the other the children's responses to two of my questions. From a positivist stance, the researcher's subjective experiences are generally ignored. However, from the realist perspective which is
adopted throughout this study, it is instead assumed that social data is necessarily a product of the researcher’s interaction with the research informants (see Ashmore 1989; Holstein and Gubrium 1995, 1997).

In other words, social data does not exist in a vacuum for the researcher to pluck and use at will. Even in the case of secondary data analysis, which may feel to some extent like this, other researchers have gone before, collected the data and made decisions about its public presentation; the secondary researcher must still also make his or her decisions about what data to use. Social research – and the data that emerges from it – necessarily relies upon the active engagement of a human researcher (with all of his or her subjective experiences) with other individuals or with material things that others have produced. Therefore, it is assumed that the researcher’s subjective point of view about the data may or may not be a valid reflection of something emerging from the data itself and worth, therefore, to be explored. As we shall see, the two things that I perceive to stand out from the data do help further analysis.92

The first ‘outlying observation’ concerns two seemingly identical photographs of Stonegate (one of the main city-centre streets along the tourist path). Although they looked identical to me, I knew that they were taken over one hundred years apart (because the dates were given at the back of each image). Other than the brownish colour of the older photo, I could not tell them apart. I found this remarkable for two reasons. First, based on only the content of the images, however, I could not tell them apart. I found this remarkable for two reasons. First, based on only the content of the images, however, I could not tell them apart. However, both census data and the images portraying the outskirts of York and Dijon clearly reflect more change than continuity. One only has to think about the multiple ‘post-isms’ (e.g. postmodernism, postFordism, postindustrialism, etc.) that have cropped up in recent decades and the vast amount of literature on any of these themes to conclude that compared to the notion of continuity, it is change in the social world that has been most witnessed in the past two or three decades. Yet from the photographs, some parts of York and Dijon (but especially in York) have remained almost identical, as if frozen in time and protected from change.

92 Indeed, I suspect that the reason they stand out to me is precisely because they somehow clash with my own ‘city habitus’ and cause me therefore to notice something that I would not normally notice.
Secondly, this made me aware that in fact many (most?) of the old photographs archived away as ‘precious documents’ that depict a city centre area, be it a street, a building, a monument etc., are also representative of the same spaces in the city of York which have been ‘frozen’. On one level, it is easy to understand that heritage industries have preserved certain physical structures. On another level, I question a) what it was about those city spaces that lead the photographers to take those original photos, b) the processes which have lead those photographs (rather than other ones) to be archived, and c) why it is that over a hundred years later those city centre photographs depict areas in the city that tourists and visitors now photograph and purchase as postcard images of the city? What is also striking is that this pattern is shared between the cities of York and Dijon. (The connection between old photographs of the city, the areas of the city which are captured as old postcards, and the preservation of those same areas is more apparent in Dijon: the vast majority of the approximately 160 old postcards of the city that were collected for this research represent city spaces that are also depicted in modern day postcards.)

In turn, I was confronted with the following questions: How could any section of a city remain identical when all around it change has also left its mark in some way? Why might it be important to conserve certain parts of the city? What dynamics might enable the preservation of certain parts of the city? What are the effects of this conflicting relationship between that which has changed in a city and that which has not? My response was that there had to be some reason to explain: a) how an area could stay the same despite it being surrounded by change? And b) why that section of the city had been preserved and not another? As I will suggest, there are clues to these questions within the different data.

The second ‘outlying observation’ relates to the contrast in the children’s responses between two different questions; the contrast was in both the mood and the tone of the responses and, of course, the content of the responses themselves. Specifically, when I asked the children to describe their ‘ideal city’, they responded imaginatively, with

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93 I came across these photos in the first year of this study so, in fact, these questions remained in the back of mind for the latter three quarters of my research.
excitement and presented a city with an endless list of possibilities as to how it could be. However, when I asked the children to describe York or Dijon in the future, their responses were strictly limited to how the city was in the present. The imaginary city, it seemed, could exist in an almost limitless number of ways but the future city—which importantly is actually also imaginary—was extremely limited in terms of the way it could be. Why was this the case?

Clearly, given the responses to what an 'ideal city' might be like, the children did not lack imagination. So why were they not able to imagine the city much differently to how it was today? Why was there such a contrast to their responses? Why might the possibilities of the way the future city might be like be so constrained? What might this mean to the way we might project future change in York or Dijon? The answers to these questions, I suggest, are also found within the empirical 'traces' (Byrne, 2002) collected in this study. Having noted these two different 'outlying observations' and the various questions that they each raise, let us now go back to the other findings discussed in this study and think about them more carefully.

For instance, as noted, the two areas also identified by the children in terms of what constitutes a city were the city-centre and the rest of the city. Therefore, if we think of the city space in York and Dijon as it is structured according to the children, then we have an 'inner-city' and the rest of the 'outer-city', although according to the children's responses, this distinction seems more important in York than in Dijon. If we think about the way the 'city-centre' (i.e. the communes of Dijon and Chenôve) is represented through the census data and administrative statistics, then we also conclude that relative to the rest of the city, this specific area, though it is still somewhat dynamic, does not show the extreme fluctuations in population levels or socio-economic changes that are observed in other areas of the city or even if we think of either city as a whole. Vice versa, based on the census and administrative statistics, relative to the rest of the city, the outer city-centre is much more dynamic and constantly changing. Similarly, if we think about what the photographs, maps and street plans, and other images show about the 'city-centre', again we might say that
(relative to the outer-city) it is spatially non-changing whereas the ‘outer city-centre’ is spatially dynamic and shows quite a lot of change over time.

Turning next to the children’s projections about York and Dijon in the future, let us assume, for the time being, that the children were accurately foreseeing the way that York and Dijon will evolve in the future. In other words, let us assume that the cities of York and Dijon will continue more or less along the same path as they have been over the last two to three decades, showing little change in the city-centre through a preservation of the historical and iconic items the children listed as being symbolic of each city (e.g. the Walls and the Minster in York and Notre Dame Cathedral and la place de la Liberté in Dijon, etc.) and showing much greater change to the outskirts through extensions of the city boundaries and the addition of new commercial, leisure and/or industrial complexes.

Furthermore, let us consider that the current city of York or Dijon develops according to the children’s desired changes in each city. In other words, using Bhaskar’s initial ontological question but projecting to understand the future rather than the past trajectory (which is what he does in relation to understanding the way the scientific knowledge has evolved) let us ask: What might York and Dijon look like if the children’s desires and preferences were actually lived out? For example, what if the children going to schools in or near the centre of the city ‘got their way’ and the future city did maintain the old historical elements and the heritage industry continued to be a preserving force of these old features? And what if the children going to schools out of the city-centre ‘got their way’ and the outskirts continued to grow outward in order to accommodate more shopping malls and leisure parks? It so happens that asking these questions we find that a city based on the children’s desires and preferences would resemble a city in which the inner city-centre appears ‘frozen’ in time whilst the outer city-centre appears changing and dynamic.

Now let us compare the children’s future projections of York and Dijon with a future York and Dijon based on the children’s desires and preferences about each city. If we do this, we discover that a future city sketched according to the tastes of the two
different groups of children (i.e. those going to school in an 'inner-city' school and those going to an 'outer-city' school) would resemble the future city described by the children. Why might this be the case? What might be going on? How might the children - as young as four years old - be acquiring this knowledge?

Whilst there may be many possible answers to these questions, the only one that I have been able to formulate and that also answers them all is one which suggests that the cities of York and Dijon are complex systems in which agents help to re-produce those city systems. This explanation combines knowledge of how complex systems behave and how social systems may re-produce even though each individual is an active agent with the potential of such imaginative choice as displayed by the children describing their 'ideal city.'

Thus, on the one hand, I suggest that cities (and the spaces which constitute them) such as the ones described by the combination of responses given to me during the interviews with the children would be self-organizing and autopoietic (see also Allen 1997; Allen and Sanglier 1981; Ball 2001). More precisely, based primarily on the children's answers to 'What is a city?', I suggest that the complex places of York and Dijon are perceived as being constituted by two main systems: the autopoietic inner-city space and the autopoietic outer-city space. In turn, not only does the city-centre area remain relatively frozen, it also re-produces itself as 'frozen' over time. At the same time, the outer-city-centre continues to change and therefore also re-produces itself as a changing city space.

On the other hand, I also suggest that a city such as the one described by the children would also look like a complex system in which the individual agents' tastes, desires and imagined future possibilities were shaped by 'an acquired system of generative schemes' (Bourdieu 1990b:55), 'structured by structuring systems' (Bourdieu 1984, 1990a, 1990b). The distinct spaces (e.g. the 'inner city-centre' and the 'outer-city-centre') re-produce themselves because the individuals who constitute them (and who in this case, are exemplified by the children interviewed) are unconsciously but
actively re-producing them through their tastes, preferences which are formed and shaped by the local city fields.

In the case of York, we might say that the important city fields concern the old, frozen city-centre alongside its newer, more dynamic and innovative and modern outskirts. In the case of Dijon, we might say that whilst the city-centre and outer city-centre are both important spaces, it would seem (from the children’s discussions) that Dijon’s reproduction concerns the whole of Dijon. However, I suspect, given the situation in York, that Dijon’s structure may change in the near future with more and more local urban schemes aiming specifically to preserve and promote the secteur sauvegardé in the city-centre such that it will become more like York in terms of its frozen city-centre and changing outskirts.

If the children’s responses are ‘shaped’ according to the different and distinctive habituses of the inner-city-centre and the outer-city-centre, then this would explain why the children’s tastes and preferences of what a desired future York or Dijon vary according to whether they go to school in an ‘inner-city’ location or an ‘outer-city’ location. Thus, the inner-city habitus ‘conditions’ the children to perceive the old features as ‘beautiful’ whereas for the children influenced by the outer-city habitus the same old features are ‘dull’ and ‘grey’ and ‘need a good lick of paint.’ It is the different habitus of particular city spaces which classify the children’s responses as ‘inner-city’ or ‘outer-city’, which ‘make the difference between what is good and what is bad, between what is right and what is wrong, between what is distinguished and what is vulgar’ (Bourdieu 1998:8).

As also noted, the children’s responses of the projected city were heavily dependent on how each city is perceived in the present. Interestingly, according to Bourdieu’s theory of habitus, this is to be expected. Bourdieu writes:

In fact, a given agent’s practical relation to the future, which governs his [sic] present practice, is defined in the relationship between, on the one hand, his [sic] habitus with its temporal structures and dispositions towards the future, constituted in the prolonged relationship with a world structured according to the categories of the possible (for us) and the impossible (for us), of what is appropriated in advance by and for others and what one can reasonably expect
for oneself. The *habitus* is the principle of a selective perception of the indices tending to conform and reinforce it rather than transform it, a matrix generating responses adapted in advance to all objective condition identical to or homologous with the (past) conditions of its production; it adjusts itself to a probably future which it anticipates and helps to bring about because it reads it directly in the present of the presumed world, the only one it can ever know... This disposition, always marked by its (social) conditions of acquisition and realization, tends to adjust to the objective changes of satisfying need or desire, inclining agents to ‘cut their coats according to their cloth’, and so to become the accomplices of the processes that tend to make the probable a reality. (Bourdieu 1990b:64-65; underscore added)

Yet Bourdieu also explains that ‘[o]nly in imaginary experience (in the folk tale, for example), which neutralizes the sense of social realities, does the social world take the form of a universe of possibles equally possible for any possible subject’ (Bourdieu 1990b:64). It would follow, therefore, that children describing their imaginary ‘ideal city’ *would* be able to conjure up multiple possibilities whereas when it came to describing what they imagine the city to be like in the future, based on their lived experiences, the children would only be able to come up with a *limited* number of possibilities. This, as we have seen, is precisely what we find in the children’s discussions about York and Dijon.

In this way, then, I argue that the children’s responses are structured by a particular system of dispositions. ‘This system of dispositions,’ writes Bourdieu (1990b:54), ‘is the principle of continuity and regularity which objectivism sees in social practices without being able to account for it; and also of the regulated transformations that cannot be explained either by the extrinsic, instantaneous determination of spontaneist subjectivism.’ ‘The habitus is this kind of practical sense for what is to be done in a given situation – what is called in sport a “feel” for the game, that is, the art of anticipating the future of the game, which is inscribed in the present state of play’ (Bourdieu 1998:25). The result, Bourdieu (Ibid:80) explains, is that agents ‘are present at the coming moment, the doing, the deed (*pragma* in Greek), the immediate correlate of practice (*praxis*)... which is inscribed in the present of the game.’

We might, therefore, conclude that in terms of re-producing the frozen inner-city-centre or re-producing the changing outer-city-centre, endogenous forces caused by
local inhabitants such as the children interviewed – who are possible adults in the future city – are active agents, participating and contributing – as individuals and collectively – to the continued change and continuity of York and Dijon through their structuring dispositions, preferences and tastes that are themselves structured by the habitus and fields of those local places as well. Furthermore, we might expect that if and when radical change to the city does take effect that it comes from endogenous or exogenous forces (caused by ‘posh, business people’) in positions of power and governance, which is what the children voiced.

It is worth reminding ourselves that when I asked the children why they thought children going to inner-city schools preferred the city one way, and why those going to outer-city schools preferred it another, the children themselves explained that ‘it’s all a matter of taste’: ‘if you are used to one area you prefer it that way but if you are used to it another way then you prefer that.’94 We might say, therefore, that children who are ‘being and becoming’ in the city and who have a ‘feel for the game’ are also doing the city inscribed through the habits of the city which are ‘being’ (in the present) and ‘becoming’ (in the future) as well. In turn, the reflexive and nested nature of the urban shaped by the young and old agents that constitute it, is itself always ‘being and becoming.’

So whilst we might interpret the children’s responses, the census and administrative and the various visual sources to inter-relate to one another in the above suggested way, what else might be learnt from the different representations/stories? What kinds of other dynamics (which are ‘being and becoming’) might manifest themselves in the social (which is also ‘being and becoming’) and which might also be empirically captured through the collected data? In other words, what other kinds of questions might arise by comparing and contrasting the different representations/stories? These are the issues which I now turn to presently in the Conclusion to this thesis.

94 Note that this is an exact translation of the reasons given to me in a Dijon city centre school.
Conclusion: Methodological Implications

So what are the methodological implications of a critical realist and complex systems perspective to the social world? How has this study advanced us in answering this question? Where do we go from here?

One of the main arguments put forth in this thesis is that researchers need to use multiple methods in order to begin to adequately explain social phenomena. Whilst the findings are specific to York and Dijon and the discussions of the children interviewed in this study, the methodological concerns and implications, I suggest, are relevant not only to the study of urban places, but also the study of many other kinds of social phenomena as well. This is not a new argument per se. The use of more than one method is an increasingly recognized methodological approach used to study different aspects of a particular object of investigation. However, when approaching the social from a critical realist and complex systems perspective, methodological pluralism becomes an integral part of the philosophical assumptions intrinsic to it.

Moreover, combining these research perspectives with the methodological approach that they require produces findings, which are descriptive of social form. For instance, in this study, the different methods have provided different representations of change and continuity in York and Dijon. Furthermore, as we have seen in the previous chapter, if these descriptions are considered together, and ontological questions about them are explored in seeking to integrate them together, then it is possible to produce causal explanations, which are theoretically and conceptually grounded in the data.

In addition, the use of different methods also provides new questions regarding the multi-dimensional ways in which real generative mechanisms manifest themselves empirically to us. In turn, we can obtain clues – Byrne’s ‘traces’ if you like – into the ways in which Bhaskar’s three layers of reality (i.e. the empirical (which is observable
and may ultimately be known to us), the actual (which exists in time and space and may or may not be observable or known to us), and the real (which is transfactual and more likely to be more enduring than our perception of it) may inter-relate with one another.

Bhaskar (1979) sums up his model of the society/person connection as follows:

> People do not create society. For it always pre-exists them and is a necessary condition of their activity. Rather, society must be regarded as an ensemble of structures, practices and conventions which individuals reproduce or transform, but which would not exist unless they did so. Society does not exist independently of human activity (the error of reification). But it is not the product of it (the error voluntarism). (Bhaskar 1979: 45-46)

We might say, then, that it is the task of social scientists, and especially sociologists, to concern themselves with the knowable properties of the 'ensemble of structures, practices and conventions which individual reproduce or transform.'

Furthermore, in combining critical realism with complexity, it is assumed that the various ensembles follow particular patterns of change and have certain characteristics intrinsic to them that the researcher must attempt to access also. It is not that any of these characteristics are new per se. I think it is more that complexity theory offers a language with which to talk about these things, which may in turn help us to adequately study them. The notions of phase-shifts and attractors, autonomous agents, self-organisation and emergence, nestedness are but some examples of this language.

Critical complexity does not, nor does it attempt to, resolve all issues. However, for now, I think it provides the best alternative to understanding cities and urban regions, and social phenomena in general primarily because it seeks to integrate the diverse and sometimes contradictory things that we have been learning about the urban throughout time. It takes a holistic approach yet always a local focal point also. Structures are nested hierarchically but causal powers are multi-dimensional, multi-directional, nonlinear and are not necessarily separable from the effects; both causes and effects may or may not be observable. Agents reflexively act across and between some or all levels of observation. History plays a fundamental role in how things
change; the present is dynamic and always becoming; and the future is non-deterministic but is not random either – the concept of ‘multiple possibilities’ that are more or less likely as time goes by is preferred to any linear model of prediction.

This being the case, the methodological approach involved in a critical realist and complex systems perspective to the world must also allow the researcher to empirically access the various ensembles and the ways that they interact. In addition, it must allow the researcher to learn about and, ideally, to explain the ways in which individuals – young and old, individually and collectively - reproduce or transform those ensembles. In this final part, I want to present five examples about the ways in which the combination of methods used in this research has succeeded in advancing the social scientist’s task of learning about the knowable properties of the various ensembles of structures and the ways in which individuals interact with them.

The first example relates to the results of this study, which suggest that we need not know the totality of a social phenomenon in order to learn about the causal interactions that produce it. For example, I used three main types of method: the use of census and administrative statistics (which provides a quantitative aggregate-macro socio-economic representation), the use of visual material in the form of photographs (which provide a qualitative-micro representation of the physical geographical space), maps from street plans (which provide a qualitative-micro (but less focused that the photographic) representation of the physical geographical space) to larger scale Ordnance Survey maps (which provide qualitative-meso-macro representation of the physical geographical space), and the use of group interviews with children (which provides a qualitative reflexive account at a micro-level). Time and space where intrinsic to each approach.

Each approach provided its own specific representation of change and continuity in York and Dijon. Just as a hologram produces a three-dimensional image, so too do I suggest that methodological pluralism produces a multi-dimensional image of the social world it represents, where information about the whole is stored in each representation. As we saw here, the representations produced by each method were
integrated with one another through constant comparison in order to re-produce a more multi-dimensional re-presentation of that object of study. The methods employed here have provided new questions relating to cause which are important to learning about the ways in which we interact in the world to shape the world.

Hence, rather than it being imperative to know about the totality of a social phenomenon, I argue that the key is to learn about the control parameters and the enduring (but not necessarily permanent) forces causing that social phenomenon. Part of the project of knowing how things are and what causes them to be that way is to also understand how things have been, and how they may continue to be, or not as the case may be. Thus, part of the project is about learning what is possible and what is not possible whilst also acknowledging that different initial conditions can lead to the same outcomes and alternatively, the same initial conditions can lead to different ones. The challenge is great but it is nevertheless the task of social scientists to concern themselves with the knowable (and by implication, the unknowable?) properties of the world (Williams and May 1996:9).

The second example relates to the similarities and differences between the images in York and in Dijon. In particular, I am interested in the available photographs archived in York and Dijon and the fact that the quantity of photographs, which depict city-centre streets is disproportionate to the total area that the city actually covers. In other words, the city-centre becomes a highly significant focal point. Why does the city-centre feature so often in these images? What might the city-centre represent? Furthermore, from going through the last three decades of the local daily newspaper (i.e. The Evening Press in York and Le Bien Public in Dijon), we also notice that whereas the York newspaper frequently shows images of ‘old York’ (images which most often depict sections of the ‘city-centre’), the Dijon newspaper hardly shows any. Why are there so many photographs of the city-centre in York and yet not in Dijon?

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95 See Glossary of Complexity Terms in Appendix A.
I suggested earlier that the children’s responses seemed to indicate that York and Dijon are structured somewhat differently, with the children referring to York as a place with a city-centre along with ‘the rest of the city’ whereas Dijon was talked about more as ‘one big place.’ In turn, we might ask if it is just a coincidence that pictures of ‘old York’ city-centre appear in the local daily newspaper significantly more often than they do in Dijon, and yet the children I spoke to in York also referred to York as a place constituted by a city-centre and ‘the rest of the city’? Or is it possible that the visual representation of the urban is also a generative mechanism which shapes and influences tastes and preferences of those who see it? After all, there must be both reasons and effects as to why the city-centre is so frequently photographed and yet why the different structures of the cities appear through the children’s discussions? These questions require further research in order to answer them but they are nonetheless raised by the contrasting empirical findings of this study. In other words, I suggest that by contrasting different empirical findings relating to a particular object of investigation, it may be possible to learn more about how specifically causal mechanisms are ‘lived’ in and through (the observable) everyday social.

The third example concerns the issue of prediction. More specifically, I am concerned with the prediction of radical change (as opposed to slow non-qualitative and gradual change) which would be of particular use to policy planning and implementation. As stated, the realist perspective adopted in this study suggests that empirical data can provide representational traces of the generative mechanisms that produce the urban. Therefore, might it also be possible to empirically capture signs of future radical change? My view is that it is, particularly through empirical findings obtained from different longitudinal methods which focus on the same object of investigation. Moreover, I suggest that such research can shed light into the ways in which there may be time-delays between particular causal mechanisms, the actual event/s they trigger and the empirical manifestation of those mechanisms. In turn, therefore, I argue that what appears to us empirically may provide clues into what will happen in the future. As Bourdieu (1990a:15) explains, ‘[t]he essential thing about historical realities is that one can always establish that things could have been otherwise, indeed
are otherwise in other places and other conditions.' Likewise, understanding the contingent nature of past and present urban form will potentially provide insights into how change and continuity may occur in the future also.

The idea that prediction may be possible goes against complexity principles so it is important that I clarify what I am referring to. If prediction implies determinism then I am not advocating that this is possible. However, if prediction implies being able to make relatively accurate probabilistic short-term forecasts concerning the outcome of, say, a handful of possible futures, then I am indeed a supporter of the notion of prediction in complex systems. Some might say that this is still insufficient in terms of being able to adequately plan for the needs and desires of a city or a society. However, if this is the best that we can do then perhaps this notion of prediction (as a set of short-term possible futures) is not only better than nothing but as good as it gets anyhow, and my guess is that we would adapt and learn to live with this limit to our ability to plan ahead also.

I am thinking here particularly about how the census and administrative data might relate to the physical spatial changes captured through maps and photographs of the city. For example, from the maps and city plans, and various photographs of York, we learnt that very little physical change has occurred for well over the past three decades. However, from the city plans and visual images we did learn that the city-centre has not been completely preserved and that quite relatively important changes to the city-centre physical infrastructure have taken place. The first time was to make room for the increased need for car parking space whereas more recently (mid-2004) in York it has also been for a handful of shop or food and drink units and residential flats. I suggested that such change to the city-centre physical infrastructure signal past or future socio-economic change. If the two things are connected, then we might also consider the possibility of a certain `time delay' between what appears through the census data and what appears visually through maps and photographs. Again, without further research it is not possible to conclude whether or not there is a connection. However, it would be interesting to find out because it might help provide insights
into the sorts of things we might want to look out for in terms of trying to predict future urban change in a particular locality.

The fourth example continues along the same lines as the issue of prediction but introduces the notion of the reflexive agent and social transformation over time. For instance, in this study I have spoken with four to thirteen year olds between 2000-2003. As noted earlier, this cohort at this particular point in time typically responded to the question ‘What is a city?’ with answers suggesting that it is a ‘big place’, ‘where there lots of people live’, ‘lots of buildings’, ‘lots of houses’ and ‘lots of shops.’ They also voiced that the middle of the city is associated with old and new buildings, shops and lots of people shopping, and walking through its pedestrianised and non-pedestrianised streets. How might other cohorts at this particular point in time have responded to this question? Would they have answered in the same way? How might we learn from the generational (in the Mannheimian sense) patterns of views and perceptions about the city? It would be possible to obtain snapshots of multiple cohorts’ responses to ‘What is a city?’ over several time points and explore the ways in which agents’ descriptions may be inter-linked with how that city has changed, is changing or will change. In so doing, we might learn about the ways changing perceptions, attitudes and the changing city itself may affect empowerment and agency.

Following on from the above, the fifth example specifically concerns children as social agents ‘being and becoming’ in the world, which is also being and becoming shaped by the individuals interacting within it. Moreover, it raises the issue of children as social informants of the possible future trajectories of the social world, which they too are actively shaping today as it is becoming. Methodologically, turning to children as social informants raises interesting questions because implicitly we are including the notion of time and change into our studies and this is crucial in terms of studying the social from a complex systems perspective (because time is a key factor in complexity theory).

Including children in research such as this, I argue, is a way of empowering children more generally. Indeed, at its core, this research has put forward the view that children
must be actively involved in social research – not only so that we can learn more about their childhood lives but also to learn about the social world itself. This is not exploiting children’s position in the world rather it is acknowledging it. After all, as we saw, the children also perceived the world as ‘theirs,’ which they therefore have a right to, as well as a legitimate say in the way that it unfolds in the future. I have shown that children are sufficiently competent to take part in research and that it also worth including them in it. Indeed, this is precisely because children have views about the world they live in and that their views are directly relevant to the way the world is and may continue to be.

To return to a quote noted in the Introduction of this thesis, then: if a city is like a text, ‘it is written as well as read, (re)constructed as well as (re)interpreted, and (re)produced as well as consumed’ (Short et al. 1993:208). This study has been an illustrative example of the way in which we can begin to learn about who writes, reads, re-constructs, re-interprets, re-produces and consumes the city, why and how they do so and what the effects might be of these inter-related events. In other words, we can explore the inter-dynamics between time, space and people ‘being and becoming’ together and how they manifest themselves empirically to us socially at micro-, meso- and macro-levels. Moreover, we can explore the nestedness of causal (uni- or multi-directional) flows that generate those various empirical traces. The study has argued that through integrating the empirical representations produced using multiple longitudinal quantitative and qualitative methods, we can begin to unpeel the multiple ontological, epistemological and theoretical layers behind change and continuity in complexes places. In addition, the research has sought to engage politically and ethically in social research by involving children in an area of research that they are not normally invited to take part in. In so doing, it has reflexively been committed to illustrating the methodological project of studying the social from a critical realist and complex systems perspective. Hence, this thesis has actively responded to, and in turn, contributed to, the methodological challenge of studying complex places specifically, and of studying complex social phenomena in general.
Appendix A: Glossary of Complexity Terms

All the entries here (except that on nonlinearity) are taken or adapted from the Plexus Institute’s ‘Glossary of Terms’ available at The Plexus Institute website.

**Autopoiesis**
A circular-like or autocatalytic-like process in which a system or an entity self-organizes itself such that it re-produces itself and the components necessary to continue self-producing itself.

**Basins of Attraction**
If one imagines a complex system as a sink, then the attractor can be considered the drain at the bottom, and the basin of attraction is the sink’s basin. Technically, the set of all points in phase space that are attracted to an attractor. More generally, the initial conditions of a system which evolve into the range of behavior allowed by the attractor.

**Bifurcation**
The point or state along a system’s trajectory whereby the emergence of a new attractor(s) occurs when some parameter reaches a critical level (a far-from-equilibrium condition). More generally, a bifurcation is said to have occurred when a system shows an abrupt change in a typical behaviour or functioning that lasts over time.

**Dissipative Systems**
A term used to refer to self-organizing systems that require a constant input of energy from their environment into the system in order to re-produce themselves. They happen at a critical threshold of far-from-equilibrium conditions.

**Entropy**
A measure of the degree of randomness or disorder in a system. It determines a system’s capacity to evolve irreversibly in time.

**Far from Equilibrium**
A term used for those conditions leading to self-organization and the emergence of dissipative structures. Far from equilibrium conditions move the system away from its equilibrium state, activating the nonlinearity inherent in the system. Far from equilibrium conditions are another way of talking about the changes in the values of parameters leading-up to a bifurcation and the emergence of new attractor(s) in a dynamical system. Furthermore, to some extent, far-from-equilibrium conditions are similar to "edge of chaos" in cellular automata and random boolean networks.

Fitness Landscape and the N/K Model
The fitness landscape is a "graphical" way to measure and explore the adaptive (fitness) value of different configurations of some elements in a system. Each configuration and its neighbour configurations (i.e., slight modifications of it) are graphed as lower or higher peaks on a landscape-like surface, i.e., high fitness is portrayed as mountainous-like peaks, and low fitness is depicted as lower peaks or valleys. Such a display provides an indication of the degree to which various combinations add or detract from the system's survivability or sustainability. The use of fitness landscapes in understanding the behaviour of complex, adaptive systems has been pioneered by Stuart Kauffman in his study of random Boolean networks. An important implication from studying fitness landscapes is that there may be many local peaks or N/K solutions instead of one, perfect, optimal solution.

The N/K model is Kauffman's (1993) conception of 'measuring' the evolution of complex, adaptive systems based on the fitness traits of an organism (N) and the inputs of one trait (K) (or gene) to another. Then one can observe the fitness landscapes obtained by manipulating the N's and K's. Emergent patterns are thus understood in terms of what rules led to them and what implications they have for fitness.

Fractals and the Fractal Dimension
A fractal is a geometrical pattern, structure, or set of points, which is self-similar (exhibiting an identical or similar pattern), on different scales. For example, Benoit Mandelbrot, the discoverer of fractal geometry, describes the coast of England as a fractal, because as it is observed from closer and closer points of view (i.e., changing the scale), it keeps showing a self-similar kind of irregularity. Another example is the structure of a tree with its self-similarity of branching patterns on different scales of observation, or the structure of the lungs in which self-similar branching provides a greater area for oxygen to be absorbed into the blood. Strange attractors in chaos theory have a fractal structure.
The Fractal Dimension is a noninteger measure of the irregularity or complexity of a system. Knowing the fractal dimension helps to determine the degree of irregularity and pinpoint the number of variable indicators that are key to determining the dynamics of the system.

**Initial conditions**
The state of a system at the beginning of a period of observing or measuring it. The initial conditions are what is assessed at any particular time, and to which one can compare any later observation, measurement, or assessment of the system as it evolves over time. For example, chaotic systems demonstrate sensitive dependence on initial conditions, meaning that the nonlinearity strongly amplifies slight differences in initial conditions, thereby rendering impossible the predictability of later states of the system.

**Nonlinearity**
Campbell (1989) provides three fundamental differences between linear and nonlinear behaviour.

1) The behaviour of linear and nonlinear systems is itself qualitatively different. Linear systems typically show smooth regular motion in space and time, whereas the trajectories of nonlinear systems often show punctuated transitions of behaviour.

2) Linear and nonlinear systems respond differently to external stimulation. A linear system’s response to changes in its variables or to external stimulation is (usually) directly proportionate to the stimulation. Linear systems obey a superposition principle, whereby it is possible to analyse ‘a complicated problem into many simple ones, find the solutions for them, then superpose the solutions to get the answer to the original problem’ (Auyang, 1998). Nonlinear systems, on the other hand, are asynchronous: change in one variable can induce non-proportional change in another (or others). Consequently, in nonlinear systems, understanding the whole cannot be derived solely from a consideration of the properties of individual parts. Instead, understanding must be obtained through the observations of these parts and their relational attributes with each other. A nonlinear mechanism, explains Allen (1998) ‘reflects some ‘collective’ behaviour of some kind which affects individual molecules, so that they react ‘faster’ or ‘slower’ than they would if they were alone.’ The example often used is a good one: to have complete knowledge of oxygen and hydrogen alone is still not sufficient to predict the (nonlinear) properties of water as it changes states.

3) The effect of change in relation to time is different in nonlinear systems compared to linear systems. A localised pulse in a linear system will tend to disperse, spreading out in time. In contrast, the result of a localised pulse on nonlinear systems can have highly coherent, stable localised structures that persist for very long times, and then dramatically react in the future, or
alternatively, the pulse may be dampened such that it has no, or little, effect. The difference between how linear and nonlinear systems react to change over time is important in terms of how we measure the effects. ‘Linearity,’ writes Auyang, ‘assures us that the system’s response at any time can be obtained by adding the effects of impulses past and present.’ As we will see, this is simply not possible for nonlinear systems.

Recommended References
There is an increasing abundance of work describing complexity, which vary dramatically in terms of the depth, breadth and topics of coverage. Newcomers to the field, however, may be interested in the following articles, which present a quick and accessible review of some of the main issues: Lissack (1999), Richardson et al. (2000), and Manson (2001).

My own particular ‘top ten’ favourites include:

See also three useful online bibliographies relating to complexity sources:

1) The LSE Complexity Bibliography available at www.psych.lse.ac.uk/complexity/bibliography.htm;

2) The NECSI list of references available at www.necsi.org/education/cxbooks.html;

Appendix B: Geography of the English and French Census

The different urban geographies used in the French census: the example of Toulouse.

(Source: Guérois and Paulus 2001)
Appendix C: Chronology of COMADI Changes

The COMADI area replaces an area previously referred to as the District de l'agglomération dijonnaise, which was set up in 1976. In January 2004, a further three communes were added to the COMADI area and this larger zone is referred to as Le Grand Dijon. The series of changes between 1976 from the District de l'agglomération dijonnaise to Le Grand Dijon in 2004 are presented here as a chronological order and mark steps along the Dijon’s metamorphical change over the past three decades:

1976 Creation of the District de L’Agglomération Dijonnaise, extended to include the following communes: Ahuy, Chenôve, Dijon, Plombières-les-Dijon, Saint-Apollinaire.

1978 Spatial boundary extended to include: Fontaine-les-Dijon, Longvic, Quétigny, Talant.

1984 Spatial boundary extended to include: Chevigny-Saint-Sauveur, Daix, Neuilly-les-Dijon, Sennecy-les-Dijon.

1999 Spatial boundary extended to include: Marsannay-la-Côte, Ouges, Perrigny-les-Dijon.

2000 Name change from ‘District’ to the Communauté de l’Agglomération Dijonnaise (COMADI).

2004 Name change from COMADI to Le Grand Dijon along with the spatial boundary extended to include three communes: Marsannay-la-Côte, Ouges and Perrigny- lès-Dijon.
Appendix D: York Parish Boundaries

(Source: York City Council)
### Appendix E:

#### COMPARISON OF PRE & POST APRIL 1996 WARDS

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## COMPARISON OF PRE & POST APRIL 1996 WARDS

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<td></td>
<td>Holtby</td>
<td>Stockton &amp; Bossall (part)</td>
<td>Ryedale</td>
<td></td>
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<tr>
<td></td>
<td>Murton</td>
<td>Osbalwick &amp; Heworth (part)</td>
<td>Ryedale</td>
<td></td>
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</tbody>
</table>
### COMPARISON OF PRE & POST APRIL 1996 WARDS

<table>
<thead>
<tr>
<th>Post April 1996 Ward Name</th>
<th>Parishes</th>
<th>Pre-April 1996 Ward Name</th>
<th>Pre-April 1996 District</th>
<th>No Change Indicator - NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Poppleton</td>
<td>Askham Bryan, Askham Richard</td>
<td>Askham Bryan (part)</td>
<td>Selby</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rufforth</td>
<td>Upper Poppleton (all)</td>
<td>Harrogate</td>
<td></td>
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<tr>
<td></td>
<td>Hessay, Nether Poppleton</td>
<td>Nether Poppleton (part)</td>
<td>Harrogate</td>
<td></td>
</tr>
<tr>
<td>Walmgate</td>
<td>Not Relevant</td>
<td>Walmgate</td>
<td>York</td>
<td>NC</td>
</tr>
<tr>
<td>Westfield</td>
<td>Not Relevant</td>
<td>Westfield</td>
<td>York</td>
<td>NC</td>
</tr>
<tr>
<td>Wheldrake</td>
<td>Elvington, Wheldrake</td>
<td>Wheldrake with Elvington (all)</td>
<td>Selby</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deighton, Naburn</td>
<td>Escrick (part)</td>
<td>Selby</td>
<td></td>
</tr>
<tr>
<td>Wigginton</td>
<td>Wigginton</td>
<td>Wigginton</td>
<td>Ryedale</td>
<td>NC</td>
</tr>
</tbody>
</table>
Appendix F: Tenure in York and Dijon

Tenure in the COMADI, 1982-1999

<table>
<thead>
<tr>
<th>COMADI</th>
<th>1982</th>
<th>1990</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Households</td>
<td>79,965</td>
<td>91,146</td>
<td>105,000</td>
</tr>
<tr>
<td>Owner Occupied (%)</td>
<td>43.7</td>
<td>46.2</td>
<td>46.6</td>
</tr>
<tr>
<td>Social Housing (%)</td>
<td>-</td>
<td>18.2</td>
<td>16.8</td>
</tr>
<tr>
<td>Private Rent (%)</td>
<td>50.2</td>
<td>48.6</td>
<td>29.6</td>
</tr>
<tr>
<td>Other (%)</td>
<td>2.58</td>
<td>4.86</td>
<td>3.92</td>
</tr>
</tbody>
</table>

(Source: Audit Urbain 2002)
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Appendix G: Images of Dijon

The reason Chapter 8 does not provide a comparison of ‘then and now’ images of Dijon stems primarily from two inter-related difficulties concerning the availability and access of both York and Dijon photographs and postcards and doing overseas fieldwork. There are seven chronological stages to the fieldwork that serve to explain the difficulties I confronted with this particular medium.

1. I examined the old images of York that were available in archives in the City Library. However, as explained, it was difficult to obtain copies of these images. Whilst I was not able to produce copies, being able to look at old images, I was nonetheless able to compare these to my own observations of the city today.

2. I conducted my fieldwork in Dijon. I examined old images of Dijon. Access and obtaining copies in Dijon was an even greater problem here than it had been in York. Nonetheless, I was able to compare old postcards with my own observations with the modern city. Most of the old postcards at this stage were accessed via market stalls or the Head Teacher who was an old postcard enthusiast who shared his collection with me.

3. At this point because it was proving to be near to impossible (given my available budget) to obtain copies of images to produce in the thesis, I did not take many current day images of Dijon whilst I was there.

4. Later in 2003, old images of York became available via imagineyork.co.uk. I was therefore able to ‘insert’ these pictures here. Later in 2004, I then went to York myself to photograph modern scenes of the city from a similar viewpoint as the ones taken in the old photographs.

5. After leaving Dijon and realising that I was now able to produce old and new images of York, I went about collecting old images of Dijon. In total, I
collected over 160 old postcards, most of which were purchased on EBay online auction.

6. Whilst I spent many hours surfing the internet and finding modern day images of Dijon, neither these nor the photographs I had taken on my fieldwork depicted modern Dijon from the same viewpoint. I was therefore unable to produce ‘then and now’ images of Dijon unless I physically returned there to take them myself.

7. Financial pressures and the impending submission deadline meant that in the end, I was never able to return to Dijon to do take these ‘same viewpoint’ images of the city spaces captured in the old images.

Thus, ironically whilst access to old images was a problem at the beginning of the fieldwork, in the end it was access to comparable modern images that caused me the bigger obstacle. The images presented below are just some examples of the old images I collected.
Place Grangier, 1907
(Source: collected postcard – no publication details)

Dijon market, c1900
(Source: collected postcard – no publication details)
Place Wilson


Place d'armes rue Rameau, 1908

(Source: collected postcard – no publication details)
la prefecture
(Source: collected postcard – no publication details)

Boulevard Sevigne
(Source: collected postcard – no publication details)
Chambre de Commerce and St Michelle's Church, 2003
taken from Place St-Michel

(Sources: (1) Copyright © 2003, Evasions http://www.evasions.be/galerie/dijon/pa_21/dijon.png; (2) pascal.oudot.free.fr/photos/dijon.html)
Place Darcy 1920s
(Source: collected postcard - no publication details)

Place Darcy, c.1924
(Source: collected postcard - no publication details)
Place du Theatre
(Source: collected postcard – no publication details)

Le Theatre, c.1905
(Source: collected postcard – no publication details)
Place Auguste Dubois, c1900s
(Source: collected postcard – no publication details)

Place du 30 Octobre around 1913
(Source: collected postcard – no publication details)
Boulevard de Brosses, around 1901
(Source: collected postcard – no publication details)

http://www.continental.fr/dijon_1900/photos1900.htm
Rue Francois Rude, 1900
(Source: http://www.continental.fr/dijon_1900/photos1900.htm)

Place St Bernard
(Source: http://duchene.gerald.free.fr/bourgogne/bourgogne01.html)

Rue Perrieres, 1900
(Source: http://www.continental.fr/dijon_1900/photos1900.htm)
Appendix H: Interview Guide

Questions:

1. What is a city?
2. What makes ‘York’ York? What makes ‘Dijon’ Dijon?
3. What things do you really like / dislike about York/Dijon?
4. Do you want to live in York/Dijon when you grow up? If so, why/If not, why not?
5. If you were to meet an alien who understood English/French but didn’t know or understand how humans live, how would you explain what a ‘city’ is to him/her/it?
6. Was York/Dijon different when your grandparents were your age? If so how?
7. What sort of place do you think York/Dijon will be like when you grow up?
8. If you could make York/Dijon your ‘ideal city’ or your ‘dream-city’ tomorrow, how would it be?
9. If you could keep only one thing the same about York/Dijon, what one thing would that be?
10. If you could change only one thing about York tomorrow, what would that be?
11. What sort of place do you think York/Dijon will be like for your grandchildren? Is that the same for all cities or just York?
12. How would you like York/Dijon to be in the future?
13. If you were me, and you wanted to find out what people your age thought about York, what other questions would you ask them?
Appendix I: Accessing Schools in York and Dijon

The procedure to apply for access to children in schools is different in York than in Dijon. In York, mainly due to the non-personal nature of the topic, I was encouraged by Head Teachers to directly approach the particular teachers rather than go through an ethics committee or the local authority. (With hindsight, it might have enhanced my chances of access had I done either.) Therefore, at the start of my research, I set out to obtain a representative sample of schools, and in turn, a representative sample of children attending York schools. From the ten secondary comprehensive schools scattered throughout the city of York, I collected a range of continuous and categorical data, such as exam results, percentage of absences per year, numbers of children per teacher, etc. Various cluster analyses later, the first letters were sent out to the 'ideal sample' of schools. Unfortunately, all replies came back negative.

Subsequently opportunistic sampling was used and another letter was sent to all secondary schools in York, including public schools and community colleges. My sample schools would simply be the ones that granted me access. Although only two schools responded positively, this allowed the interviews to begin. In order to obtain more schools, I turned to primary schools to further increase my chances of access. Thereafter, a combination of opportunistic and theoretical sampling was used. For example, other than the first school (which was selected based on its easy access given that I had worked there previously), where possible, each school was selected based on the answers provided by the children in the precious school.

In Dijon, the procedure was, on the face of it, a lot more formal. I went through a series of hierarchical channels before any Head Teachers were met. As Lincoln and Guba (1985) note, it was necessary to 'deal with multiple gatekeepers, each time having to repeat tasks of persuasion and striking a bargain.' In effect, I wrote to the
‘Inspection Nationale de l’Education de Bourgogne’ whereupon I was to discuss matters further. Having been granted permission from the regional administrative body, I was then invited to contact the local governing offices, of which there are four, carving up Dijon spatially. I had to gain permission from each local office in order to talk to children living in all areas of Dijon. Letters to each of the local ‘Inspections’ were therefore sent out next. Of the four, one invited me to discuss matters further and later granted me access to certain schools. Another replied advising me to directly contact the Head Teachers of various schools. A third replied much later, leaving me time to set up only one visit to an inner-city primary school. The one non-response meant that I was unable to interview any children in the south of Dijon.

Unfortunately, having gained permission thus far did not guarantee access to schools. The final decision was left to the Head Teachers. Those who were favourable to the idea of me interviewing children at their school invited me for an initial meeting whereupon a date was finally set. Despite (or because of?) the lengthier administrative procedure, I was more successful in accessing schoolchildren in Dijon than I was in York.

Having spent a lot of time negotiating simple access to talk to children at various schools, I did not then want to put the main gatekeeper off by seeming overly fussy about which children I spoke to. It was therefore necessary for me to respond sensitively and with flexibility to each of the different gatekeepers. In terms of the necessary logistics to set up the interviews, different people responded differently. Sometimes, the groups of children were drawn from one class over a morning or an afternoon. Other times, a group of children from each year group was selected. It tended to depend upon teachers’ agendas and teaching time as well how authoritative the Head Teacher was with regards to the teaching staff. That said, my preferences were always stated: I wanted to talk to children across the age groups, from the range of socio-economic backgrounds and educational abilities, in groups of four or five and of a roughly equal mix of boys and girls. Overall, I think that this was achieved.
Interestingly, although the access formalities in York and Dijon differed prior to any contact with children, once permission had been granted and a date arranged, the procedure was very similar. I arrived at the school, I was greeted by either the Head Teacher or the teacher whose class the children were being selected from, and was shown to the room I was to conduct the interviews in. I was then largely left to my own devices. The first group of children would come in to the ‘interview room’, the interview would take place, the children would go back to class and inform the second group of children that it was their turn, and so on. Relative to the necessary procedures I had gone through in order access the school, the surveillance was surprisingly lax once I actually came into contact with the children. On the same issue, although my contact letter informed the Head Teacher that I had had a police check, only three schools asked to see it. Yet, in many schools, I was left to ‘get on with what I had come to do’ to such an extent that it was difficult to find an authoritative adult to thank and say good-bye to when the interviews had been completed.

Overall, I appreciated both the autonomy and the privacy I was given to conduct the interviews. There were few interruptions, which facilitated the interview process as well as a clearer recording of the discussions. On the other hand, however, I felt very vulnerable. Had there been any serious problems, I am uncertain as to whether I would have been able to rely upon the support of the teaching staff. Thankfully, there were none but I was very conscious of the need for things to go smoothly to avoid any potential issues. Perhaps this forced me to conduct the research more ethically than I would have been otherwise. Had there been any problems – big or small – I may have had to defend my actions at every stage. However, it remains an interesting feature that whilst gaining access to children in schools the researcher has to proceed through strict stepping-stones of gatekeepers, but once in, little or no checking took place.
Appendix J: Describing the Interview Process

Here, I illustrate how both the structure and the flexibility intrinsic to this method shaped the research process. I begin by saying something about the environmental setting of the interviews. I then discuss the general structure of the interviews by outlining the interview guide that I used for all groups. Again, the *italics* serve to distinguish the narrative style in which the practicalities of the research process are described from the more theoretical aspects of the process.

*All the interviews were conducted within the school that the children attended. Most were conducted in a classroom or the school library, in which there were only myself and the children being interviewed present. Mostly, we sat around a small table. Were possible, I gave the children a choice of which table we sat at. Likewise, depending on the facilities of the room, the children chose whether we sat on the floor or not. On occasions where there was a shortage of space, however, alternative arrangements were made. This was the case in three York schools. In one school, for example, the interviews took place in the school’s large assembly hall. The hall was not in itself an issue. Rather, the problem came from the interruptions caused by adults and children crossing the hall to get to various rooms.*

Similarly, some of the interviews in one of the schools were conducted on a low stage at one end of the assembly hall. The problem with the stage was that there was a lot of clutter stored on it and the resulting space was simply too small for our purposes. We were crammed tightly together round a little table and those near the edge of the stage feared toppling over so much that they remained distracted, and in turn distracted the others, for the duration of the interview. On another occasion, we were placed in a large room, which also served as the library. There were books shelved along all walls that other children were browsing. At one end, there was also a computer-class taking place. Because of both the interruptions caused by children looking for books
and the noise disruptions caused by the on-going computer class, this was perhaps the most unsuitable of all the locations. That said, the interview process proceeded in all cases.

The interview guide (see Appendix H) (see Bryman 2001; Denzin and Lincoln 1994; May 2001; Silverman 1985) provided the convenient structure, which remained constant between groups and between countries, with the flexibility of adapting the order of questions from time to time, as well as the way the questions were asked in order to adapt to the children’s different ages. Each interview revolved around a distinct three-phase format: the opening-, the middle- and the closing-phases (Keats, 2000). Table 21 summarizes the activities performed during each of the three phases; in what follows here, I detail only the first two phases.

In the ‘opening-phase’, I tried to be especially attentive to each child. I tried, on the one hand, to build up rapport and, on the other hand, to provide them with accurate and sufficient information about what I was doing there. I introduced myself as ‘Emma’, emphasizing that I was not a teacher but a student. I explained what the purpose of the study was and why I was wanting to speak to them, the sorts of questions I was interested in asking, that I was asking them about their views ‘because although there were quite a few books written about York and Dijon, none of them mentioned what children thought. I continued to say that what also really annoyed me was that even though most of the children had been living in the cities all their lives, no one seemed to think that they had might have opinions about how they thought York/Dijon should be like, how they wanted to see it change, etc.’ In this way, I was trying to show that although I was an adult, I was still ‘on their side’ and it also seemed to work as an effective ice-breaker.

I asked if I could record the interview, explained how the tape-recorder worked, why it was important to tape the sessions, that only I would listen to the tapes, and that I would sum up and then write up their views and opinions. I explained that only a small number of people would read this report, although York City Council and
Dijon's Agence d'Urbanisme had expressed and interest in what I was doing and I would try to convey their wants and desires to these agencies. I then asked the children to write down their name and age and I explained that because the tape recorder was not very good and that it was sometimes really difficult for me to clearly hear their recorded voices afterwards, that it would really help me if they spoke clearly one at a time. Finally, I asked if they wanted to ask me any questions before we started or if there was anything they were not sure about.

<table>
<thead>
<tr>
<th>Phase of interview</th>
<th>Examples of activities performed by phase</th>
<th>Purpose of phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. the 'opening-phase'</td>
<td>I introduced myself. Obtained the children's informed consent. Took down respondents' name and age. Built up rapport between interviewer and interviewees.</td>
<td>To negotiated terms of continued consent; To build rapport; To facilitate respondents' openness, etc.</td>
</tr>
<tr>
<td>2. the 'middle-phase'</td>
<td>I asked questions, followed up answers. Continued to maintain rapport and trust.</td>
<td>To obtain relevant data.</td>
</tr>
<tr>
<td>3. the 'closing-phase'</td>
<td>I reiterated what would happen to the data. Reminded them that only I would be listening to the tapes and that their responses would remain confidential. Played back the tapes and listened to snippets of the interview.</td>
<td>To debrief; To inform respondents on 'what happens next?' to the data; To supply each respondent with interviewer's contact details; To end interview and say good bye to the interviewees.</td>
</tr>
</tbody>
</table>

Table 21: Three phases of the interview

The opening phase of the interview was in many ways the platform for the rest of the session. It was, therefore, particularly important that I took my time here. For my part, this phase meant building rapport (Bryman 2001; Keats 2000), laying out some of the ground-rules of the interview (e.g. they did not need to raise their hand to speak but I appreciated it if they could speak one at a time) and, of course, explaining issues of confidentiality and obtaining their informed consent. For the children, however, it was, I felt, their time to figure out whether or not they were going to cooperate and trust me or not. I felt tested and watched. Therefore, I was especially sensitive to both the needs of individual children and the general feeling in the group. For example, at the very start of the interviews, the children were very quiet. Indeed, they rarely expressed themselves verbally at all in the first couple of minutes. Yet rather than wait for them to do so, I felt that it was my job to promptly, but sensitively, respond to
them. I interpreted their behavior as signs of unease or suspense, but they might also have been reacting to me as a teacher-like adult (see Andersen et al. 1985; Solberg 1996). Either way, at such times, I would respond by trying to make the children feel more relaxed, more informed about who I was, why I was there, how I intended to proceed, etc. In this way, it was hoped that if they had been uneasy, they became less so; if they had perceived me as a teacher-figure, they at least became aware that I was a student. Once I sensed that they were comfortable and at ease and that they were as clear about me as they were about what we were going to do, I moved onto the second phase.

In the 'middle-phase' of the interview, I asked questions and explored issues. For this part, I had a written list of questions and topics that I aimed to cover in each group. Mostly, I asked questions in the same order; sometimes, the flow of conversation veered towards a particular direction and I would alter the order of questions to suit. The wording of the questions remained, by and large, similar. I asked new questions where I felt that respondents' clarification and elaboration might benefit the research question or my own understanding of their answers. Waterman et al. (2001) have shown that the way children respond during interviews is significantly dependent upon the way the question is asked. Indeed, researchers have also shown that when questioned by adults, children will tend to give an answer whether or not they know the answer or understand the topic of the question (Scott 2000; Wilson and Powell 2001). Hence, I paid close attention to question form, using clear, open-ended questions in 'a developmentally appropriate manner' (Wilson and Powell 2001:20). I tried to use concrete questions, such as 'what', 'where' and 'who' questions as much as possible; I tended to use 'why', 'when' and 'how' questions cautiously and mainly with only with the older children (Saywitz 1995; Wilson and Powell 2001). In addition, I made an effort to reveal my train of thought so that the children would not perceive my questions to be nonsensical (Waterman et al. 2001). Sometimes, I asked additional questions simply to maintain rapport with the interviewees and to show them that I had listened.
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Ordinance Survey (2000a) York with City Centre Enlargement. Essex: Street Master.

Ordinance Survey (2000b) York, Selby and Tadcaster. Scale 1:25,000.


