

## Representing complex places: a narrative approach

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**Abstract.** The authors argue that narratives—the plural being very important—are crucial for the representation of complex urban spaces. They do this by drawing on first-hand empirical examples from a previous examination of people's understanding of 'postindustrial transformation' from the past through the present to the future, and earlier work on children's understanding of their own places in the present and the future. In so doing, they propose that the use of narratives must be part of the repertoire of approaches used to represent complex urban systems. This does not imply an abandonment of interest in or search for causal generative mechanisms in system change. Rather, it is a recognition that narratives enable human actors to express the meaning that underlies their own agency as part of their account of the trajectories of places.

### Introduction

In any discussion of complexity, a key issue is what is meant by the term. Plainly, the term has multiple meanings; almost any discussion of complex systems always includes, and often concludes with, an argument about definitions of complexity. We draw upon Rosen's (1987) distinction between simple and complex systems:

“a simple system is one to which a notion of state can be assigned once and for all, or more generally, one in which Aristotelian causal categories can be independently segregated from one another. Any system for which such a description cannot be provided I will call complex. Thus, in a complex system, the causal categories become intertwined in such a way that no dualistic language of state plus dynamic laws can completely describe it” (page 324).

Furthermore, on the basis that a number of authors have explicitly adopted this position, and also because complexity ideas are implicit in much of the urban literature, we treat cities as complex systems.

The dominant mode of representation of cities as complex systems—with representation understood as the stage beyond simply asserting the complex nature of urban systems—has been through iconic modelling. Iconic models are founded on algorithms that derive complex emergence from the iterative progression either of nonlinear equation sets or of 'game' rules in simulations (see, for example, Allen, 1997; Batty et al, 2003; Dendrinos, 1996; Dendrinos and Sonis, 1990; Portugali, 1997; 2000). However, although such approaches certainly have their uses, they do not address crucial aspects of the processes of complex causation in urban systems. There are three reasons for this. First, they have a limited capacity for capturing the generative dynamics that occur across the multiple hierarchical levels. Most models account for only two or three levels, whereas aggregate social form is derived from the multiple nonlinear interactions of multiple levels; the interactions are interdependent across and between levels. If we are to construct representations of the urban, then we also need somehow to construct models that acknowledge multiple nonlinear multilevel interactions.

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Second, although some models are based on empirical data (for example, Batty et al 2003), few use these data directly within the model; instead they take the form of hypothetical predictive propositions about urban systems rather than working with what is known to be real about the urban. As Batty et al (2003, page 1588) comment: simulation often “becomes a series of diagnostics in which existing controls are also evaluated and this turns the process of prediction into one that is infused with prescription.” Whilst we agree with them that this meets “the oft-quoted objection to technocratic, top-down-style planning in which plan and planner take a privileged position”, we stress the importance of exploring modes or representations in which actual data are directly integrated. Traditionally, data would be understood in this sort of context as the quantitative products of measurement processes. We absolutely agree that social measurements are relevant here, but we think that measurements alone will not resolve the issue.

In summary, measured data and the structures of explanation we construct with them are not adequate either as an account of the nature of complex systems incorporating human agency or as modes of establishing such accounts. We also need forms of data which can convey meaning and the potential for social action. Narratives have this capacity. As Guhathakurta (2002, page 909) argues, the strength of the narrative is that it “substitutes meaning for the straightforward copy of the events recounted. It follows that the absence of a narrative is an absence of meaning itself.” Urban systems are social systems. Therefore, representations of urban systems need to incorporate meaning within them.

It is this aspect that constitutes our third and most important reason for asserting the necessity for narratives in complexity-related research on urban systems. We must be able to allow for the conscious reflexivity of individual or collective social action. Our understanding of complex social causation must take into account the reflexive role of human agents in change, with agency understood to include both conscious and intentional planning and political processes and the actions of individuals and households expressed in consumption, cultural, and other social practices. The question of how to incorporate agency into complex understanding, whilst also taking into consideration the interaction between macro-, meso-, and microlevels and the implications of reflexive agency, needs to be resolved. We argue that narratives can help us to represent agency, which is (a) multiple, (b) multilevel, and (c) takes account of conscious reflexivity between and within the different levels of multiple agency shaping the emergent urban form.

Hence, in this paper we argue that narratives are crucial for the representation of complex urban form precisely because they enable actors to express the meanings that underlie their own agency (which may or may not be part of a collective agency) involved in shaping the trajectories of places. Moreover, qualitative modelling, using available computer-based packages, enables us to systematize and generalize from these narratives and provides a bridge between the quantitative and qualitative in our representations and projections. We do not claim that narratives should be used *instead* of quantitative modelling and simulation. Rather, we argue that narratives should be used alongside them, as a complementary method of equal status in much the same way as methodological triangulation helps to inform research practice in general.

Luhman and Boje (2001) and Guhathakurta (2002) have explicitly argued for the use of narratives in relation to understanding complex systems. Whereas Luhman and Boje argue that narratives aid further conceptualization of ‘complexity science’, Guhathakurta demonstrates the ways in which computer-based urban models can ‘tell a story’. We extend Luhman and Boje’s and Guhathakurta’s proposals by drawing on two first-hand examples, which illustrate the potential of narratives specifically in

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relation to representing cities as complex systems. In doing so, we are drawing, at least metaphorically, on the systematization of comparative method proposed by Ragin (1987; 2000) in the form of qualitative comparative analysis.

Narratives admit the voice of reflective agency. They are a conventional way of exploring the qualitative representation of trajectory: historical narrative is always a qualitative account of trajectory. The increasing use of multistranded narratives addresses precisely the complex and multiagent character of change and the *experience* of change. ‘Biographies’ of city regions are specifically urban representatives of the genre. However, such historical narratives draw upon the traditional repertoire of historical techniques in the production of representations of past trajectories. The interesting question is: how can we draw on social actors’ understanding of that past in relation to the future?

Here, actors’ perceptions matter in two interrelated ways. The perceptions will inform their own actions towards the future, and these actions themselves have constitutive implications for the production of the future. At the same time, people construct their own narratives of the future as a contextual guide for their own present and future actions. It is important to develop procedures which draw on this combination of retrodictive narrative of the past, expected general trajectory of the future, and our own intentions for action in informing our understanding of how the trajectories of urban systems might develop in the future.

In this turn to actors’ accounts, we are picking up on a point made by Smith:

“the accumulation strategies of capitalist logics, structures and actors, to which many urban analysts devote so much attention, are not the sole, or at times even the most important agencies in the constitution of urban life. As important, if not more so, has been the impact of ordinary women and men—the consciousness, intentionality, everyday practices and collective action—on the social construction of urban life” (2001, page 6).

It should be noted that a turn to the ordinary masses is not a turn away from the significance of generative mechanism. We are not advocating a social version of micro-economics with nothing to deal with but the aggregative summary of the effects of individual rational agents. Consciousness, intentionality, everyday practices, and collective action are emergent structural phenomena made manifest in social action. Furthermore, responses to the implications of the capitalist mode of accumulation as it develops are a crucial component of the sources of the social actions of people, although never the only one.

The history of cities at the level of elite determination in accordance with capitalists’ interests can be written using the usual tools of historical narrative. How can we access how people think about these things? Moreover, how can we do this not just in terms of generating an account of how it was, but in terms of generating an account of how people might think about the future in relation to the present and the past? The tools developed for oral history are extremely useful because we must include accounts of the past from those who have experience of it. However, we extend the strengths of historical narratives to include narratives about the present and the future in order to explore past causes and project future ones.

For us, the turn to reflective informants is a way of resolving all three of the problems of complex representation specified above. It enables us to deal with the multiple and intersecting levels of complex systems because people deal with all those levels as agents and can reflect on, and talk about, those dealings. It certainly generates empirical data. Moreover, it explicitly and absolutely deals with conscious human agency as something that matters.

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### What people know

We are interested both in history and in projection, where projection is understood as the narrative towards the future. In other words, we want to know about what people say has happened, how they think things will develop, *and* how they will act in relation to those developments. We see action in the future as both responsive and constitutive. In turn, the ways that people deal with change and how their actions contribute to the engendering of change are important. We are concerned with the relationship between back trajectory, the present, and projection to the future. (In the case of children, we are primarily concerned with the present and the future.)

Individual and collective narratives are descriptions of trajectories. All stories move through time. As such, narratives are descriptions not of single systems but of the interweaving of complex systems. People never tell just the story of their own life; nor do they project simply in terms of themselves. All lives are embedded in the social; there is no personal without the social. Therefore, we regard narratives and projections not just as accounts of the single complex system of the self, but as representations of how lives and the social intersect, that is, Mills's (1959) intersection of biography and history—the essential substance of sociology as practice.

The narrative approach that we are suggesting has two aspects. First, it is a mode of representation in terms of our distilled account and interpretation of the accounts and interpretations of our informants. Second, it allows us to explore the ways in which complexity is experienced in everyday life. Of course, we cannot just ask people this question. The terminology requires a level of technical sophistication which is not generally available, and the lack of consensus about what complexity is makes it difficult to answer this question directly anyway. Moreover, we assume that people experience the complexity of the urban whether or not they are aware of it as such. Therefore, we can learn about the complexity of the urban through people's narratives in much the same ways as narratives are used to explore the ways in which people experience agency, structure, and culture in everyday life precisely because their everyday life is embedded in the systems which shape it.

In turn, we suggest that in our accounts and interpretations of narratives about the urban we must always bear in mind the following two questions: are these narratives isomorphic with the general character of complex systems? Do people intuitively understand their world in complex terms and act in relation to it on the basis of that understanding? If the answers to these questions are 'yes', then perhaps we can also conclude that that we are dealing with complex places. Thereafter, exploring the extent to which this is the case may help us to evaluate the degree of complexity of that place. These issues are likely to influence the possible futures we subsequently project for a particular place.

Our proposition is that exploration, guided by Bateson's (1984) view of the nature of everyday understandings, provides us with a way of accessing this kind of knowledge as part of our representation project. Bateson addresses the question of how data are constructed in social surveys. He argues that interviewers are participants in a social encounter with reflexive human beings from whom they seek knowledge of the world. He identifies three levels of knowledge, the first of which, information, is what concerns us here. For Bateson, information is knowledge about the world organized in the language of everyday life and it is held by informants based on their observations of the world.

Similarly, in interviews, we ask people to act as observers and to tell us what they know so that we can make use of it as indirect observers. However, we take this further. Informants are more than observers because they also reflect on their own motives, understanding, and meanings. Moreover, they formulate intentions as to

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action in the future. In other words, we can elicit (interpreted) accounts of the social world, the meanings attached to it, and intentions about future action. In turn, we can use these accounts to learn about the generative dynamics from which the urban emerges.

The potential of narratives to aid in our understanding of complex places will be illustrated through Byrne and Doyle's (2004) examination of people's understanding of 'postindustrial transformation' from the past through the present to the future, and Uprichard's (2005) work on children's understanding of their own places in the present and the future. These two studies were conducted in the spirit of Plummer's (1983) approach. That is, they are 'short, introductory studies' which sought to understand how people understand their social world. They were:

"concerned with depicting and discussing a particular and peculiar style of investigating and understanding human experiences, a style which simply advocates getting close to concrete individual men and women, accurately picking up the way they express their understandings of the world around them, and, perhaps, providing an analysis of such expressions" (Plummer 1983, page 1).

Plummer was interested in documents of life in the tradition of Thomas and Znaniecki (1918), later endorsed by Znaniecki's (1934) programme of analytic induction as a research logic for which causal explanation is the main objective. We think that the objective can be investigated in a range of ways, so long as we always pay proper attention to what people actually know.

Note that the assertion about the validity of knowledge elicited through interviews and related strategies dismisses the strong version of Bourdieu's (1984; 1990) notion of habitus as 'a collection of systems of structuring structures' which are always inaccessible to human perception. However, a weak version of habitus, in which much of social action is unconscious, embodied, not reflected upon, but can ultimately be accessed through a systematic process of research and investigation, is perfectly acceptable. After all, if we are interested in transformation then we are dealing with radical disruptions of experience, which even Bourdieu recognizes can lead to reflection and elaboration of personal knowledge.

In our first illustrative case, about the end of coal mining in the northeast of England, we are dealing with just such a transformation of experience and environment. In the other case, about children's views on York and Dijon, we are dealing with children who are anticipating the process of development of their local urban environment—but that process also involves radical changes in self (as they become adults). Whilst we acknowledge that these are both small-scale studies, they are precisely about the act of narrating. Therefore, they are used as examples of the potential benefits of using narratives to represent complex urban systems. In each case, we will provide a simple description of some of the emergent themes that arose from each study. Later, in the conclusion, we comment more specifically about the ways in which these descriptive themes help us in our attempts to represent cities as complex systems.

### **Example 1: Beyond the end of coal—reflecting on the past and visualizing the future**

Conventionally, historical trajectory is represented through narrative expressed in words. However, we also have images available and, if those images are ordered in time, then they too can stand as representations of a trajectory which can be compared as Byrne and Doyle (2004) suggest, as very slow movies showing how things change. They explored the application of this mode of representation in engaging with informants in South Shields, which is a medium sized (population 100 000) industrial town and port, and is part of both the Tyneside conurbation and the Great Northern Coalfield in the northeast of England.

The specific historical context was ‘the end of coal mining’. Coal had been mined in South Shields and the surrounding area for at least seven hundred years, but the massive industrial development of coal mines from the late 18th century onwards was one of the foundational processes of the industrial revolution. The northeast is a zone of ‘carboniferous capitalism’, with the mining and transport of coal being foundational to the whole industrial system until the 1930s, and remaining important until the closure of the last mine in the area, the giant modern Westoe Colliery, in the early 1990s. At its peak, in the period from 1900 to the 1920s, mining had employed nearly 10 000 men in South Shields. Until the closure of Westoe, the industry was still one of the largest employers, with some 2000 men engaged. Almost everyone in the town had some sort of family connection with coal mining during the three previous generations (Byrne and Doyle, 2004).

Mining literally undermined the town: the whole town stands on top of mined-out coal measures, and mining extended some seven miles underground out into the North Sea. This enormous underground system came to light—to the surface—in the form of large and conspicuous structures, in particular the Crown Tower, the minerals shaft headgear of Westoe Colliery, which stood on a hill near the North Sea and was a prominent land and sea mark in the area. There were other older pitheads and a series of railway lines and staithes (wharves) from which coal was shipped, at times globally. The surface evidence of coal was less than its underground presence, but it was very considerable. South Shields was, to quote the title of the research project, ‘a town built on coal’. The Crown Tower was not an old-fashioned headgear but a large engineering structure. Since the 1930s the process of extracting coal below ground had been intensely mechanized and, in its last phase, computerized. However, what went on below ground was invisible to most people and even to most of those who worked underground. This was because coal workings were generally only illuminated at the point of work or at the restricted level of the miner’s headlamp. Yet Doyle had successfully produced photographs that depicted the *whole* underground scene.

Therefore, Byrne and Doyle (2004) had images both of the visible surface representation, which reflected the trajectory of the place over most of the lifetime of people resident in the area, and of the less visible underground scene. In some cases, they were able to arrange these images in time-ordered sets. The time-ordered set of particular significance here was the Crown Tower Set. This was a series of five images of the Crown Tower arranged thus:

- (1) Being constructed, late 1950s;
- (2) In existence, mid-1960s;
- (3) Being blown up—caught in the act of crashing to the ground, 1992;
- (4) Lying on the ground, 1992;
- (5) The empty site, 1995.

The economic and social history of northeastern coal mining can be documented in relation to the combination of global energy, political economy, and the specific UK political project of Thatcherism and the defeat of the 1984 miners’ strike. This clearly was a history of transformation, with the complete cessation of mining in 1992 representing the end of a specific industrial system.

Byrne and Doyle were interested in the way in which a culture of industrialism in general, and mining in particular, which had been engendered through more than two hundred years of lived experience, continued to inform popular attitudes, meanings, and intentions. They wanted to know what people thought of the past and how their understanding of the past informed their views of potential for the future. To this end, they assembled focus groups, most of which were drawn from existing organizations whose members met together for another purpose. They regarded the set of images as

a stimulus to conversation: a conversation among people who usually talked to each other. In so doing, they intended to create a seminatural ethnographic context, although there was some intervention by the group facilitator.

One thing that emerged from the discussions was versions of the future. Different participants and groups, referred to as the 'Arts Group', the 'Reflexive/Feedback Group', and the 'Business Studies Group', had different versions of the future that could be associated with their different experiences of local change in relation to the life courses of the members of the groups. Here is a set of passages drawn from the different group discussions in which the future is addressed in some way.

#### **Arts Group**

C: "I was going to say that. When something is chopped out, you know, you've got people lose their jobs. The whole heart of the community is removed. If there is something in the future then people.. If things get better people don't mind change so much, I don't think. You know.. they get a bit nostalgic. But they don't mind change so much. If they go from a family, you know, comfortable income.. dad's got a job, or whatever.. to nothing. Then people resent it. And something.. if anything is put there it has to be something."

C: "I think as well what you memorialise it with has to be so carefully chosen.. people will resent a piece of art when they've got no future.. no nothing. If you put something there that to them is not functional.. not going to do anything for them.. and not going to bring any money into their community. What they want is jobs. What they want is their life back, in a way.. and you have to.. you know, it's almost as if you feel you have to offer them something that can slightly compensate in that space. But really it's going to be a drop in the ocean, you know. You have to be careful that there's something there that they don't resent.. that they don't feel that."

#### **Reflexive Feedback Group**

D: "I don't know, because there's a lot more there. There's all those pubs along the front. There's the kind of band stuff. But actually if you see that as a kind of substitute for the employment it's ridiculous. It's enjoyable because people like listening to the band and going to the pub and looking at the sea. But that's the question. I mean the light industry stuff—is that just a token gesture really?"

J: "I don't know what it is. I mean there is a continual debate in the press, and arguments about what there should be there. Time and time again they have surveys of people saying it should be leisure.. sport.. that recreational type of use. And the council keep coming back saying no, it's got to be light industry and housing. I don't know what their politics are. I don't even understand their political motive in that."

#### **Business Studies Group**

A: "We have got rid of all the chimneys. I think the sky looks better now."

B: "It doesn't look as smoky."

A: "I think when you've got chimneys around it gives the town a dirty image. Heavy industry. Unsafe. Polluted."

Q: "So that tower [Crown Tower] gave that kind of feeling to the place?"

A: "Yes. I think if I hadn't lived here and I'd seen that I would have thought twice about coming. Let's face it.. you want to go to a town that's clean.. and look at Newcastle.. look at the big cities.. you see office blocks.. and you look at chimneys."

Q: "That's not a chimney. That's a winding tower."

A: “It’s the same sort of thing. And when you look at that.. the first impression it will give people is it’s a terrible town that.. it’s dirty. It’s a pit town.. there’ll be nothing here for them.”

Q: “Because there’s a pit here it’s a dirty place?”

A: “That’s the general impression that people perceive of it though. So [...] what are we coming for ...”

Together, the narratives represent South Shields during the period in which the research was conducted. Of particular interest are the contrasting viewpoints between the informed narratives of the two groups of older people, for whom the physical structures stand for a past which is gone, and the younger (16+) group (the Business Studies Group) who reject that same past. Also significant is the nature of the attitude which all groups have in terms of the current dependency of the place, the unsatisfactory character of available alternative employment, and attempts at regeneration based on leisure and tourism. For example, the business students perceived the Crown Tower as a representation of the past, but a past that was negative, dirty: *not* conducive to employment opportunities in the area, and one that should therefore be demolished and removed from the present physical and cultural landscape. In contrast, the older members of the Reflexive Feedback and Arts Groups perceived the Crown Tower as a positive symbol of the past which stood for past, present, and future employment.

These different narratives must be incorporated in our representations of South Shields. This is not simply because local people are an intrinsic part of any local place, which raises ethical issues about local views *not* being incorporated in representations of local space. Rather, from a complexity stance, the different narratives are important precisely because the ways in which the different groups perceive and interact in (and with) their local environment play a part in shaping that future urban space. As Lefebvre ([1974]2003, page 74) notes, a city has been composed by well-defined groups of people and those living in that space are a “*component part of it*” (page 178, emphasis added). By implication, in asking how and why people describe the urban landscape as they do, the underlying questions are: (a) *why* has the city been composed in that way?, (b) *who* is composing the city?, and (c) *what* are the mechanisms by which those people or those groups of people are composing the city in that way? Although these questions must remain unanswered in this paper, our point is that in obtaining local people’s views about their urban world through narratives, we are not only attempting to build a representation *of* the urban world, we are also attempting to know the complex urban space-in-itself ‘*in the making*’.

In the next example, we will see something similar from the children’s narratives and likewise, we argue that the views of local people—young and old—are interesting in themselves but more importantly, they raise questions about how the urban might evolve given the different interacting perceptions of the people in that urban space.

### **Example 2: Children’s narratives about York and Dijon: present and futures**

Like Byrne and Doyle’s (2004) research, Uprichard’s (2005) work explored the ways in which local residents experienced the changing city. However, instead of involving adults as research informants, this study considered the role of *children* as present and future agents in shaping the trajectories of the urban. Small-group interviews were conducted with children (aged 4 to 12 years) living in the two European cities of York (population 181 000) in England and Dijon (population 220 000) in France. These two cities have long and different histories but present somewhat similar socioeconomic forms. In each, the city centre acts as a focus for tourism and commerce, which effectively outperform other parts of the economy in terms of local turnover. The interviews sought to elicit the children’s perceptions of the city in the past, present, and future.

Two main themes emerged from the children's stories about where they lived: change and continuity. Change and continuity are interesting themes in themselves. However, as we shall see, from a complexity perspective, they are especially interesting because they resonate with the ideas of phase shifts, autopoiesis, and attractors. In turn, the children's responses can be seen as directly exploring one of the fundamental questions raised earlier in the paper about whether people's narratives are isomorphic with the general character of complex systems.

For instance, reaching a balance between change and continuity did not seem to be an issue at all to the children. There was an assumption that both were to some extent inevitable anyway; as one child explained, "because every ci'y will change". Of particular importance were: what changes, what stays the same, and how fast and to what extent does the city space change *as a whole*; who changes the city and why the city changes were also significant concerns within and across groups. These issues were discussed in terms of two other themes which ran throughout the narratives, which were to do with the discrepancies between the different futures of the two cities as seen through the eyes of children living there. That is, the change and continuity that the children *want* in the future and those which they *imagine* will occur.

### **Desired change and continuity**

In terms of the city as a whole, only two (out of over 300) 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." However, they did not want the city to change to the extent that it became unrecognisable either. Some change was welcome, but not just any change. For instance, there were particular buildings, streets, and icons that the children felt represented that city. Many York children, for example, 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:

**B:** "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."

Examples of the 'city icons' in Dijon, are the 'Lac Kir', St Bénigne church and Notre-Dame cathedral, the Place Darcy, the Porte Gillaume, the Palais des Ducs, 'la Chouette', the city's association with wine, mustard, blackcurrant, local residents, and visitors. Even when asked to choose, say, between the Minster or Notre-Dame coming down and 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 like most to change about the city) they always opted for the building to stay. The overwhelming opinion was that those structures, physical or symbolic, which capture the essence of the city must be maintained throughout time.

In contrast, 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 consensus was that 'more was better', particularly if they targeted the younger age groups. However much the children wanted these developments, they also voiced that they should not be at the expense of the city icons 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.

### Projected change and continuity

In terms of what the children imagined *would* or *might* occur in the future, the same story runs across both cities. The children predicted that the city is “gonna have expanded *a lot*, and it’s gonna be *much* bigger than it is now” and that “there will be quite a lot of sort of shops and shopping malls and things”. Although children of different ages imagined different future cities, which were more technologically advanced than today, the younger children (under 7 years old) 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”. 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 was that:

A: “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 of old and a lot more new on the outskirts.”

So what can we learn about these sorts of narratives? What do these two illustrative studies offer? How do they help us in our complex representations of cities? We discuss this in the remainder of the paper.

### Conclusion: The story about the stories

People’s stories matter. They matter because they allow us to see how people interpret the world and how they perceive themselves *in* that changing world. As Sennet (2001) writes:

“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” (2000, page 123, original emphasis).

In studying cities and urban regions as complex systems, we take it as given that people are always (potentially powerful agentic) components of those systems. Our ways of representing cities as complex systems need to reflect this, but they also need to take account of the relationships between individuals, collectivities, and organized institutional power—‘they’! Most of the children interviewed in Uprichard’s (2005) study will continue growing up in these places and will reside as adults in them also. Likewise, most of the local residents approached in Byrne and Doyle’s (2004) study will remain locally. In a real sense, then, these people will be *part* of these places for many years to come. Narratives are a way of incorporating people methodologically and theoretically into our representations.

In trying to understand the patterns of change in our cities and urban regions, it is not only important to describe those changes: we also need to understand the different patterns of the effects of those changes, and consider how those patterns interact together through time and space. Narratives allow us to capture links between the local micro-, meso-, and macrolevels of social interaction. It is not only important to know which levels connect with one another, we also need to understand *how* they connect, how the mechanics of the articulations between the multiple levels are experienced in everyday life, in order to understand better the dynamics of change generally across time and space, and specifically within a set time and space.

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Of particular significance is qualitative change involved in phase shifts. We can employ narratives not just as a means of identifying phase shifts in the past and the present, but also in terms of the imagined potential for change in the future. If urban systems—the quotidian operationalization of the local—are in a time of qualitative change (that is, they are going through a phase shift) then the possibility emerges of social actions influencing the outcome of that phase shift. Things might be made different. This is a very interesting possibility indeed, and the informants in the groups identified above were themselves thinking actively in this way, at least inasmuch as they voiced these issues during the interviews.

Following Bateson (1984), whether or not the participants were thinking these things prior to being asked about them in the context of the research is not the issue. Instead, as noted above, we argue that the data produced by the informants during the interviews (which Bateson refers to as ‘information’) reflect the informants’ knowledge about the world, based upon their observations of the world and articulated in their own everyday-life language. As Hammersley and Gomm explain in relation to the general interview method, the approach adopted here assumes 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 though 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” (2004, pages 96–97).

The point is *people* build cities and urban regions. Therefore, however we choose to model complex places, we need to integrate real people into our representations of them. Narratives help us to explore not only how people *do* describe their world, they can also be used to learn about how they *want* their world to change. Furthermore, combining representations of what different groups of people *want*, with the ways that different people perceive things *as they are*, and the kinds of futures that local people imagine *may occur* can help us to build up a multidimensional picture of a particular place in which people are precisely at the heart of that representation.

Building such narrative-driven models would be useful because, just as simulation will increasingly have to be part of the models that we are simulating (because our actions may depend upon our simulations) (Cilliers, 1998), so too must we attempt to construct reflexively representations which integrate the different ways that various agents experience, move about, and act in the world. After all, even if human organization is purely rule based, we need to understand how those rules are played out in the form of actions and perceptions in order to explore the degree to which our futures are determined or whether they can be swayed through conscious action and reflection. Our models may be interesting, but they are only useful if they actually help us to cause the effects that we would like to produce. As somebody once said:

The Philosophers have described the world—the point, however, is to change it.

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