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DELEUZE AND GUATTARI

Jean Hillier in conversation with Gareth Abrahams

Jean Hillier

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Deleuze's seminal texts are notoriously difficult to read, and even more difficult to relate to the work we do in our day-to-day lives as planning theorists and practitioners. One of the reasons for this difficulty can be found in Deleuze's eclectic references to other specialist disciplines: biology, differential geometry, psychiatry, linguistics and art amongst others. Spending many hours poring over biological descriptions of ginger, or staring into Bacon's distorted faces will leave many of our most important questions unanswered. And if we put these questions to one side, we soon find that modelling a road layout on the growth patterns of a ground stem vegetable produces a pretty image but an impractical plan.

The reason is that Deleuze does not simply use these images as metaphors for his philo-sophy. Rather, he re-creates them into concepts with a very specific function. Thus, the rhizome, the assemblage, the machine, the universal singularity, the multiplicity and the virtual diagram should be seen as concepts that *do* something very specific. As many Deleuzean scholars have noted, Deleuze's philosophy is not concerned with what something is, its inherent traits or essence, but what it *does,* what it *might do*, how it might affect what other things do and how it might be affected by them (Bryant, 2008; DeLanda, 2002; 2006; Bonta and Protevi, 2004). Thus, when we read Deleuze's texts, we must ask ourselves, 'what does this concept do in Deleuze's philosophical project?' and, by extension, 'what might this concept do for planning?' If Deleuze is to change the way we work, therefore, we must start by exploring his understanding of reality (his ontology), and then consider how bringing this ontology into planning might help us re-think some our most fundamental assumptions and tools.

Identifying Deleuze's ontology is not a simple task. As Jean Hillier notes later in this publication, there is some dispute amongst Deleuzian scholars about whether we should talk about a Deleuzian ontology or several. Indeed, this plurality can be seen across Deleuzian scholarship. Manuel DeLanda, for example, discusses what he regards as Deleuze's *realist* ontology (DeLanda, 2002), his *virtual-actual* ontology (DeLanda, 2002), and his *non-essentialist* ontology (DeLanda, 2006). Later in this publication, Hillier refers to an ontology of *difference* as well as a *post-structuralist* ontology. Rather than revealing contradictions, these different frames offer us a variety of starting points for navigating through Deleuze key ideas and, by extension, through our own work. With this in mind, I would like to draw on an ontological frame that I believe could be particularly suited to planning. This frame is drawn from DeLanda's careful reading of Deleuze's three realms of reality: the actual, the processes of actualisation and the virtual (DeLanda, 2002).

The first of these realms is the easiest for us to visualise because it forms the world we see around us. In Deleuze's work, the actual is comprised of human and non-human entities, which might include the planner, the client, the houses, trees, people, birds, worms, flowers and pebbles on a site. However, for Deleuze, whilst this actual realm is the easiest for us to visualise, we must not limit our understanding of reality to the observa-

tions we draw from these entities. Above I said that we can learn little about Deleuze's philosophy by staring at a piece of ginger or a painting. The same argument applies here. For Deleuze, we will learn very little about the actual realm by staring at a bird, a flower and a pebble and trying to determine what they *are*. These entities and their discernible properties only provide us with an 'image'. They tell us almost nothing about how they *came into being*, how they might change over time to form new beings, what they *might do*, how they might affect what *other things might do* and be affected by them. To understand these aspects of reality, Deleuze suggests, we must understand the realm that precedes the actual, or, what we might term, the 'pre-actual' or the 'pre-individual' (DeLanda, 2002).

Whilst the 'pre-actual' is not visible, it is, nonetheless, fundamental to plan-making practice. When we form a plan, either as planners, master-planners or architects, we do so by imagining what *might become* of the entities we see around us, and what other entities or group of entities might come into being. Plans, we might argue, set-out a world that has yet to be actualised, formed from potentials to become something.

Yet, anyone who has worked in these professions will have realised that such plans are likely to be revised many times as we move through different periods of time or across different spatial scales. A visit to the Council's planning archive will reveal how many times a local area plan has been revised over the last forty years, and working in an architect's office will reveal how many times a building design changes as it moves from inception to completion. This is because we cannot imagine everything that may or may not happen in the future. Some *becomings* are simply *beyond* our imagination and our sensory observation of the world around us (Bryant, 2008; Williams, 2008).

For Deleuze, this captures an important ontological point. As human entities, we can only access a small part of the pre-actual: the part that surrounds the actual entities that we identify as important. Thus, when a planner imagines what might become of the houses, trees, flowers and pebbles on a given site, or how introducing a new road or a new policy might affect that site, they can only base these speculations on what they can observe.

But, we might ask, what about the parts of the pre-actual that we cannot access? Or, put differently, if we *were* able to map these becomings further beyond the actual, where would this take us? To answer this question, Deleuze introduces us to the idea of a virtual realm. This realm, he suggests, is formed from becomings that have yet to begin this movement towards the actual. This is a realm formed from 'pure' potentials to become, with no pre-defined template determining *what* they might become, or *how* they might become (DeLanda, 2002; Hillier, 2007).

This area of Deleuze's ontology presents us with a number of abstract concepts intended to explore how pure becomings might structure this virtual realm, both as

clusters (virtual diagrams, or multiplicities) and as a sequence of clusters (planes of immanence). To respond to the confusion that has surrounded these concepts over the last few years, several Deleuzian scholars have published detailed glossaries and dictionaries (see Parr, 2005; 2010 for example). After reading these definitions, many planners might conclude that such concepts are too abstract to be of any practical use to plan-making. When studied in their philosophical form, this is probably not an unreasonable conclusion to make. However, as I noted above, we must not simply ask what Deleuze's concepts are, but what they do, and, more importantly, what they might do for planning.

This line of enquiry forms the basis of Hillier's 2007 monograph. For Hillier, the virtual realm, and the concept of the plane of immanence in particular, provides us with a new way of thinking about strategic plan-making. As I noted above, planners typically start with the actual, move into the pre-actual and then back into the actual. When they do this, the intention is not to explore becomings in their own right, but to explore the becomings that are likely to be actualised. Or, in other words, the focus of existing methods of plan-making are always anchored around the actual realm. But by introducing this other, virtual realm Hillier suggests that planners can explore a new focus. This new focus, suggests Hillier, demands that we imagine 'what might be' (becomings), without thinking too hard about how they might be actualised in practice, or what they might be actualised into. This idea is captured in Hillier's call for us to 'Stretch beyond the horizon' (Hillier, 2007): to stretch our imagination beyond the world we see around us and towards the virtual. In doing so, Hillier sets planners with a new challenge, however impossible it might be….

'A conversation: what is it, what is it for?'

This publication is structured around a number of 'conversations with planners'. But, we might ask, what do we mean when we talk about a conversation, and what is this conversation for? This question is considered in Deleuze's work with Claire Parnet (Deleuze and Parnet, 2002). Deleuze argues that most conversations are structured around a number of dualisms both in the form of the conversation (the interviewer/interviewee; the question/answer), and the content of the conversation (do you think this or that?) These dualisms, he argues, can often lead us into instances in which the 'aim is not to answer questions (but) to get out' (Deleuze and Parnet, 2002: 1). This is made all the more problematic, he suggests, because most questions are 'already worked out on the basis of the answers assumed to be probable according to the dominant meanings' (Deleuze and Parnet, 2002: 15). Thus, rather than creating something new, these questions and answers re-trace taken-for-granted relationships between selected ideas. 'Western democratic conversation between friends' write Deleuze and Guattari, 'has never produced the slightest concept' (1994: 6). If we should focus our attention on creating concepts, as Deleuze and Guattari (1994) suggest, then should we discard conversations as a meaningful contribution to such an exercise?

The easy answer to this question is, no. As with many of Deleuze's arguments, he does not break-down existing ways of thinking and working without offering us a replacement. Indeed, 'the conversation' is an important part of Deleuze's later texts written in collaboration with the psychotherapist and political activist, Félix Guattari. We can see this in the opening to A Thousand Plateaus, which reads, 'the two of us wrote Anti-Oedipus together. Since each of us was several, there was quite a crowd' (Deleuze and Guattari, 1987: 3).

Here Deleuze and Guattari show us that, to be productive, the conversation must include the collection (or multiplicity) of becomings that that we have drawn from other encounters, other conversations in other disciplines and other lines of enquiry. In Dialogues II, Deleuze expands on this by discussing instances when Deleuze and Guattari were both working on the same concept, 'body without organs', but did not grasp it in the same way. Inversely, he discusses an instance when they were working on two very different concepts as part of two different lines of enquiry. Yet, by bringing these together in a conversation, these concepts formed a new encounter, an 'outline of a becoming' (Deleuze and Parnet, 2002: 2) that did not belong to either of them, but 'worked between the two' (Deleuze and Parnet, 2002: 13). Returning to my introduction, we might argue that a conversation, like a plan, sits somewhere between the actual and the virtual. And like a plan, our role in a conversation is not to focus on that which has already been actualised, (such as pre-conceived ideas), but on that which might come into being.

So what does this mean for my conversation with planning theorist, Jean Hillier?

There are clear and obvious differences between Deleuze's conversation with Guattari and my conversation with Hillier. However, this does not preclude us from using their arguments to re-learn 'the art of conversation'. My conversation with Hillier is not intended to resolve the link between planning and Deleuze, or to explain how and why Hillier's link should be used as the basis for other planners interested in 'Stretching beyond the horizon'.

As Deleuze and Guattari suggest, Hillier and I both bring to this conversation different combinations of becomings, pulling us towards different ways of reading, under-standing and, most importantly, (re)creating concepts. Keeping this in mind, we have made no attempt made to bring these readings into neat, conclusive points. As Hillier noted in her review of consensus-building, we must not start with the transcendental ideal of a coherent end-point in which a range of actors will agree on a single direction for the future (Hillier, 2003; 2007).

The way we move through a conversation is as important as the way we envisage what we hope to achieve from that conversation. Drawing on Deleuze's argument, it was important that the questions I asked did not feel like a pre-conceived trap from which Hillier's 'aim is not to answer questions (but) to get out…'. Thus, questions were asked as they arose, without any idea as to how they would link to each other, what the response might be, or whether they would support previous or future questions. This fluidity is captured in the formatting, where questions and answers sit within the body of the text rather than as a stand-alone interview. For me, these questions and answers mark an encounter: the earliest outline of a becoming that might lead us into new conversations with Deleuze, with other planners or/and with each other.

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DELEUZE AND GUATTARI

Jean Hillier in conversation with Gareth Abrahams

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Theory 'is exactly like a tool box. .. A theory has to be used, it has to work'
(Deleuze, 2004b: 206 [1])

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[1] Page references to Deleuze and Guattari's work are for the English language editions.

After World War 2 in much of Europe and North America, cities were subject to intense processes of reconstruction, slum clearance and urban renewal. Grounded in centralised planning schemes – a legacy of wartime tactics – urban redevelopment was expected to solve problems of housing quality and shortages, traffic congestion, retail provision and so on in an 'orderly' manner. Whether utilising zoning or local area planning schemes, the intention was to generate 'an orderly city life' (May, 2005: 163).

However, in many respects the grand schemes failed, as residential areas were bulldozed for urban motorways, low income/public sector high rise developments rehoused inner city inhabitants kilometres away from their families and friends and monozoned city centres sank into decline faced with the rise of out-of-town shopping and a lack of reasons for office-workers to stay in town after hours. More recently, urban planners have sought to regenerate city centres along lines suggested by, for example, Comedia (1991), Charles Landry (1995), John Montgomery (1995) and Richard Florida (2003, 2004, 2009, 2011).

But what these authors and the planners overlooked, and what Deleuze and Guattari would have told them, is that cities are not simply matters of function; rather, they are matters of connection (May, 2005: 165). It is the relations between humans and non-humans (land uses etc.) in the city which generate feelings of community, vibrance, isolation, fear and so on. In an urban assemblage, constituent elements change their composition as they come into relationships with other elements. For instance, a city centre motorway underpass may transform from a convenient office-worker thronged short-cut to the railway station in rush-hour to a threatening hang-out for the homeless or drug-users after the station closes at night.

Cities are machinic in Deleuze and Guattari's terms. Although some form of order actualises, it bears little resemblance to a predetermined plan or design guide. Order emerges instead from the specific contexts of relations between elements in assemblages which both create and are created by the elements themselves. Deleuze and Guattari would argue that rather than thinking in terms of known needs and solutions (such as to housing provision, retail and commercial floorspace provision etc.), planners should think about relational connections between elements and what might happen if …… This would be to regard cities as machinic assemblages, with actualisations of virtual difference.

The work of Deleuze and Guattari is relatively little known (even less under-stood), however, by planning scholars and practitioners. The aim of this short book is to highlight some of the concepts which Deleuze and Guattari develop in their work and which might be useful for those involved in spatial planning research and practice to consider. It is obviously impossible to cover all of Deleuze and Guattari's ideas in a short volume, so I have selected those which I think might be most appropriate. There are

several good Deleuzean Dictionaries and Introductions to Deleuze and Guattari's work in different languages which explain the concepts considered below, and more, for those wishing to read further. With apologies for predominantly citing references in English, see, in particular, Dictionaries by Parr (2010), Zourabichvili (2004) and that in Bonta and Protevi (2004), while Stivale (2005) provides a strong explanation of many concepts. Also of value are Introductions by Colebrook (2002, 2006), Goodchild (1996), May (2005) and Patton (2010) and, in relation to architecture/the city, Ballantyne (2007), Bonta and Protevi (2004), Buchanan and Lambert (2005), Grosz (2001) and Rajchman (1998, 2000). A collection of essays on Deleuze and the City is under construction at time of writing, to be published by Edinburgh University Press in 2014 or 2015.

Why Deleuze and Guattari?

There is much debate over whether there is a Deleuzean ontology as such, or even several ontologies. For me, one of the great attractions of Deleuze and Guattari's writings is that they reject the rigidity that ontologies can sometimes fall into. A Deleuzean – or Deleuzoguattarian – ontology would be an ontology of difference: of the new, of change and transformation; which is what spatial planning is all about. A Deleuzean ontology of difference would be concerned with continual creation. This means that questions, such as 'what might the city be like?', should not be answered by reference to models, rules, prescriptions and so on, but through appropriate experimentation: 'what we require are not solutions but problems' (May, 2005: 172); critical thinking about situations, relations between elements and being open to what might happen if ….; what differences might emerge.

This is a poststructuralist ontology which recognises both the importance of structures, systems and order, and also that of agency and power or force relations between agents and their mutual connections. Deleuze (2004a) emphasised the importance of praxis in the mutation of structures; of what 'bodies', in every sense of the word, can do. Bodies can be human, non-human animal, mineral or vegetable, but also social bodies, such as lobby groups, professional organisations and so on.

Deleuze and Guattari's philosophy is a spatial philosophy of the city and its modes of arranging or disposing persons and things (Rajchman, 1998: 3). As such, 'thinking takes place in the relationship of territory and the earth' (Deleuze and Guattari, 1994: 85). A framework inspired by Deleuze and Guattari may help us transform our traditionally rather static, axiomatic ways of understanding place, planning and governance. The authors offer a different understanding of space, spatialisation and movement which can raise some important questions to begin reconceptualisation of planning theory and practice.

Besides being inherently spatial, ('becomings belong to geography', Deleuze and Parnet, 1987: 3) a Deleuzoguattarian frame is concerned with the processes through which existing forms of government (of self and others) are transformed. Patton (2000: 3) identifies a constant theme of Deleuze's work as being the conditions under which new institutions take shape, in which Deleuze avoids the Freudian/Lacanian trap of privileging the psychical over the social, and the Habermasian trap of privileging the social over the psychical.

Deleuze and Guattari also offer us a new empiricist constructivist conception of the relations between theory and practice. This is a conception which understands such relationships 'in a partial and fragmentary manner, not as determinate relationships between "theory" understood as a totality and "practice" understood as an equally unified process of the application or implementation of theory' (Patton, 2000: 5), but as a 'system of relays within … a multiplicity of parts that are both theoretical and practical' (Foucault, 1977: 206). As Deleuze and Foucault (1977: 205-206) explain, 'the relationship which holds in the application of a theory is never one of resemblance. … Practice is a set of relays from one theoretical path to another, and theory is a relay from one practice to another'.

Deleuze and Guattari do not provide a catalogue of ready-made answers, which would simply block creative thought. Their 'system of relays' is rather a meshwork of potential enquiries which offer varying lines of inspiration (Bonta and Protevi, 2004). It is up to us to identify, analyse and intervene in the mixture of forces at work in the complex spaces of our cities, to speculate and to influence what may happen.

Planners can never 100% guarantee what will take place, even if their plans are implemented as intended. Think, for example, of families living in poorly maintained high-rise residential blocks, or long culs-de-sac designed for resident safety from traffic but which reduce legibility and require long walks to transport stops or use of unappealing alleyways between lots. Planning is inherently experimental; so we should accept that.

In presenting a selection of Deleuze and Guattari's concepts, I am aware of how much is not included and the relationships (links) between these 'unsaid' concepts and those discussed below. I am also aware that Deleuze and Guattari's work is deliberately experimental, aimed at stimulating thought and practice, and that my attempts to set some of their ideas down in black and white in a linear format may unwittingly disconnect them from other concepts and reify what was never intended.

Inspired by Andrew Ballantyne's (2007) brilliant example in *Deleuze and Guattari for Architects* of the hefted sheep who always follow habitual paths and the free-spirited sheep who experiment and take risks in their wanderings, I offer this collection of Deleuze and Guattari's concepts to those involved in or intrigued by planning research or practice and who are interested in a challenge; in thinking differently and in extending the range of what planning may offer.

I have chosen to ask 'what can an assemblage do?', what can space do?' and 'what can machines do?' in the next three chapters as these are fundamental to Deleuze and Guattari's work. Within each chapter I introduce some of the concepts which Deleuze and Guattari offer. The final two chapters address what Guattari termed ecosophy (ecophilosophy) and (predominantly strategic) spatial planning respectively.

What can an assemblage do?

What has become known as 'assemblage theory', after DeLanda's (2006) interpretation of Deleuze and Guattari, is now widely referenced and applied in the field of geography (see, for example, Anderson and McFarlane, 2011; McCann, 2011; McFarlane, 2011a, 2011b; and the *Dialogues in Human Geography* discussion in 2012 led by Anderson, Kearnes, McFarlane and Swanton). Whilst generally envisaged as a description of an object (such as a house, city, report, plan and so on), an assemblage in its Deleuzoguattarian sense implies 'a way of thinking the social, political, economic, or cultural as *a relational processuality of composition* and as *a methodology attuned to practice, materiality and emergence*' (McFarlane, 2011a: 652, emphasis added). Assembl*age* is concerned with assembl*ing* – processes of assembly; bringing heterogeneous elements into connection with others, separating elements and reconnecting them elsewhere and so on. Sometimes Deleuze and Guattari use the term 'machinic assemblage' (1987: 73) to emphasise that connections are *made* (machined).

An assemblage as a thing comprises 'heterogeneous elements that may be human and non-human, organic and inorganic, technical and natural' (Anderson and McFarlane, 2011: 124), structured by forms of power, including capital, gender, ethnicity and so on, but always exceeding those structures and performing differential capacities to become otherwise than anticipated (McFarlane, 2011: 667). Such a view accords with what Law and Mol (2001) term a topology of fluidity or fluid spatiality. I regard the author's Zimbabwean bush pump assemblage as more-or-less analogous to a city in that, barring extreme circumstances, it generally retains its shape even though 'from time to time bits, so to speak, fall off. New bits are patched on' (2001: 614). Dynamic relationalities are reflected in differing styles and functions of every pump, yet, as Law and Mol (2001: 614) explain, changes occur in ways which allow the performance of continuity. Changes are gradual and adaptive to circumstances, affording the pump resilience in 'a world in which invariance is likely to lead to rupture, …[i]n which the attempt to hold relations constant is likely to erode continuity. To lead to death'- or at least dysfunction.

Relations between elements are temporary, even if 'temporary' can be a very long time, as in changes to relations between geological strata due to folding and faulting activity. Assemblages do not have finality unless they cease to be. There is no predetermined model or end-state to which assemblages aspire or evolve. Humans, for example, are the effects of genetic, social and historical assemblages (Colebrook, 2002: xx). We are all different. As are cities, which are the effects of social, cultural, environmental, political, often military and colonial assemblages. The collection of elements and the relations between them in an assemblage, such as a body or a city, expresses its identity: David Beckham, Princess Mary, Vienna, Ystad and so on. (See Fig. 1.1) It should be noted in addition that the elements which constitute an assemblage also include its qualities (stylish, multicultural, quaint etc) and its effectivity, what it can do (pass balls accurately, ski, present music, attract tourists …).

PHOTO: JEAN HILLIER

Fig. 1.1 Cat Assemblage

In this perspective, assemblages are actualised by a multiplicity of relations between elements which have no significance alone. Relations, therefore, have localised motives, not predetermined models. Roffe (2006: np) offers the example of a tree in autumn: 'A flash of red, a movement, a gust of wind, these elements must be externally related to each other to create the sensation of a tree in autumn'. Here we can see that there is no predetermined model of a tree; only an immanent and contingent world of relations

– wind, leaves, colour – from which the tree in autumn emerges through the exterior relations of its elements. Exterior related elements retain some degree of autonomy from the assemblage in which they participate. So it is possible that one such element (eg the colour red) may be detached from a set of relations in one assemblage (the autumn tree) and inserted into a different set of relations with entirely different elements in another assemblage (eg a British post box). Similarly, David Beckham changes football clubs and joins assemblages of different players. Or, another person might be a local planning officer, a part-time university student, a football player on Sunday afternoons and a daughter. She connects differently into the four assemblages above whilst being the same person. (See Van Wezemael, 2009 for more detail on exterior relations of elements.)

It is the capacity for elements to connect outside of their assemblages into other assemblages which highlights the temporary and partial nature of relations, connections (Greenhough, 2012: 203) and of assemblages. It also highlights the role of the aleatory (unpredictability, randomness or chance). For instance, there are now over 43 medicinal drugs which may result in potentially fatal side effects if they connect with grapefruit juice (Mann, 2012). Pharmaceutical companies test their products on assemblages representing a range of human digestive systems. But the chance entry of grapefruit into the drug-body assemblage can block enzymes which should break down the medication, leaving it highly concentrated and potentially toxic.

In this instance the grapefruit acts as a catalyst (Deleuze, 1989: 213) which disrupts what pharmacists assumed would be linear causality (patient takes drug [cause] > patient becomes more healthy [effect]). We see that the same cause can produce very different effects depending on the assemblage which it joins. The potential for medication to work differently in different people illustrates the significance of both the exteriority (medication introduced into different body assemblages) and the interiority (medication in relationship with enzymes etc within a particular body assemblage) of relations.

Deleuze and Guattari (1987: 503-505) define the concept of assemblage along two *axes*. One axis defines the *roles* which components or elements may play, from the purely material to the purely expressive. Material components include elements such as bodies (David Beckham, Princess Mary and so on), buildings (in Vienna, Ystad), technology (footballs, computers, lifts), laws, reports, minutes of meetings etc etc. Material elements in a social assemblage, such as a lobby or pressure group, also include the time and energy expended, for instance, in maintaining the assemblage's relations, negotiating agendas, hiding struggles from public view (Hillier and Van Wezemael, 2008). Each of the material elements can be enforced/stabilised or challenged/destabilised, by, in the example above, a key person leaving the group, someone leaking information on disagreements to the media etc. Expressive components include language (such as, written decision notices or petitions; spoken, pictorial, genetic code and so on) and non-linguistic visibilities such as gestures and charisma. Each of these elements can also be enforced and/or challenged.

Deleuze (1988a) suggests that relations of power can be traced on the material/expressive axis where one can also identify subjectifications (how actors regard and treat other humans and non-humans, such as NIMBY residents, skilful opponent, greedy developer, derelict land, weed or pest) and subjectivisations (how actors regard and treat themselves, such as knowledgeable expert, 'yes-person').

The second axis concerns the stabilisation/destabilisation or territorialisation/ deterritorialisation of assemblages. I will write more about *territorialisation* in the Chapter 3, but simply state here that stabilisation, or territorialisation, acts to sharpen borders, homogenise components and so on. Deterritorialisation, or destabilisation, acts to free up fixed relations (see Hillier and Van Wezemael, 2008). An assemblage is thus both 'the provisional holding together of a group of entities across differences and a continuous process of movement and transformation as relations and terms change' (Anderson et al, 2012: 177).

Territories are more than spaces, however. Territories express or claim something (my share of the pitch, my palace, my story) as well as occupying space. But we can see from these examples that assemblages and territories are contingent. They are constantly changing – Beckham changes football clubs and plays in different positions, Princess Mary changes clothes and venues, Vienna and Ystad change with regard to populations, seasonal bird migrations, residential and other developments.

Deleuze and Guattari use the term 'territory' in a metaphorical sense to depict sites of political engagement, their lines of power, practices and institutions (O'Neill and McGuirk, 2005: 285). Territorialisation is a form of action on, or capture of, individual or social forces which seeks to limit or constrain their possibilities for action. It involves 'the creation of meaning in social space through the forging of coded connections and distinctions' (Brown and Lunt, 2002: 17) into some form of uniformity or consistency, such as regulations, land use development plans and so on.

An assemblage can have components working to stabilise or territorialise and code it at the same time as other components work in the opposite direction. The axis of territorialisation is concerned with process.

John Phillips (2006) points out that the traditional translation of Deleuze and Guattari's term *agencement* by the English term 'assemblage' is 'not a good approximation' (Phillips, 2006: 108). As Phillips indicates, there is a world of difference between the terms. Deleuze and Guattari only rarely use the French term assemblage, for which 'assemblage' would be the literal translation. *Assemblage* would be used to refer to, for example, disparate elements which are assembled together (such as a loose network of neighbours and a city council). Deleuze and Guattari tend to use the French words ensemble or association rather than assemblage to indicate non-directional groups of actors. (See Fig. 1.2)

Fig. 1.2 A Food Assemblage

This is an assemblage of elements which are all foodstuffs which I have in my kitchen. But I would not cook or assemble pet food, bircher meusli and garlic etc into one dish to satisfy my hunger. This assemblage is non-directional.

The term *agencement* implies agency and strategy. Deleuze (1988b [1970]) appears to have developed the notion of *agencement* from his work on Spinoza's idea of the common notion; the 'having in common' becoming a 'third body' in an event. *Agencement* thus implies an agency and immanence which assemblage does not. (See Fig. 1.3.)

This is an assemblage of organic foodstuffs from my kitchen which can form an agencement. Folded together and encountering heat each element is transformed during the cooking (machining) process, changing their relationships forever: becoming-cake. The cake can perform agency to satisfy my hunger and perhaps stimulate affects and joyful sensation. However, I cannot pre-organise a perfect cake that looks exactly like the recipe book image as my cake-event is generated uniquely at the moment of interaction of heat, my folding technique, the ingredients, the cake-tin, the oven-timer etc etc. The cake could burn or be soggy, or it could be edible. Whichever, it will never be the cake in the recipe picture.

Fig. 1.3 A Potential Food Agencement

An agencement, therefore, is more than simply an assemblage. It is a process of 'agencing' (Bogue, 2007: 145-146) – an active bringing-into-existence of its own agency. In the concept of agencement the constituent elements intersect, fold together and transform themselves and each other (such as ratepayers living in a 'neighbourhood' with a clear sense of themselves as a political actor when local politicians propose changes in neighbourhood policing).

In asking 'what makes an assemblage into an agencement', one would critically investigate the relations between the entities or elements in the collective. What is important are the relations between the elements, rather than the elements themselves: 'in a multiplicity, what counts are not the terms or the elements, but what there is "between"' (Deleuze and Parnet, 1987: viii).

One of the key aspects of an assemblage or an agencement, then, is what Deleuze terms 'a logic of AND' (Deleuze and Guattari, 1987: 25); a 'geography of relations' (Deleuze and Parnet, 1987: 70). One element is not hierarchically absorbed by another but exists in connective alliance with it. A logic of 'and' is a relational co-existence rather than a binary either/or. The assemblage of Princess Mary comprises flesh and blood and gown and tiara …. Vienna comprises streets and shops and houses and music and … and … and.

Deleuze's stammering 'and, and, and' is relational. Relations imply social practices. They come into being via practice. Contingent 'circumstances, actions, and passions' (Deleuze and Parnet, 2002: 56) provide for the specific forms of relations between different human and non-human entities. Relations are not derived from the entities themselves, but are rather endowed with a positive reality.

Relations are thus 'effects of the activities and practices of individuals who are different yet nevertheless interacting' (Hayden, 1995: 286). Relations as practices inevitably involve plays of power and politics. Following Foucault's (1980) notion of power as a capillary process, Deleuze suggests that power works on and through subjects via the relations produced within the various contexts.

Relational assemblages of elements are inherently unstable and fluid. Assemblage boundaries are indeterminate and frequently challenged, transgressed and/or extended as new connections occur and old ones rupture. 'Neither boundaries nor relations mark the difference between one place and another. Instead, sometimes boundaries come and go, allow leakage or disappear altogether, while relations transform themselves without fracture. Sometimes, then, social space behaves like a fluid' (Mol and Law, 1994: 643, cited in Urry, 2003: 41).

As Ballantyne (2005: 239) eloquently demonstrates, the design of buildings is 'an art of relations'. As he explains, in this example relations include those between people 'as they are brought together and kept apart by walls and spaces, relations of crowds and stones and timbers as they co-operate in holding together as assembl[age] of many parts that we perceive as some kind of unity, contractual relations as the flow of money and labour makes this assembl[age]' and so on.

Such ideas also find resonance in Patsy Healey's work in the planning field and her interest 'in the way the dynamic fluidity of evolving relational webs intersects with the "fixes" that develop as certain ways of thinking and doing become consolidated into accepted practices' (Healey, 2007: 15). A relational awareness in planning practice would recognise the diversity of assemblages relevant to the issue under consideration, each with its own force relations, 'nodal points and flows, and spatial patterning' (Healey, 2007: 29).

But as Ruddick (2012: 208) points out, planners need to avoid envisioning relationality between things as pre-constituted objects. Human and non-human 'objects', as assemblages, are contingent, even if over a very long time-frame. The popularity of 'relationality' risks turning it into an empty signifier, simply looking at something/someone in relation to something/someone else, rather than delving below the surface to examine relational interiority and exteriority. In other words, it is not simply the relations between elements within an assemblage, or across assemblages, that should be considered, but the ways in which the relations engage the elements themselves (Ruddick, 2012).

A space of flows is a space of lines rather than a space of points. Points lie on the intersection of lines. If planners are to understand what is happening in the geographical areas in which they work and research, they need to follow and disentangle lines which are in constant flux, bifurcating and changing dimensions.

Deleuze and Guattari (1987) distinguish between two different forms of line which define the possibility of elements within and in relation to assemblages and systems. The first are broad *molar* lines of rigid segmentarity (Deleuze and Guattari, 1987: 195 and 210–211). Molar lines position elements within organised, hierarchised and stratified spaces (eg lifecycle stages – birth, school, jobs, retirement, death). The line is rigid because it is imposed as the defining line of the assemblage. A linear line, it must be followed (Bonta and Protevi, 2004: 106). The second lines are *molecular* lines of supple segmentation (Deleuze and Guattari, 1987: 196 and 210-211), along which occur processes of desire, affective attachments to friends, pets etc. They are variable, but only within the parameters of the system. The two forms of line are closely entangled: 'every society, but also every individual, is, therefore, composed of both segmentarities at once' (Deleuze and Guattari, 1987: 260).

Deleuze and Guattari also identify a third form of line: the *line of flight*. This is a crack or rupture of the other lines and a flight from what has been. It is a vector of escape towards a destination which is unknown. It marks a threshold of lowered resistance to something ('you can no longer stand what you put up with before', Deleuze and Parnet, 2002: 126), a change in desire or the intensity of desire, a new anxiety and so on. For an individual, it could be a change in profession or a divorce. It could be a group of people forming a new political party or planning practitioners conceiving a new form of adaptive strategic spatial planning. Lines of flight may be born out of resistance, but they can be positively creative. 'It's along this line of flight that things come to pass, becomings evolve, revolutions take shape' (Deleuze, 1995: 45).

Deleuze and Guattari (1987) utilise the metaphor of a *rhizome* to signify connection. A rhizome is a plant, such as ginger, potato tubers, ferns and some iris species, which can send out new roots and shoots at any point, forming a network. (Fig. 1.4)

Deleuze and Guattari contrast a rhizome with a tree where branches and twigs are hierarchically organised from the central trunk. A rhizome describes 'the connections that occur between the most disparate and the most similar of objects, places and people; the strange chains of events that link people' (Colman, 2010: 232). A rhizome is thus a 'map' of networked, relational and transversal processes. Rhizomes are in constant, though often slow, transformation as relations change through new encounters or ruptures and the course of lines is altered. The world wide web and social media are good examples of rhizomes which allow non-hierarchical, international connections almost anywhere, between almost everyone with electronic or wi-fi access.

Fig. 1.4 Ginger Rhizome

Livesey (2010) demonstrates how the concept of the rhizome has application to urban planning, suggesting that it can be used to examine interconnections between buildings and spaces and the structure of cities (2010: 235). Deleuze and Guattari (1987: 15) describe Amsterdam as a 'rhizome-city', but the term could apply to many others. A 'rhizome-city' implies that points (eg locations or buildings) are connected to an infinitude of other points, as in, for instance Doreen Massey's (2007) case study of London. Connectivity and movement (mobilities) are important for humans and non-humans including information, finance and other commodities. (See also Graham and Marvin, 2001, for good examples of urban connectivity and non-connectivity.)

So, what can an assemblage do?

An assemblage arranges or fits heterogeneous elements together relationally into an identifiable entity. Assemblages claim territories, such as individual homes, neighbour-hoods, towns and cities. They express a range of meanings. Assemblages as agencements work through flows of agency which can transform behaviour and shape space. Think, for example, of the cellphone/body assemblage, where the phone rings, is answered and the body changes direction and purpose on being asked to collect some groceries.

Since assemblages emerge through the exterior relations of their elements, they can explain movement, change, space and so on in terms of the alignments and realignments of relations between elements rather than in terms of some pre-assumed identities, intentions or interiorities of the wills of individuals or groups (Grosz, 2001: 92). We need to remember, however, that although assemblages are composed of relations, they are not reducible to them (see Buchanan, 2000). Assemblages have their own speeds and slownesses; their own vitality.

Anderson et al (2012: 173) suggest that 'thinking with assemblages' offers an openness about spatial form that follows from an experimental stance that is attentive to how provisional orderings cohere in the midst of, and through, ontologically diverse actants'. To which I would add, not only how provisional orderings may cohere, but how they change, rupture and fragment. Thinking assemblages means thinking relations, agency and process rather than end-product. This is important for spatial planning as I discuss in Chapter 6.

GA: As you note in your text, Deleuze's concepts are not intended as fixed points of reference, but experiments: solutions to specific problems arising through this experimentation. Therefore, it seems that Deleuze would welcome, and indeed may have insisted, that we approach his concepts in a pragmatic way: by re-creating them to resolve specific problems identified within a specific field. This is an important point for us because Deleuze does not offer us solutions to the kinds of problems we find in planning. My question, therefore, is how do we go about re-creating Deleuze's concepts to suit planning problems? And, how far can we push these concepts before they cross a 'threshold' and become something else: something that is no longer 'Deleuzean'?

JH: What kinds of problems are you thinking of?

GA: I think your question back to me, 'what kinds of problem?' goes straight to the heart of this question. I think there are probably two groups of problems here. And we may argue that there are overlaps between them: the problems for which Deleuze created the concepts and the problems for which we, as planners, make these concepts useful.

In the former, I believe Deleuze creates concepts as solutions to ontological problems that arise as he sets out his philosophical project. Thus, 'the assemblage' is a solution to the ontological problem of essences (DeLanda, 2006). But this problem/ solution is approached in a more-or-less abstract way.

Planning problems, we might argue, usually arise from (or perhaps underpin) the making or assessing of a plan / proposal. Therefore, the problems are much more practical in nature.

Typical questions facing typical planners might include: 'do we need more housing? Where do we put housing, how many, what should they look like and designed for whom? What other problems does this create? What other facilities or solutions must be considered, where do they go and what knock on affects does this have? How do we respond to that? Which of the three brick samples proposed by the developer do we approve?'
For planners the question might be – how do we translate Deleuze's ontological solutions into practical solutions to these kinds of practice-based questions?

JH: You say that Deleuze does not offer us solutions to the kinds of problems we find in planning. Well, firstly, I don't think that there can ever be 'solutions' in planning as such. There is always the virtual, as I demonstrate using Ballantyne's box in Chapter 4. Whatever we decide to do, we could always have done something else. In addition, nothing is ever completely 'solved'. If we 'solve' a problem of traffic congestion by constructing an urban toll motorway from A to B, then some people will be able to drive from A to B more quickly. But others will refuse to pay the toll and will find rat-runs through residential streets. In addition, the local community through which the new tollway has been built may be severed by the road and also have to endure massively increased levels of noise and pollution. Loss of property value is also inevitable. Wildlife and pets will be affected too as they will be forced to change their movement patterns or risk being run over.

Moreover, I would argue that Deleuze does not offer solutions to anything and would not want to do so. Deleuze problematised the problem-solution relation, turning it on its Platonic head. When spatial planners think about 'problems', they tend to think in terms of 'solutions'. 'It is though a problem were merely a particular lack or fault that a solution will fill or rectify' (May, 2005: 83). A solution makes problems disappear! Practitioners and politicians may fall into the trap of allowing a solution to define a problem. For instance, we can control farmers burning stubble near motorways on days when hot air presses down on cooler air nearer the ground (a temperature inversion), but we cannot – or do not want to – control car usage. Motorway smog thus becomes a problem of farming rather than of driving. Or, there is lottery money available to build a sports arena but not a school. So the problem becomes a shortage of sports facilities.

As Deleuze notes, however: 'far from disappearing in this overlay, however, [the problem] insists and persists in these solutions' (1994: 163). Perhaps instead of regarding problems as something to be definitively 'solved', planners could regard

them as opening up areas for discussion and negotiation of different possibilities, recognising that every possibility will capture something, but not everything, of the problem, and thinking through what it renders present and absent. It is also important to recognise the implications, advantages and disadvantages (Strengths, Weaknesses, Opportunities and Threats, SWOT) of each possibility for different socio-economic groups, for non-humans and so on.

We must be careful not to allow the solution to define the problem (what we think that politicians or the public want; what there is lottery funding for; what 'best practice' tells us to do and so on). Solutions are actual – real, stable identities, whereas problems are virtual – inexhaustible 'open fields' (May, 2005). We thus tend to see solutions in terms of their actuality rather than their virtuality. In other words, we let the solution determine how we see or frame the problem. We may, therefore, ignore many potentialities, opting for a particular version which is already constrained by an overdetermined structure that we have imposed.

As Deleuze (1994: 163, 212, in Williams, 2003: 134) wrote, 'the problem is at once transcendent and immanent in relation to its solutions. Transcendent, because it consists in a system of ideal liaisons or differential relations between generic elements. Immanent because these liaisons or relations are incarnated in the actual relations which do not resemble them and are defined by the field of solutions'.

Deleuze referenced non-linear mathematics and differential calculations to demon-strate how problems are multiplicities of singularities; fields of vectors which point towards different trajectories. But the mathematical equations cannot tell in advance which trajectory will be actualised. DeLanda (2010) develops these ideas further to demonstrate how problems are independent of their solutions, and Kang Cao and Yan Zhang (2013) explore Riemannian differential geometry and planning in a paper in Planning Theory. This is definitely not my field, but I think what is important for planners is that we should not subordinate problems to solutions. Doing so focuses efforts on 'final products' or solutions instead of on the processes involved in terms of how the 'problem' is defined.

I know that you have not used the word as such in your question, but for me, problematising problems and solutions leads onto problematising judgment, something which planners are constantly required to exercise.
I think that Daniel W. Smith's (2006, 2012) reading of Deleuze's work on judgment is really useful. Following Deleuze (1982), Smith explains how the simplest form of judgment is that of attribution. For example, the park is beautiful. A property (beauty) is attributed to a thing or subject (the park). But what interests Deleuze is the judgment of relation. For instance, Regent's Park in London is larger than Green Park. This statement does not attribute a property to a subject, because if we say

that 'being larger than' is a property of Regent's Park, we also need to say, at the same time, that 'being smaller than' is also a property of Regent's Park since it is smaller than, for instance, Richmond Park. 'Larger than' and 'smaller than' are relations, not properties, and as Deleuze shows us, relations are external to their terms. A relation may unite the terms, but is not reducible to them. Large and small are properties, on the other hand, which are internal to their terms.

Relations can change. Although it is extremely unlikely, the Royal Parks Agency may decide to subdivide Richmond Park, making it smaller than Regent's Park.

As Deleuze (1982: np) stated, 'Once you discover the world of relations, you can ask if every judgment is not a judgment of relation'.

Deleuze also distinguishes between the power of judgment and the power of immanent evaluation. He gives the example, in one of his lectures, of Orson Welles' movie 'F for Fake', in which a forger of Vermeer's works of art was able to pass off the forgeries as real Vermeers. Deleuze (1984) explains that the forger managed to convince the experts by studying and making use of the criteria which the experts had established as constituting a Vermeer. The experts judge the forged painting according to their criteria and decide, 'These are genuine Vermeers, they meet all the criteria' (Deleuze, 1984, my translation). Deleuze argues that the mistake which experts commit is to not recognise that what makes Vermeer a great artist is that he is able to transform creatively: he metamorphoses. 'A genuine Vermeer has the power (puissance) of metamorphosis' (Deleuze, 1984, my translation). The forger simply paints according to some static template of criteria, while the expert simply judges the creations of others according to this static template, unable to change or to comprehend metamorphosis. For Deleuze, critique and creation are immanent. "[It] is not a matter of judging … in the name of a higher authority, which would be the good, the true; it is a matter, on the contrary, of evaluating every being, every action and passion, even every value, in relation to the life which they involve. .. [I]mmanent evaluation, instead of judgment as transcendent value . . . ." (Deleuze, 1989: 141).

Perhaps the closest example in planning/architecture to this would be judgment of architectural buildings in competitions by what they look like when new, or even off-the-plan, compared with by post-occupancy evaluation of how they perform.

Also, Hutton's Transport Plan and Policy for Kosovo (see Hillier, 2007: 304-307) embraces a philosophy of specification of planning objectives in terms of performance rather than physical manifestations. The key paragraph on page 1 of the Plan states that 'The Plan also recognises that economic and urban geography are volatile: the size and nature of urban development is always changing, producing

ever-shifting patterns of demand for transport' (MTC, 2005: 1, in Hillier, 2007: 304). The basic ideas underlying the plan include abandoning the notion of an end-state. Many transport plans, like other strategic spatial plans, are created through a linear process moving from a survey of the current situation and identification of 'problems', to the design of an idealised 'end state' to 'solve' the problems and definition of a list of projects which will achieve that end state. Such plans, premised on stability, tend to fail for economic, social, technical and political reasons. Performativity was thus considered far more relevant for the Kosovo Plan than was output measurement.

The point which Deleuze is trying to make with his Vermeer example is to demonstrate the power of the false and to argue against making transcendent judgements of true and false, good and evil. Deleuze, then, is not talking about the kind of everyday judgments which development assessment planners make – does the development application comply with the guidelines? – but about morality and ethics.

For Deleuze, morality always implies 'something superior to Being which plays the role of the Good' (Deleuze, 1980: np), against which humans and non-humans are judged. Deleuze prefers ethics to morals because he argues that there is no judgment, as such, in ethics. Instead of relating a human or non-human to a set of transcendent values, Deleuze would relate them to the mode of existence that they imply. In other words, ethics is concerned with what a human or non-human can do, rather than with what they are. While morality looks at what 'is' and then claims 'what ought to be', ethics is concerned with creativity and potentiality.

What can space do?

For Deleuze and Guattari, space is 'the locus of interaction of dynamic forces of material systems' (Bonta and Protevi, 2004: 17). Space is a multiplicity of elements which brings together characteristics of simultaneity, contiguity or juxtaposition and qualitative and quantitative differentiations (Grosz, 2001: 113). As Grosz (2001: 114) describes, 'space is discontinuous, infinitely divisible, static and always actual. Space in short is the milieu of things, matter, identities, substances, entities that are real, comparable and calculable'.

Planners and architects have traditionally regarded space as a passive Euclidian container, 'out there', in which objects can be placed or located. In this view, space precedes the objects. As Deleuze (1991) suggests, however, space is produced through matter. Assemblages and individual bodies are constituted along with the space they occupy. Space is active, changing with time, open to change and transformation.

Although *A Thousand Plateaus* (Deleuze and Guattari, 1987) is a geophilo-sophical project, full of spatial metaphors, there is little discussion of physical space itself. In fact, for Deleuze and Guattari, space is not necessarily (or even very often) a geographical entity. Whilst buildings and streets may represent physical spaces of planned neighbourhood 'community', they have no tangible connections to people's spaces of lived experience. Deleuze tends to consider space as narrative space of cinema; space as discursive and in constant movement.

Deleuze and Guattari describe space according to its degree of *smoothness* and *striation*. Elsewhere (Hillier, 2007: 63-65) I explain that smooth and striated spaces can be physical (as in cities), or mental (psychological). Smooth space is seemingly undiffe-rentiated space (eg felt cloth), in contrast to striated space (woven cloth) which is regular, ordered and closed. Smooth space may be regarded as composed chaos; a 'complex web of divisions, bifurcations, knots and confluences' (Serres, 2000: 51). In striated space, relation-

ships are linear cause and effect and the observer has a god's-eye view, able to see the order of things by deterministic laws. Smooth space consists of points as relays between lines; striated space consists of lines between points (Deleuze and Guattari, 1987: 480-481). Fig. 2.1 summarises the various qualities of smooth and striated space.

Smooth Space	Striated Space
felt: entanglement	woven space: warp and woof
infinite, open and unlimited	fixed, limited
continuous variation	back and forth
space of movement	sedentary space
space of war machine	space instituted by state apparatus
'barbarian'	imperial
multiple perspective	central perspective
close-range/micro-vision	long-distance/macro-vision
points of reference immanent	points of reference transcendent
abstract line: wandering, irregular	concrete line: bounded, constant, regular
line without beginning or end	line of fixed orientation
matter variable	matter gridded and organised
smooth space of Go	striated space of Chess
thought space	ideology
constantly transversed into striated space	constantly reversed into smooth space

Fig. 2.1 Qualities of Smooth and Striated Space

ADAPTED FROM HILLIER (2007: 64)

Striated space is fixed. It 'bounds, structures, frames and locates action; and practices of discipline, regulation, subjection take place inside these spaces' (Osborne and Rose, 2004: 218). Moreover, time is detached from space. Yet, as Osborne and Rose indicate, striated space always fails – it is lacking. There is a constitutive outside or lack: people rebel, plans go awry, things change. 'Striated spatialisation, precisely because it aspires to a certain rigour or rigidity, is vulnerable to forces that would turn its lines into points, open up its intervals, redistribute its surfaces' (Osborne and Rose, 2004: 218).

Striated space tends to be associated with the State: 'one of the fundamental tasks of the State is to striate the space' (Deleuze and Guattari, 1987: 479) (eg, through local zoning schemes, land use classes and so on), whilst smooth space is created by *war machines* (see Chapter 4) along lines of flight (eg anti-wind farm lobbies, civil liberties

organisations). Both spaces, nevertheless, cannot be completely actualised, opening up opportunities for the counter form of space.

Smooth and striated space should not be regarded as mutually exclusive, but rather 'intermixtures which constantly make use of elements of each other' (Osborne and Rose, 2004: 211). Forces at work within space are constantly attempting to striate it whilst in the course of striation other forces are smoothing. The two exist in complex, mixed forms in agonistic relation which Deleuze and Guattari (1987: 481) exemplify through the sea and the city as smooth and striated spaces par excellence: 'the sea is a smooth space fundamentally open to striation, and the city, is the force of striation that reimparts smooth space'.

PHOTO: JEAN HILLIER

Fig. 2.2 Antony Gormley's Another Place, Crosby Beach, Liverpool

I demonstrate striation of the sea and beach through the example of Antony Gormley's installation *Another Place* on Crosby Beach, Liverpool, England. (Fig. 2.2)

The smooth spaces of the sea and the beach and the random placing of 100 cast iron statues of Gormley's naked body were striated by requirements to comply with the 1949 Coast Protection Act, the 1985 Food and Environmental Protection Act and with

national Planning Policy Statements, Regional Spatial Strategies, Local Development Frameworks and 1994 Habitat Assessment regulations. After two years of heated debate the iron men, the beach, human visitors, fishers, jet skiers, sailors, dogs, and the sea were acceptably striated for all permissions to be granted. Several iron men were relocated to afford easier passage for the coastguard lifeboat, a by-law requires dogs to remain on-lead, signage and ranger patrols warn human visitors and fishers and permanent flashing buoys mark safe channels at sea for sailing craft (see Hillier, 2011a for detail).

But, can one striate the birds? (Fig. 2.3).

PHOTO: JEAN HILLIER

Fig. 2.3 Birds at Another Place, Crosby Beach, Liverpool

Smooth spaces arising from the city for Deleuze and Guattari (1987: 481) include shanty towns, or one might add, perhaps, activities of guerrilla gardening or squatting, though in many ways these activities endure where permitted/striated. Ecological reterritorialisation of 'derelict' or brownfield land or social media discussion could also illustrate smoothing of urban space.

Whilst smooth space is the fluid space of flight and becoming, and striated space is controlled, the former should not necessarily be regarded as positive and the latter negative. Lines of flight can turn out to be negative in their impacts, such as the Taliban for women's employment and social opportunities in Afghanistan.

Striation is a form of *territorialisation*. As I stated in Chapter 2, territorialisation describes 'the creation of meaning in social space through the forging of coded connections and distinctions' (Brown and Lunt, 2002: 17) into some form of uniformity or consistency, such as laws, symbols, slogans or concepts (such as performance measures). For instance, English local authority planning departments are territorialised by the Department of Communities and Local Government (DCLG) so that the desires and behaviours of local planners align with those of central government. Whilst all humans and institutions territorialise, it is a principal function of the state (Deleuze and Guattari, 1987: 310-350). The act of governance requires the stabilisation and fixing of certain forms of social interaction in order to maintain 'social harmony'. Similar to the Foucauldian concept of governmentality, Deleuze and Guattari describe state territorialisation as a form of action, or capture, on individual or social forces which seeks to limit or constrain their possibilities for action (Patton, 2000: 104) (eg anti-social behaviour legislation).

As mentioned above, however, individuals and groups may decide to leave a territorial assemblage following physical or psychological lines of flight, shedding the system by which they had been previously controlled. Deleuze and Guattari (1987: 508) refer to this as deterritorialisation: the destabilisation and ultimate removal of codings that confer fixed meaning. Absolute deterritorialisation would resemble an anarchic revolution. However, as Deleuze and Guattari (1994) indicate, deterritorialisation does not take place without some form of reterritorialisation; the establishment of new rules and ideologies. As Ian Buchanan points out, 'it is the sad fate of successful anarchists to impose anarchy as a form of government and so undo everything they'd worked for at the moment of its achievement' (2000: 119).

Deterritorialisation, and especially reterritorialisation, are usually associated with power imbalances. Sutton and Martin-Jones (2008) offer the example of colonialism to illustrate this point. Through colonialisation, in the Americas, Africa, the Middle East, India, East Asia, Australia, New Zealand and so on, dominant European cultures were imposed more or less successfully on 'conquered' lands. Processes by which Indigenous peoples and their lands were deterritorialised and reterritorialised included war, massacre,

genocide, slavery, taxes, land clearances, reservations, diseases and other forms of violent abuse (Sutton and Martin-Jones, 2008: 7) together with less physically violent colonisation such as 20th and 21st Century Americanised consumerism in which former striations are displaced by new modes of ordering.

Power is quite a difficult concept to unravel in Deleuze and Guattari's work. In fact, Deleuze engaged in strong debates with his good friend, Michel Foucault, about power. Deleuze and Guattari prefer to examine the role of desire rather than power as such, because they regard desire as creating relations through which power might actualise and operate. In this, Deleuze takes a Nietzschean approach in terms of potential powers or forces which are actualised in their relation with other powers. Power, or force, then, is not a thing to be 'owned', wielded or managed, but rather a process of actualisation. While many commentators concentrate on the differences in understandings of power between Deleuze and Foucault, Paul Patton, a student of both, points to the convergence between their ideas of power as a productive, differentiated, heterogeneous, variable process which can be either positive or negative in its impact (Patton, 2000: 73-77).

Deleuze and Guattari (1987: 106) make a crucial distinction between power in French as *pouvoir* – instituted power of domination or coercive power – and *puissance* – the capacity to form emergent unities which respect the heterogeneity of their components, immanent forces/capacities of becoming, power to act rather than to dominate another. For Deleuze and Guattari, desire exemplifies puissance, as does the assemblage of wasp and orchid which becomes a symbiotic, emergent unity (see chapter 4).

Elsewhere (Hillier, 2007, Chapter 5), I illustrate the power of *pouvoir* in relation to the construction of the bridge at Hindmarsh Island in South Australia, which the Indigenous Aboriginal people call Kumarangk. The story tells of the privileging of colonial, rational, documented, adversarial systems of spatial planning-related law, which permitted construction of the bridge, over Indigenous oral, spiritual knowledges about sacred sites and how the power of Deleuzoguattarian *pouvoir* (institutional domination) restricted the potential for *puissance* of the local Ngarrindjeri women to respect their heritage.

For Deleuze, law is not so much a noun, as a desiring-machine process which creates relations through which power actualises and operates, as in the Kumarangk case. 'Where one believed there was the law, there is in fact desire and desire alone' (Deleuze and Guattari, 1987: 49). Law was created by non-Indigenous Australians and then interpreted reactively by the South Australian government, the Federal Court, a Royal Commission and various Inquiries. In so doing, Ngarrindjerri women's Indigenous law was captured, de- and re-territorialised. It was unable to become a line of flight, resisting and trans-gressing State law, as it was thwarted by the powerful blockages of pouvoir.

So, what can space do?

As Claire Colebrook (2004: §5) suggests, we can and should move beyond constituted space and systems to the thought of spatiality in which 'space will differ within itself according to the lives that occupy it'. Space is the effect of relations: 'our space is constituted by the sense we make of it' (Colebrook, 2004: §8). Spatiality, then, is an opening of the virtual; the potential to create the new. Deleuze distinguishes between space as gridded, coded or striated by laws and other agents and smooth space as a plane of singular affects and events. Yet he stresses the importance of both. We need 'just a little order to protect us from chaos' (Deleuze and Guattari, 1994: 201).

GA: I would like to talk about the relationship between the State assemblage and striated spaces. As you note in your text, this link is made in Deleuze's seminal texts and has been picked up by a number of Deleuzean scholars, forming a strong influence in Bonta and Protevi's 'geophilosophy' for example (Bonta and Protevi, 2006). But, I would like us to consider how viable and useful this relationship is and what it might mean for current or future planning professional many of which will work for, or go onto work for local governments.
 The first question I would like to ask concerns the State assemblage and its striated space (singular). Do you think we can usefully talk about a coherent State assemblage, or is it better to think of the state as an assemblage of assemblages, each assemblage striating space in different ways? Otherwise, how do we explain why one State assemblage striates space into roads and railways lines, another into buildings and areas of historic interest, whilst another into key environmental features and flooding zones?

JH: Deleuze and Guattari regard the 'State' as 'state-form' – a process of institutionalised overcoding or territorialisation – rather than a noun. We are used to thinking of nation states with (temporarily) fixed geographical territorial boundaries. But Deleuze is more interested in what state-forms can do than what they are. For Deleuze and Guattari, states are 'isomorphic'. They may share basic structure and function, but since they are heterogeneous, they differ in how they express these. For example, some states recognise gay marriage, while others do not recognise homosexuality. in this example, the state (national, Provincial or State authorities) expresses the institutionalised logic of the state-form.
I agree with you that the nation state is an assemblage of assemblages, whether it is State Departments or Ministries, local authorities or whatever, along to the individual human and non-human bodies and computers that work for the state or are affected by it. This may look like an arborescent (tree-like) hierarchy, but Deleuze and Guattari (1987) would prefer to view it as a mixture of rhizomic, vertical and horizontal connections. Each assemblage opens up to further assemblages: Leibniz' (1998) 'ponds within ponds'.

GA: This leads me onto my second question concerning the link you make between permitted striations and unpermitted smoothness. Does this mean that there are no striations in a shanty town? What about the undetected squatter – do they not striate space in a similar way to an architect?

JH: There is no completely smooth or striated space. Space is always a mixture of both. Rhizomes are always partially striated. I actually disagree with Deleuze and Guattari that shanty towns are smooth spaces. As the excellent work of scholars such as Ananya Roy, Pedro Abramo and James Holston illustrates, 'informality is a deregulated rather than unregulated system' (Roy, 2009: 83). There are important striations in informal settlements. Striations include land markets, governance structures, street layouts, women's spaces, gang and other 'business' territories and so on (Abramo, 2009; Appadurai, 2002; Holston, 2007, 2009; Roy, 2003, 2009, 2010, 2011, 2012; Zalnar and Alvito, 1998). As Simone (2004) has demonstrated in Africa in informal settlements, access to resources is generally acquired through associational (rhizomic) systems which are heavily striated and require 'obedience', 'loyalty' and 'duty'.

GA: In my last question, I would like to turn to the role of the planner in practice. Many practicing planners will work in local governments, whilst others work in the private sector for private developers, and others will work in private, commercial companies employed by private not-for-profit companies such as housing associations working with one or several government departments. How do you think planners might position themselves in these different instances i.e. as part of a state assemblage, part of a broader project assemblage that includes one of several state assemblages, or outside the state assemblage (if this is possible)?
JH: With regard to how planning practitioners might position themselves, it's important to me that they recognise what they are doing. This could be enforcing the state-form of striation, as in development assessment planning or environmental regulation; or it could be challenging to deterritorialise the state-form, such as those working in private sector development consultancies trying to achieve extra density or height, or those who work for war machines such as NGOs or lobby groups, perhaps on behalf of people with disabilities who desire a more legible, navigable streetscape and street furniture. It is also important to remember that when deterritorialisation occurs – i.e. the striations of the state-form are ruptured – reterritorialisation will occur in some manner, in the form of new codings and guidelines.
So I should like planners to think not only what it is they are doing and why, but also how their work affects human and non-human assemblages. To paraphrase Deleuze (1981), not so much what it is, but what it can do.
And this takes us back to the issue of ethics …

What can machines do?

A machine, for Deleuze and Guattari, is an assemblage of parts that works and produces (Goodchild, 1996: 218). It is associated with the verb 'to machine', meaning to assemble, make or produce, rather than some thing which is necessarily mechanical. Moreover, machinic production in a Deleuzoguattarian sense does not repeat predetermined processes. The machine, therefore, is singular and produces something new. The product can then become a component of further machines. Machinic relations are thus created. Desire, which I discussed briefly in Chapter 3, is a machinic relation as it generates relationships through bringing multiplicities of elements together. A machine, then, can be summarised as a productive assemblage of components (Goodchild, 1996: 4). In a Deleuzean sense, Le Corbusier was correct when he claimed that the city is a machine (1929). Each machine has a composition, function and potential.

There are various kinds of machines including *technological machines*. A house is a technological machine for living (Le Corbusier, 1929). A house is composed of plans, materials (bricks, mortar, timber, concrete, class, furnishings, people, pets etc), labour, finance and so on. (See Fig. 3.1)

The main function of a house is to provide shelter and comfort. Its potential is to produce affects in whose who encounter it. These affects may lead to emotions of joy or sadness, or perhaps wonder at the aesthetic taste of the designer, depending on the personal experiences of those involved.

Guattari (1995: 47-48) gives the example of the Franco-British aeroplane Concorde as a technological machine. Concorde was **composed** of a multiplicity of different machines, each with their own planes of reference: aerodynamic ideas on paper and the theories which underlay them; technological knowledge to translate the ideas into prototypes; industrial knowledge and capacity to produce the plane; political will and economic funding to make it happen; trained pilots to fly it; all grounded in a collective

Fig. 3.1 A House Technological-Machine

desire for Concorde to be actualised. Its function was to fly faster than the speed of sound between London, Paris and New York. Its potential was huge, but foundered on a lack of economic support from changing assemblages of government regimes and a fatal crash at Charles de Gaulle airport, Paris in July 2000. Despite being the only fatal accident involving Concorde in its 27-year operational history, and no fault of the aircraft design or of any of the above machines, the crash sealed the fate of the plane.[2]

Potential is denoted by what Deleuze and Guattari term an abstract machine. The abstract machine is a machine that desires (it is sometimes referred to as a desiring-machine): its potential power of existing is desire. The potential of Concorde and, similarly, the technological machine of a local area plan, for instance, was/is fundamentally linked to political, economic etc desires to produce something or to make something happen.

[2]   A titanium alloy strip 435mm x 230mm had fallen from a Continental Airlines DC-10 onto the runway some five minutes prior to Concorde taking off and a runway inspection had not been undertaken. The debris burst one of Concorde's tyres and tyre debris struck the plane with such force that shockwaves caused a fuel tank to rupture. Leaking fuel then ignited on contact with severed electrical cables. Travelling too fast to abort take-off and unable to climb or accelerate, the plane stalled and crashed, killing all 109 people on board. Continental Airlines was subsequently found criminally responsible for the crash (BEA, 2002).

Abstract machines are vectors of creation. An abstract machine may thus be defined as 'the immanent relations that constitute a particular machine, process or assemblage' (Goodchild, 1996: 217). Here, the word 'particular' is important because abstract machines are not something which pre-exists, but are always incarnated in the particular.

An abstract machine links 'unformed matters' and 'nonformal functions' (Deleuze and Guattari, 1987: 141). It lays out the components of an assemblage and what it can do, not just in a current state, but in future states as it enters into transformative relations with other assemblages (Bonta and Protevi, 2004: 48). 'Unformed matter' is defined by its virtual capabilities or capacities and 'nonformal functions' are the virtual transformations of the assemblage. (I discuss the Deleuzoguattarian concepts of the virtual and the actual below.) For instance, the abstract machine of discipline regards any human or non-human animal (especially pets) as unformed matter linked to the nonformal function of 'impose conduct' or 'control conduct' (see Bonta and Protevi, 2004). The abstract machine of discipline is a virtual structure which may be actualised or made tangible through institutions such as schools, prisons, puppy training classes, local authority planning departments and so on.

Capital is an abstract machine of desire. The basic mode of operation of capital (as explained by Massumi, 1992: 131ff) is to grasp the human body (as unformed matter) from the angles of its functional potential to buy or sell a commodity (a commodity relation) and its potential to sell its time/activities or to buy those of others (a wage relation). The capitalist relation is abstract because it does not matter what a body buys or what activities it sells, only that it buys and sells (the nonformal functions). The virtual structures of capital relations are actualised through institutions such as job centres, marketing agencies, shopping malls, banking systems and so on.

Concrete machines are assemblages of particular arrangements of material and discursive elements which construct a singular version of a thing (eg a place). Guattari indicates that concrete machines functionally cross times and spaces, insides and outsides, subjects and objects. 'They will not manufacture time and space "in general" but this time and this space lived by a particular assemblage in a particular context' (Guattari, 2011: 106). Concrete machines thus socially organise or territorialise perceptions and meanings through systematisation/institutionalisation of particular ways of seeing and under-standing through redundancies of representation between abstract machines and the strata of power. Van Wezemael and Paisiou (2011) demonstrate how project plans can perform as concrete machines. Project plans have the capacity to assemble materialities and expressivities such as steel, trees, bitumen, information, political will and so on and simultaneously to use, activate and organise a system of connections between these elements such that one singular version of reality is represented: the desired project.

However, concrete machines offer 'a practical "either-or"' (Guattari, 1984: 157) to actions becoming territorialised as above. Redundancies can also 'open up the possible' (Guattari, ibid) onto lines of flight; to deterritorialise accepted meanings or doxa and to reterritorialise new understandings which may, for instance, be more socially or environmentally just (see Hillier, 2013a, 2013b).

War machines effect lines of flight (see Chapter 2). They have no essential relationship to war. Deleuze and Guattari's concept is of a 'war machine which precisely does not have war as its object' (1987: 523). Rather, a war machine engenders the production of something new; new ways of thinking, new ways of being. In local planning, for instance, war machines are often grassroots assemblages which are generated by common desires for something other than that which is proposed in the plan. A resident action group as war machine may thus 'wage war' on existing orders of knowledge and codings of land. It both resists what is and, by fleeing, creates the new. It is important to state, however, that the 'new' may also function as a repressive machine (such as the Taliban in Afghanistan). There are no guarantees that the creative new will not be destructive.

It is time to turn to Deleuze and Guattari's concepts of the *virtual* and the *actual* as they underpin so much of the authors' work. Understanding the *virtual* is made easier by many people's familiarity with electronic virtual worlds such as *Second Life*. For Deleuze and Guattari, the virtual is the pre-possible, before there is any conceptualisation of alternative possibilities or potentialities. Ballantyne (2007: 35) describes it as 'the soup from which the emergent properties will in due course emerge, but with no sense as yet of what those emerging properties are going to be'.

Ballantyne (2005) offers the example of a polypropylene box. Whilst it is not in use, the box is 'virtually' all the things it could be used for, from a storage container or carrier for things, upside down as a stool or table, a 'play' house or car for a child, bed for a pet or whatever is desired. If someone sits on the box, they have actualised it as becoming a seat and other potential uses remain virtual. In urban design, the virtual is the state before a design is conceived, where anything might be possible. It resists representation.

The actual is what is; that which we can perceptually and tangibly grasp. But any actual thing, whether it is a stool or an urban design scheme, is only possible because reality has a virtual dimension. The virtual and the actual are always co-present. The actual is what effectuates the virtual, but it can never completely activate all that the virtual implies, as Ballantyne's example of the box illustrates.

So, as Rajchman (1998: 117) asks, how can we as architects, planners, designers and so on conceive of, and deal with, something that is essentially ungraspable? His answer is that we need to experiment with what the virtual might become if we did x or y. In other

words, to ask the question, 'what might happen if …?' For Rajchman (1998: 117), this would involve holding together 'the most, and most complicated "different possible worlds" in the same container', whether that container is a house, a mainstreet design or a strategic plan, in order to allow flexibility as circumstances change, often unexpectedly. Recalling that the house, design or plan can never exhaust the virtual, we then appreciate that there is always the potential for something else to actualise. 'The virtual is the realm of productivity, of functioning otherwise than its plan or blueprint, functioning in excess of design and intention' (Grosz, 2001: 130). We should learn to expect the unexpected.

Between the virtual and the actual there is Deleuze and Guattari's concept of emergence. The virtual is what conditions emergence and the actual is what emerges. Linked to physics and complexity theories, emergence implies movement and change.

A related, and important, concept for Deleuze and Guattari is that of *becoming*. Becoming constitutes passage towards a new assemblage (Deleuze and Guattari, 1987: 257-258). It may refer to a process and a noun. As a noun, becoming implies the pathways along which an assemblage may be transformed whilst retaining some resemblance to its former self. Deleuze and Guattari cite the example of the wasp-orchid assemblage (1987:

Fig. 3.1 The wasp-orchid assemblage

10). The Drakaea (wasp-orchid), for instance, is a genus of Australian orchid, often named the Hammer Orchid, which is pollinated only by the Thynnid wasp. Female Thynnid wasps are flightless and so have to wait on top of flower stems for male wasps to arrive in order to mate. A Drakaea flower assumes the resemblance of/codes itself as a female wasp in the colour of its labellum (see Fig. 3.1) and production of similar pheromones. When a male wasp lands on the labellum, some of the orchid's pollen will adhere to it. Eventually, the male wasp realises that he hasn't landed on a female and flies off to try again. When he lands on another orchid, he transfers pollen to this plant, thereby effecting pollination of the orchid.

In the wasp-orchid assemblage, both the wasp and the orchid are changed by their incorporation into the assemblage (eg by the addition of pollen) which is marked by emergent properties greater than the sum of the parts (pollination). The becoming of a wasp-orchid assemblage is an alliance of heterogeneous parts (Bonta and Protevi, 2004: 59). In the process of becoming wasp-orchid, the encounter between the wasp and the orchid releases something from each (deterritorialisation) and, in the process, releases a series of enabling and potentialities by which the entity is transformed (reterritorialisation).

GA: If planning is about working with the virtual, then the next question we might ask is how do these potential come into being to form the cities and building we see around us? Your text suggests that this happens through 'emergence', but form many, the idea of emergence would be seen in opposition to the idea of engagement. Indeed, many planners, masterplanners, architects and builders would suggest that they were fundamental to the actualisation of the town or building assemblage. How would you respond to this?

JH: In most Western jurisdictions, planning powers are almost exclusively negative. Where public ownership and funding for projects is limited, the power of planning lies in regulatory control. Local planning authority planners have to wait for private sector and infrastructure assemblages to approach them, requesting permission to do something. Local planners might design a new outer suburban district centre, or redesign a run-down inner suburban streetscape, but they are unable to actualise the shops and cafés which they hope to see there.

Deleuze and Guattari (1987) suggest that good artisans will work with the potentials which materials themselves suggest, rather than dreaming up ideas for imposition on what is supposedly passive. So, although I agree that planners are probably fundamental to the actualisation of, say, the district centre assemblage, they are definitely not the only actors (human or non-human) involved. There is thus much scope for things to not turn out as planned; for something to emerge in the gap

between plan and built form, between virtual and actual. Deleuze was highly critical of suggestions that 'production is the result of an (architectural) imposition of a transcendent form on a chaotic and/or passive matter' (Protevi, 2001: 8). In planning and architecture this would translate into not rigidly imposing transcendent, prede-termined form on immanent elements that are likely to change; i.e. working *with* the elements, not on them.

A good example of this would be the construction of a block of apartments in Newcastle-upon-Tyne, UK, over a culvert. In 2012, the culvert collapsed in heavy rain and, some four months later, a period of prolonged rain led to a washout and ground subsidence leaving the apartments perched precariously above the raging water. The apartments will have to be demolished.

(SOURCE: COURTESY OF TYNE AND WEAR FIRE BRIGADE)

In working with elements and their potentitlities, planners and architects would, hopefully, understand that humans and non-humans are complex mixtures of virtual and actual which have the capacity to interact with other humans and non-humans in unforeseen and unforeseeable ways. This has particular resonance, I think, not only for land use planning, but with regard to environmental planning and ecolo-gical thinking, as issues of climate change, salinity, as well as flooding and so on, exemplify.

Becoming characterises events. Event is another of those awkward Deleuzoguattarian terms which is much debated. I will attempt to keep my explanation simple, so rather reductionist, by defining an event as a 'happening'. For Deleuze, events involve activity and change. They are both process and product: the emergence of something and the effect of a synthesis of forces. (See my cake example in Fig. 2.3.) An event takes place at the threshold of being and becoming; between material actual and immaterial forces. We cannot organise an event to achieve any pre-given effect as effects are generated at the moment of the forces' interaction. Furthermore, events are not produced as copies, or in the image, of anything. They are 'wholly immanent, original and creative productions' (Stagoll, 2010: 91). Events have no determinate outcome, simply new possibilities. Their effects, however, do change relationships for ever. An event is never a beginning, nor an end, but always 'in the middle'.

Events can range through the local – such as a tree greening in spring (Stagoll, 2010) or reddening in autumn – to something like a building or an old wall falling down – which may kill insects, animals and/or humans by its fall, affecting multiplicities of assemblages, as well as opening up different vistas of what lies beyond and offering new connections - to the momentous, such as 9/11 in New York which has led to changes in requirements for air travel and 'security' legislation around the world.

The virtual is laid out on the plane (a field or even a plan) of immanence. In fact, the plane of *immanence* includes both the virtual and its actualisation simultaneously (Deleuze and Parnet, 2002: 149). What Deleuze means by this is that purely actual objects cannot exist, as I explained above with the example of Ballantyne's box.

Deleuze and Guattari refer to the plane of immanence (1994) sometimes as the plane of consistency (1987), which can be quite confusing, especially as by 'consistency' they mean 'composition' (this is the plane where things are 'composed'), rather than conformity, coherence or non-variability. This would be the very opposite. To reduce the confusion, I will simply refer to the plane as that of immanence.

The opposite plane to that of immanence is what Deleuze and Guattari call the *plane of organisation* (1987) or transcendence (1994). Again, since the two terms effectively mean the same thing to Deleuze and Guattari, and since the inherent property of transcendence – that values come from 'outside', a 'higher' sphere beyond the limits of experience – is commonly associated with theology, which would be a confusing diversion here, I will refer to the plane as the plane of organisation. This is potentially the easier term for planners to remember, engaged as they often are, in 'organisation' of land uses.

Fig. 3.2 offers descriptors of the planes of immanence and of organisation.

Plane of Immanence	Plane of Organisation
relation 'in'	relation 'to'
becomings/emergence	transcendence
open-ended trajectories	closed goals
multiplicities of meshworks	hierarchical relations of power
chance/aleatory	planned development
chaotic smooth space	regulated striated space
(with some regulation/striation)	(with some chaos/smoothness)
unstructured	structured
dynamism of unformed elements	stability of judgement and identity
flux and fluidity	inertia or sluggish movement
power to/*puissance*	power over/*pouvoir*

Fig. 3.2 Schematic Descriptors of the Planes of Immanence and Organisation
(SOURCE, HILLIER, 2011B)

The plane of immanence is a plane (or plan) defined not by what it contains, but 'rather by the forces that intersect it and the things it can do' (Kaufman, 1998: 6). It is the Deleuzoguattarian virtual realm of potentialities. It is the temporary product of mapping power or forces (see below). As Kaufman (1998: 6) continues, such mapping 'is at once the act of charting out a pathway and the opening of that pathway to the event of the chance encounter'. Bonta and Protevi (2004: 64) indicate that the 'key move' is to construct a plane by collaborative experimentation.

On the plane of immanence all possibilities are brought together and new connections are made and unmade continuously. The plane of immanence is thus a continual process of emergence. The plane is not something closed or the end of a process with specific targets to be achieved. It is a plane (perhaps a long-term strategic plan or trajectory) where 'heterogeneous elements come together to form open-ended ensembles [assemblages], rhizomatic multiplicities governed by processes of becoming' (Patton, 1986: np). It is a plane of foresight; of trajectory, of creative transformation, of what *might* be. Chance is important, however. There is always the potential for unforeseen lines of flight to emerge (for example, a change in government retail policy, enormous increases in fuel prices, consumer refusal to shop at monopolistic or multinational retail outlets without fair-trade policies, and so on).

The plane of immanence is not any one definite concept that is, or can be. Neither is it a method, a state of knowledge nor a set of opinions. Rather it 'functions like a sieve

over chaos' (Boundas, 2005: 273), implying a sort of 'groping experimentation' (Deleuze and Guattari, 1994: 41) of multiplicities of ideas, many of which never come to be as originally intended. The plane of immanence lays out the 'potential logic' of place. One of the tasks of the strategic spatial planner is to '"flush forms" out of the chaotic state of the plane of immanence' (Frichot, 2005: 68). As Frichot perceptively continues: 'the plane of immanence leaves us with bloodshot eyes, ringing ears, ground down teeth, exhausted limbs and in a thorough state of perplexity. Nevertheless, as we travel upon the plane of immanence every day, we have mostly become habituated to its continuous upsurge of novelty. As social actors, often contained by fixed scripts, susceptible to cliché [habit] and opinion [doxa], we are happy to brush off the interfering noise of immanence, and just get down to business' (ibid).

As illustrated in Fig. 4.2, Deleuzoguattarian planes of organisation support the day-to-day elements of personal and social life. These planes contain hierarchical power relations which striate our worlds (into zones of land uses, for example) and fix identities (such as female, male; resident of suburb x or town y). This is a teleological plane of purpose ('a design, a mental principle' [Deleuze and Guattari, 1987: 265]) concerned with the development of forms and the formation of subjects supported by stability of identity and judgement.

The plane of organisation is a master plan or blueprint with certain goals for development. These goals are predetermined standards (such as land use regulations or a mainstreet design scheme) to which things are submitted in judgement and ordered by forms of representation (whether applications meet the standard criteria). Local area plans, design briefs, detailed projects are typical planes of organisation. They tend to be relatively local or micro-scale, short-term and content specific. They facilitate small movements or changes along the dynamic, open trajectories of planes of immanence.

The planes of immanence and organisation exist simultaneously and are inter-leaved; a multitude of layers that are sometimes fairly closely knit together and sometimes more separate. Deleuze suggests that these might be vertical relations of thought: above, 'a battle, a turbulent, stormy zone where particular points and the relations of forces between these points are tossed about' (Deleuze, 1988c: 121) – the plane of immanence – while below lies the area in which are 'collected and solidified the visual dust and the sonic echo of the battle raging above them' (Deleuze, 1988c: 121, both citations in Stivale, 2006: 86). But Deleuze also describes continuous movement in 'a diagram of forces or particular features which are taken up by relations: a strategy' (1988c: 121). The vertical movements link with the horizontal tensions and torsions in a struggle with which practitioners must engage in their own manners, casting planes (plans) over the chaos (Stivale, 2006: 88), to 'tear open the firmament itself, to let in a bit of free and windy chaos and to frame in a sudden light a vision that appears through the rent' (Deleuze and Guattari, 1994: 203, cited in Stivale, 2006: 88).

So, what can machines do?

Machines assemble, make or produce. The human or animal body as a machine is constituted by many other machines, including an eating machine of food processing (mouth, digestive system etc), a breathing machine (nose, lungs etc), a thinking machine (brain, neurons etc). These machines are, in turn, all composed from other machines: the mouth is a machine comprising teeth, tongue and so on. Teeth are made of enamel, calcium, nerves etc etc …. and … and … and.

Through concepts of machining, immanence, emergence, becoming and event in this Chapter, we can see Deleuze and Guattari's emphasis on creative change or trans-formation: what may be regarded as an ontology of the new or an ontology of difference.[3]

GA: In your work you talk about making a strategic plan as a plane of immanence, or more precisely as a figure of the plane of immanence (Hillier, 2007). You also talk about local plans as a plane of transcendence. You have noted that Deleuze's ontology is flat, so I suspect that you do not intend this distinction to be based on scale. Can you help clarify what you mean when you make this distinction?

JH: I rather abbreviated my explanation of how I think that Deleuze's planes of immanence and organisation (I prefer to use the term organisation to transcen-dence) might be applied to spatial planning as I have written about this at length elsewhere (Hillier, 2011b). I obviously make a huge oversimplification of Deleuze and Guattari's concepts and I believe that all spatial plans will inevitably reference both planes. For instance, all forms of spatial plans could be defined not by what they contain, but by the forces which intersect them and what they can do. Similarly, all plans could be the temporary product (until they are reviewed or superseded) of mapping force relations and charting out potential pathways.

But I think that it is useful for strategic spatial planners to think of longer-term strategic plans (of, say, 15 years duration) as relating to planes of immanence because they are really speculations on what might be; something which records desiring-production. Such plans represent the coding of disorganised flux or chaos; the virtual realm of potentialities. As Stagoll (2005: 205) explains, 'to think of this field of possibilities means arranging it according to some concept …, thereby constructing a temporary and virtual arrangement according to causal, logical and temporal relations. Such thinking is always a response to some particular set of circumstances'. The strategic spatial plan might be regarded as the skeletal frame or figure of the virtual plane; 'the breath that suffuses' (Deleuze and Guattari, 1994:

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[3]   Note that this is not difference to or from anything else, but difference-in-itself. The leaves on a tree may turn green in spring or red in autumn, but they remain the same leaves on the same tree. They are not different leaves, but different in themselves.

36) its parts, the plan as the concrete assemblage of the plane as the abstract machine of which the assemblages are 'working parts' (ibid).

This is why I am keen that longer-term strategic spatial plans give up including very detailed targets (such as x square metres of retail floorspace, provision of y housing units in specified locations, or z jobs) when we cannot predict what will happen in say two years' time, let alone in 15. I think that trajectories towards more flexible 'goals', such as habitability or sustainability, offer the capacity (puissance) for adaptability that strategic spatial planning on the longer-term requires. It seems to be usual for longer-term strategic spatial plans to be prepared for whole municipalities, sub-regions or even regions, which is where the 'scale' issue comes in.

Since there is a need for detailed spatial plans to regulate development, I think that it makes more sense to prepare these at more local scales and over shorter time periods than the more visionary documents I have just talked about. This is where I find Deleuze and Guattari's plane of organisation useful. Planes of organisation contain hierarchical power relations which striate our worlds (into land use classifications or zones, for instance). As Deleuze and Guattari (1987: 265) explain, planes of organisation are teleological designs and mental principles concerned with the development of forms and the formation of subjects supported by stability of judgment and identity. We can only have stability of judgment over short time periods for the most part as actors and circumstances change.

The plane of organisation is a master plan with certain goals. These goals are predetermined standards (such as land use regulations, design guidelines and so on) to which things are submitted in judgement and ordered by forms of representation (whether applications meet the standard criteria etc). I think that local Area Action Plans or Development Plans, design briefs, detailed project briefs fit this description and are figures on planes of organisation. They tend to be relatively local or micro-scale, short-term and content specific. They facilitate small movements or changes along the dynamic, open trajectories of planes of immanence.

With regard to scale, a 'flat' ontology does not necessarily mean only horizontal. It means what Leitner et al (2008) call 'co-implicated' – looking among connections between people, places and assemblages – rather than down or up at them. Entanglement rather than embedding. I think that this is implied when Deleuze and Guattari state that we inhabit both planes at once and by their insistence that 'every politics is simultaneously a macropolitics and a micropolitics' (1987: 213).

What can nature do?

Deleuze and Guattari's world is one of continuity between human and non-human behaviours. Each species (including *homo sapiens*) creates its own territories through its percepts, concepts and affects: the assemblages and events in which it participates. The assemblages and territories intersect.

Mark Halsey's (2006) study of the old-growth forest in Goolengook, Australia, demonstrates how attempts by forest-administrators to striate nature on a plane of organisation severely limits their potential for dealing with the forests. As Halsey explains, 'the guiding objective of environmental administrators becomes the location and categorisation of a delimited series of *attributes* common to a field (of species, of classes, of types) as opposed to establishing categories on the basis of the *relations* pertaining between individuals and their associated becomings' (2006: 238, emphasis added). To change the way in which foresters depict and manage their world to a relational view would, as Halsey (2006: 239) points out, inevitably result in 'the sudden and dramatic demise of modern forest management principles premised as they are on the notion that great sections of forest can be clearfelled without serious consequence since there also exist … other sections "just like them"'. Forest planes of immanence become planes of organisation become 'harvested' timber.

I have demonstrated similar effects both in old-growth forests in south-west West Australia (Hillier, 2007, Chapter 6) and also in the ways in which Environmental Impact Assessments striate and codify environmental 'types', such as wetlands and sand dunes, prior to 'measuring' them or allocating them 'values' (Hillier, 1999a, 1999b).

As Mark Bonta (2004: 99) explains, Deleuzoguattarian geophilosophy combines the non-linear, open systems approach of complexity theory with the fluidity of poststructuralism: 'it allows us to move beyond the impasses of interpretation-based and signifier-driven accounts of space (landscape-as-text; discourse as primordial) without becoming

trapped in essentialist, authenticity-bound "who's right?" scenarios'. Deleuzoguattarian-inspired analysis can help us understand the ways in which different human and non-human actors (including places) can interrelate, engage in conflict, generate cross-factorial alliances, de- and re-codify/de- and re-territorialise space.

For instance, in environmental debates, assemblages of actors 'deterritorialise forces of the earth … and put them to work in a different way, stratifying them in different sequences, drawing from elements common to them – on the physico-chemical, geological, biological and human strata – but for different purposes' (Bonta and Protevi, 2004: 174). The deterritorialised elements of non-human spaces are thus subjected to attempts by different human-centred assemblages to reterritorialise the spaces and overcode them in some way, whether for economic, environmental conservation, social or political purposes. Deleuze and Guattari (1987: 9) also recognise that although powerful sign systems may dominate or overcode a multiplicity, such overcoding will inevitably be temporary as 'multiplicities are defined by the outside: by the abstract line, the line of flight or deterritorialisation according to which they change in nature'. Humans will never completely overcode non-human multiplicities. Non-human actors may operate according to different temporalities to humans and have voice in different manners, but act and speak they will.[4]

Verena Conley (1993, 1997) develops Guattari's (2000) concept of ecosophy as a way of moving beyond the dialectical oppositions of human/non-human. Guattari's ecosophy consists of three interrelated registers: mental ecology (how we construct ecosystems, time, space and so on), social ecology (the everyday practices of life) and environmental ecology (a broad reconsideration of nature which radically decentres current constructions and practices). Of these, Guattari stresses the importance of mental ecology. Without a reorientation of how we construct or subjectivate ourselves and non-humans in relation to space and time, little else will happen than continued destruction (Guattari, 2000: 41) as there are no closed 'systems'.

In thinking about what nature can do, Jane Bennett (2004, 2010) develops Guattari's ecosophy and Deleuze and Guattari's ideas of 'material vitalism' concerning the immanence of matter-energy: 'thing-power'. Bennett's (2010: x) aims include to dissipate onto-theological binaries of life/matter, human/animal, will/determination and organic/inorganic in order to induce an openness of humans to material vitality and to develop a form of political analysis that can account for the contributions of non-human agents. Regarding assemblages as comprising humans and non-humans would enable us, for instance, to appreciate the role of bees in our food chains, of chickens in the spread of avian flu, of how sand storms may influence the spread of sectarian violence (Bennett, 2010: 107) and so on. As Bennett comments, 'if human culture is inextricably enmeshed with vibrant, nonhuman agencies, and if human intentionality can be agentic only if accompanied by

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[4] For example, mass clearing of trees for agricultural purposes in Australia has caused huge problems of salinity which are severely threatening agricultural holdings and livelihoods. Tree clearing is also related to flood devastation and erosion.

a vast entourage of nonhumans, then it seems that the appropriate unit of analysis for democratic theory is neither the individual human nor an exclusively human collective but the (ontologically heterogeneous) "public" coalescing round a problem' (2010: 108). In order to achieve this, we will need to devise new processes that both recognise the important role of non-humans (Guattari's 'nascent subjectivity') and which enable us to involve non-human 'voices' in strategic policy and development assessment decisions. But how we might do this is not simple and Bennett gives us no real answers.

What nature can do is related to the anthropocentric issue of what humans permit nature to do (eg levees to prevent flooding, cloud seeding to shift rain patterns, groynes to contain longshore drift of beachfronts and so on). We tend to overlook that elements are not fully determined by their relations (see Chapter 2). Additionally, we may not recognise that there are many elements and relations of which we are completely unaware, some of which may be currently unknowable to our research methodologies. Even when we are aware of relations (such as human effects on climate change), we may choose to ignore them. This is often a matter of politics. There has been much discussion of Deleuze and Guattari's political philosophy and whether it can be reconfigured as a political program or model (see the review in Buchanan and Thoburn, 2008).

Deleuze and Guattari (1987: 213) comment that 'everything is political, but every politics is simultaneously a macropolitics and a micropolitics'. With regard to macropolitics, in Anti-Oedipus (1984) Deleuze and Guattari regard the State as an all-embracing power (pouvoir) which brought together labour power and the conditions necessary for the creation of surplus-value. Whilst the power of the State vis-à-vis capital has clearly declined since Deleuze and Guattari wrote, it nevertheless remains that 'one of the fundamental tasks of the State is to striate the space over which it reigns …. [T]he State does not dissociate itself from a process of capture of flows of all kinds, populations, commodities or commerce, money or capital etc. There is still a need for fixed paths in well-defined directions, which restrict speed, regulate circulation, relativize movement, and measure in detail the relative movement of subjects and objects' (Deleuze and Guattari, 1987: 385-386). Think, for example, of what the State has performed in the name of 'Homeland Security' to capture flows of migrants; of how 'movements' are 'measured' by ubiquitous CCTVs, GPS systems in mobile phones and cars, by Facebook and Google; of taxation, levies and duties. However, when public opinion called for States to regulate the banks in the early 21st Century financial crisis, State ministers lacked the courage to do so.

The State operates through capture of movement and the partition of space in order to control the development of potential war machines and cut off possibilities of lines of flight (Deleuze and Guattari, 1987: 386). Yet the State never entirely constrains or neutralises micropolitics, and it is here that Deleuze and Guattari see most potential for revalorisation of decision making in favour of the marginalised. However, Deleuze and Guattari are not necessarily concerned with opposition between individuals/groups and

the State per se, but rather between the lines that appear in and cut across individuals/ groups and society (such as environmental movements). As Guattari commented, 'why would you look to a party or a State apparatus to liberate desires?' (in Deleuze, 2004b: 32). It is not the control of State power or macropolitics which interests Deleuze and Guattari, but the forms of social change which can occur 'alongside or beneath any given form of State' (Patton, 2000: 8).

This has led several commentators (eg May, 1991, 1994) to suggest that Deleuze and Guattari's politics are a form of anarchism or anarcho-syndicalism. Deleuze and Guattari are more interested in locally relevant micropolitical tactics than in a broader strategic political thought: in particular or local 'revolutionary-becoming' rather than wholesale social change (Patton, 2000, 2012). 'Top-down' reasoning would restrict emergent, 'bottom-led' understandings of the world and lines of flight. However, Deleuze and Guattari do not leave everything in the hands of local stakeholders. They argue that 'molecular escapes and movements would be nothing if they did not return to the molar organisations to reshuffle their segments' (Deleuze and Guattari, 1987: 216-217), of broad stratifications of class, gender, sexuality and so on. In other words, Deleuze and Guattari look to the strength (puissance) of creative lines of flight to disrupt (deterritorialise) and transform doxa and dogmatic systems into new forms (reterritorialisation). By this, Deleuze and Guattari do not necessarily mean the abolition of 'molar' (eg State) organisa-tions, but their transformation into a 'fabric of immanent relations' (Deleuze and Guattari, 1987: 358). Neither does 'revolutionary-becoming' imply classical forms of revolution with coups d'état and so on. Rather, Tampio (2009), Nail (2012) and others read revolutionary-becoming as including problem-based participatory forms of inclusive, democratic organi-sation. Examples are offered of the international Occupy movement and the Zapatistas in Chiapas. Mexico (Nail, 2012; Ruddick, 2012).

Deleuze and Guattari, then, do not advocate any specific end-state or principles, for instance, for environmental or social justice, despite being active in several movements in France. Patton (2000, 2012) suggests that we should not be surprised by this, as Deleuze and Guattari's political philosophic thinking pre-dates much of the Western debate on Marx and distributive justice. It is not the entity, therefore, but the process which interests Deleuze and Guattari.

So, what could ecopolitics do?

Nail describes the Mexican Zapatistas' self-management of their ecosystems as a 'model for a post-neoliberal environmentalism' (2010: 183). Based in an autonomous federation of towns and villages with democratic, participatory councils for ecological self-government, policy is decided through a procedure of 'counting the affects' of a situation (Nail, 2010: 185), working through who and what has the capacity to affect or be affected and with what implications for humans and non-human nature.

GA   Here you seem to be pointing us towards an approach to planning that rejects an inherent distinction between the human and the non-human. How might this be possible in practice? When a planner reflects on non-human issues, they do so through ecological reports, policies on flood protection etc. This seems to be less problematic in other, connected plan-making professions such as architecture. As you note above, an architect's plans should be created to work with the potentialities from related human and non-human entities ie to work with the movement of water across the site, the composition of the ground, the absorption rate of bricks, the bricklayer's ability to lay bricks in different locations, the architect's details for controlling how water is directed through and around the building etc. With this in mind, how do we encourage planners to work with these human– non-human potentialities and relations in planning? What barriers would we need to overcome? And what might this mean for the profession?

JH: Deleuze and Guattari's work – especially that of Félix Guattari – is post-human in that it attempts to avoid anthropocentrism and regards homo sapiens as one of many species: 'we make no distinction between man (sic) and nature: the human essence of nature and the natural essence of man become one within nature … man and nature are not like two opposite terms confronting each other – not even in the sense of bipolar opposites within a relationship of causation, ideation, or expression (cause and effect, subject and object, etc); rather they are one and the same essential reality, the producer-product' (Deleuze and Guattari, 1984: 4-5). It then follows that humans have no inherent rights to regard nature in a functional, human-serving manner or to set themselves up above nature.

For Guattari (2000), capital exerts a determining role over, or captures, both environmental and mental ecologies. (We can see this, for instance, in activities of drilling for oil in the Alaskan Arctic National wildlife Refuge, fracking in the USA, UK and Australia, the extinction of the African western black rhino due to poaching and slaughter for horn in Cameroon and many other examples.) Guattari argues that we need to deal with this problem of capitalism if we are to not destroy the planet.

Deleuze and Guattari argue that political assemblages should no longer aim at the control of nature, but rather be shaped by transversal communication between the living and non-living, such that 'mastery over nature is replaced by intervention within an immanent process' (Goodchild, 2010: 28). But we have what seems to be an insurmountable paradox. On one hand, we humans may be capable of developing new 'techno-fixes' (such as solar power rather than coal-fired power stations) which help us reduce carbon emissions which accentuate global warming. But on the other hand, there are strong political, social and economic vested interests which may prevent us from operationalising the techno-fixes on a sufficient scale to make a difference.

Guattari stresses the need for a redefinition of societal values to act with a sense of responsibility for non-human nature as well as for humans. This means thinking nature as a negotiation of dynamic assemblages of humans and non-humans. Clearly there is a need for a 'big picture' approach to issues, such as global warming, in which the entire human world participates. But there is also a critical role for site=specific approaches based in comprehension of and responsible working with the 'resonances, alliances and feedback loops' (Herzogenrath, 2009: 5) between human and non-human nature. This is different from deep ecology, as espoused by scholars such as Arne Naess for instance. Deep ecology tends to be heavily essentialist and may actually deny difference, rather than embrace the coexistence of interrelated differences and the unique capacities to affect and be affected of different modes of existence (Hayden, 1997).

The implications of applying a Deleuzoguattarian approach to nature would most likely mean that environmental law needs to change to position the human in an ecological plane both beyond the anthropocentric and beyond the construction of prescriptive idealities, whilst not being co-opted by political and economic interests (see Philippopoulos-Mihalopoulos, 2011). Is this possible? Personally, I don't know, but I hope so.

What can spatial planning practice do?

Can there be such a thing as Deleuzean-inspired spatial planning? If so, it would appreciate that construction of the region/city/neighbourhood/house is never complete but always-already in change. With regard to urban design/architecture, Ballantyne (2007: 82ff) explains the interdependence of elements in an assemblage (eg humans, non-human nature, built form etc) referring to Deleuze and Guattari's (1987) example of von Uexküll's (1965) tick which latches onto mammals as its *milieu* (environment). Von Uexküll demonstrated how the animal and its milieu are intricately linked, necessary for the animal to survive. The assemblage organism-plus-*milieu* cannot be described in Cartesian terms. It is 'formless' (Ballantyne, 2007: 86); something with which architects, designers and planners cannot cope and so they represent 'form' in effect as a social construction of the relations, networks and flows of towns, neighbourhoods and so on.

State-driven spatial planning attempts to impose form or order on the formless, but as Ballantyne (2007: 88) comments. 'that is not what makes them work, and it is no way to understand urban design'. He continues: 'towns make the *milieu* for individual buildings, and one needs to understand the interdependence of building and *milieu* if one is to design a successful building – a building that sustains life, and that becomes a thriving organism' (ibid). One could easily substitute mainstreet, local centre etc for 'building' in this sentence.

Too often, planning permission is given for individual buildings as 'well-defined object-parcels that tend to separate themselves from their surroundings' (Ballantyne, 2007: 88). Each building/mainstreet/centre may be aesthetically attractive, but out of synch with the human and non-human (birds, animals, plants, snow, rain etc) life of the city. If a 'regenerated' local centre does not mesh relationally with the elements which generate liveliness and vitality, then it will most likely remain unused, not even by groups of skate-boarders and hoodies.

Process is what matters then, rather than an end product of detailed targets, set in stone. Longer-term strategic spatial planning might be seen as a trajectory in the direction of …, rather than as straight lines to … As Deleuze (1997: lvi) wrote, 'every work is a voyage, a journey, but one travels along this or that external path only by virtue of the internal paths and trajectories that compose it'.

Deleuze's ideas about immanence lead me to suggest that strategic spatial planning (and perhaps mainstreet/local centre redevelopment) should not be concerned with setting out all possibilities in advance. It should recognise Deleuze and Guattari's virtual. A plan, then, should always be incomplete so as to be able to respond to the 'unforeseen moments in what happens in us and to us that open up onto new histories, new paths in the "complication" of our ways of being' (Rajchman, 2000: 61). A plan constitutes a space whose rules can themselves be altered through what happens in it. For me, the role of a plan is not to predict but to 'remain attentive to the unknown knocking at the door' (Deleuze, 1994). A plan is about connections of all the senses, of people, nature, space and time: 'and' or 'with'.

'To make connections one needs not knowledge or certainty, but rather a trust that something may come out, though one is not yet completely sure what' (Rajchman, 2000: 7). A 'belief of the future, in the future' (Deleuze, 1994: 6). However, this is not to suggest abdicating responsibility for trying to prepare for a 'better' future than the present, even if transcendent notions of 'the good' are destabilised and dissolved. Deleuze and Guattari (1987: 483) write of an 'anexact yet rigorous' practice which is 'open and connectable in all of its dimensions' (Deleuze and Guattari, 1987: 12); a continuous exchange of striated and smooth space, of deterritorialisation and reterritorialisation.

Some points of crystallisation have to exist as decisions are taken, however much definitive grounds for acting may be absent. In the spirit of Deleuze's (1989: 91) view of the crystal as 'the bursting forth of life', I am keen to regard decision making opportunities as kaironic, embracing both kairos as timeliness of opportune moment and as a time of tension, a problem which must be solved (Patton, 1997). Smith (1969) links kairos with phronesis (practical wisdom)[5] to offer an ability to act timely and wisely. Time-space is thus 'pulsed' (Deleuze, 1977), comprising pulsations of territorialisation mixed with non-pulsed smoothness. Whether pulsations of spatial planning committee meetings and development assessment decisions or strategic planning timelines, pulsations of time and space are imposed on actors who are thereby ordered.

I embrace a Deleuzean-inspired view of planning practice which allows unexpected elements to come into play and things not to quite work out as expected. This allows me to see planning and planners as experiments or speculations enmeshed in a series of modulating networked relationships in circumstances at the same time both rigid

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[5] See Flyvbjerg (1993, 2001, 2004, 2012) and Gunder (1997) for discussion of phronesis in planning decision making and research.

and flexible, where outcomes are volatile. where problems are not 'solved' once and for all but are rather recast as necessary, reformulated in new perspectives (Hillier, 2007: 189). For example, with regard to the smog which occasionally hangs over the city of Perth, West Australia, the question is one of whether the smog is due to traffic fumes or farmers burning off hay stubble. Such questions are an issue of problematisation of representations rather than of neat solutions.

The UN-Habitat *Global Report on Human Settlements* (2009) calls for development of systems of strategic spatial planning which include provision of a flexible, 'forward' long-range spatial plan consisting of broad frameworks and principles, with which detailed local area plans and mega-projects should mesh. This resonates with some practice approaches to strategic spatial planning (such as were intended in England, 2004-2010) and what I had loosely termed a 'multiplanar' approach based on Deleuze and Guattari's planes of immanence and organisation (Hillier, 2007, 2011b).

As I wrote earlier in Chapter 4, the planes of immanence and organisation exist simultaneously and are interleaved, sometimes more closely than at other times, with force relations playing out on both planes. Humans and non-humans inhabit both planes at the same time. While a 15+ year strategic plan may describe a desired trajectory – towards sustainability for instance – localised plans, policies and projects are created as required to deal with details and specific issues. At the local scale, spatial planning is concerned with the active management and negotiation of space through Local Development Plans, major projects and Development Assessment processes. Planning practitioners have to make sense on a daily basis of the chaos of uncertainty wavering between rationality and irrationality and attempting to make undecidable decisions: in effect, to plan (Hillier, 2007: 249).

Inspired by Deleuze and Guattari, I have argued for broad trajectories/visions of strategic spatial planning to act as frames of reference (planes of immanence) for more specific local/short-term plans and projects (planes of organisation). The frames of reference (such as sustainability, habitability and so on) provide justification and navigational context for short- and medium-term substantive actions (such as major projects) which mark movement and change along the broader trajectory.

I have attempted to translate this theoretical material into a practical methodology of strategic navigation for strategic spatial planning (Hillier, 2011b), inspired by Deleuze and Guattari's 'pragmatics'. This is a reading of pragmatism which has at its core issues of power relations, politics, creative transformation and practical experimentation.

Deleuze and Guattari regard their 'pragmatics' metaphorically as a form of cartography. They describe their cartography as comprising four components (1987; 146):

- The generative component – the *tracing* of concrete mixed semiotics and pointing towards the potentiality of what might emerge;
- The transformational component – making a transformational map of the regimes and their possibilities for translation and creation;
- The *diagrammatic* component of the relational forces that are in play 'either as potentialities or as effective emergences';
- The machinic component – the outline of programmes of what new assemblages/*agencements* might emerge.

A cartographic method would first make a tracing of 'how did something come to be' which explores, in particular, the force relations between human and non-human actors. Tracing is concerned with understanding path dependencies, transformations and ruptures, investigating how elements and processes (such as human and non-human actors involved in policy-making for energy infrastructure provision or social housing location) respond to their own relational logics and to external pressures and stimuli. Tracing, then, overlays a product (what happened) onto the process of its production (how it happened). One could use Foucauldian genealogy or actor-network approaches as a methodology for tracing.

Deleuzoguattarian mapping involves the creative discovery and perception of landmarks, useful for orientation purposes as something to head towards. This would not be an attempt to define long-term detailed programs of action, but to raise questions of potential agency and of socio-economic-political and institutional conditions of change. For instance, what might be the implications of a Russian gas magnate taking ownership of a local football or ice hockey club with visions of expansion? Or a celebrity-led fringe political party holding the balance of power?

Mapping generates a diagram of the discursive and material forces expressing immanent relations of power. Deleuze (2003: 101) describes a diagram as being 'suggestive' of 'possibilities of facts'. It would help evaluation of the organisational potentiality of various strategic agencements to emerge, such as the fringe political party. The idea is to attempt to anticipate the ways in which force relations and alliances might be redistributed in different circumstances and situations and to work out what kinds of changes in relations between humans and non-humans could be vitally important (eg discovery of seams of oil shale beneath good quality agricultural land): 'it is never filiations which are important, but alliances' (Deleuze and Parnet, 2002: 69).

Deleuze and Guattari's machinic component concerns the evaluative study of assemblages/agencements and their potentialities with a view to intervening strategically. This is an ethical issue, as are all strategic planning decisions. One way of machining new strategic spatial planning programs could be through prospective or strategic foresighting (see Albrechts, 2005, 2006, 2008; Hames, 2007).

Key elements, in diagramming and machining in particular, are questions of 'what might happen if …? However, this questioning is very different to that generally associated with more rational comprehensive forms of strategic planning. Deleuze and Guattari emphasise the importance of the force relations between elements rather than simply the elements themselves. Rational comprehensive modes of planning also rarely look backwards at force relations, generally performing trend analysis on data. A Deleuzoguattarian-inspired analysis would look at more than just the numbers. It would look at *how* those numbers actualised: what were the conditions of their possibility. Why, for instance, was their an apparent spike in high-rise residential apartment block construction in the last three years? Is this a reliable trend? Have the conditions underlying the construction rate ceased to operate, and so on. What are the force relations between, for instance, an interventionist Minister for Planning who calls in/determines planning applications, developers and their agents, local planning officers, construction companies, NIMBY inner suburb residents? Mapping would similarly look at the force relations between elements.

Deleuze and Guattari's pragmatic cartography resonates extremely well with Richard Hames'[6] (2007) methodology of strategic navigation, which I have developed for strategic spatial planning (Hillier, 2011b). Hames (2007: 228-229) defines strategic navigation as 'the art of confidently and ethically finding viable paths into the future, negotiating unknown terrain and unprecedented complexity while retaining integrity and relevance'; a definition which meshes well with the practice of strategic spatial planning. Hames advocates a methodology of 'strategy-as-process' – 'a continuous braiding of intel-ligence creation with insightful action' (Hames, 2007: 81) – based on appreciation of a 'system's (eg a city or region) past, present and potential futures. Hames' four components of sensing, making sense, designing and enacting fit closely with Deleuze and Guattari's four components of pragmatic cartography. (See Hillier, 2011b, for detailed questions which planners might pursue in practising strategic navigation.)

Tracing – Hames' sensing – offers us a temporarily stabilised grid of reference for understanding what took place. Practitioners can then make sense of this through identifying patterns of behaviour and activity and reperceiving issues in the light of this information, thereby deepening their awareness and understanding of what went on, how and why. We may be able to understand, for instance hypothetically, why one particular interest group (which we had anticipated would have a major impact on governance) faded into the background and remained an assemblage of elements, whilst a different group mobilised support from temporary alliances of highly diverse actors, generated strategic agency *(agencement)*, deterritorialised the prevailing system and toppled the ruling regime.

Emphasis then shifts to designing - mapping the relational connections, to diagram potentialities. Background documents to plans would no longer be questions of land use *per se*, but of interrelationships between different actants (including land uses).

Planners would 'map out a range of circumstances' (Deleuze, 1995: 26), situations and relations or lines. Mapping lines and diagrams of relations of power or forces enables construction of trajectories (strategic plans) representing desired futures. Then comes experimentation, testing out relations, recognising the limitations of particular constraints and attempting to work through enabling constraints where possible. Planners have to operate through some reductive, perspectival stabilisation of difference simply in order to cope. Some territorialisation is inevitable. Even so, no matter how much we map and diagram spaces of possibilities, there will always be the unknown. Enacting the plan becomes reflexive and adaptive as changes in context, agents and structures occur. For Deleuze, normativity and normative criteria are immanent: the conditions of producing something new (such as a plan, a district centre redevelopment etc) always change according to what has been produced already. Analytical critique, or evaluation, and creation are immanent processes.

Strategic navigation is potentially an inclusive, democratic 'what might happen if …?' approach which allows disparate points of view to co-exist; which has a concern for indeterminate essences rather than ordered ones; for emergent properties rather than fixed ones; and for intuition and uncertainty, multiplicity and complexity rather than systematic predictabilities. Strategic spatial planning by strategic navigation is a performance of risk-taking, of not being in total control, of transcending the technicalities of planning practice which demands that strategic spatial planners 'step outside what's been thought before, … venture outside what's familiar and reassuring, … to invent new concepts for unknown lands' (Deleuze, 1995: 103) and to allow possibilities for something new to emerge. As Rajchman (1998: 33) suggests, 'the aim of the game is not to rediscover the eternal or the universal but to find the conditions under which something new may be created'.

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GA: In your work you suggest that planning is about working with the virtual i.e. to imagine 'what might be' in the future (potentials). Could you give us some idea about the method or process we might use to imagine these potentials? And how we select which potentials should be used to form a strategic plan?

You also suggest that established methods of forecasting such as scenario-design provide us with some approximation of a Deleuzian approach to planning. Does this mean that we can use established, forecasting methods and refer to them as Deleuzian, or are there some important differences that we must be wary of?

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JH: I think that one of the better techniques for working with the virtual is what the French call 'futuribles' or 'prospectifves' or foresighting in English. The essence of this is foresight, not forecast. De Jouvenel (2004: 6) argues that foresight invites consideration of the future as immanent, something created dynamically, whereas forecasting tends to be built on transcendence, a future already largely decided by

trend extrapolation, 'like a mystery that simply needs to be unravelled'. Prospectives involve an open exploration of the potential (and the impotential) of many possible futures (futuribles) through development of radically alternative exploratory scenarios. It involves an exploration of conjectures rather than of facts. They break with existing paradigms by forcing actors to think outside their usual assumptions.

Louis Albrechts (2005: 255) describes *prospectif* scenario-building as deriving from the observation that, given the impossibility of knowing how the future will play out, a useful strategic trajectory would 'play out well across several possible futures'. This should develop openness to new ideas and explore potential areas or lines of resistance in a linking of critique and constructive vision (Albrechts, 2006). As Albrechts explains, *prospectives* offer a way of attempting to make visible the potential forces which could lead the future in a range of directions, desirable and undesirable. '[Prospectives] identify contingent decisions by exploring what places/ institutions might do if certain circumstances were to arise; they enable us to reflect on a series of "what if" stories' (Albrechts, 2005: 256).

Prospectives, however, are far more than the usual form of scenarios which planning consultants often employ (typified by high, medium and low growth). Scenarios tend to be fairly restricted in what they envisage, whereas prospectives engage in 'horizon-scanning' (www.futuribles.com) and beyond, where anything and everything can be suggested. Participants then work through what might be the conditions of possibility and force relations between human and non-human actors for the suggestion to actualise. The participants can then begin to 'anticipate' the likelihood of these events happening. Those deemed 'unlikely' can be put to one side. But participants will have, at least, considered what might be recognisable signs of their eventuation, so that, on seeing signs of an 'unlikely' event, they can bring 'plan c' out of the filing system or off the proverbial back-burner. It's a sort-of pre-anticipation of the unexpected.

For instance, in a *prospective* exercise, someone might suggest that within 20 years, 'the world will run out of oil' or 'the European Union will break up'. If we take the first hypothetical above, discussion would think through what would be the conditions of possibility or drivers (and in particular, the force relations between actors) for the world to run out of oil, and what would be the Strengths, Weaknesses, Opportunities and Threats (SWOT) of such circumstances. Or, if oil does not run out, but becomes a scarce commodity (perhaps the US stockpiles it, or an oil-rich state, such as Venezuela, nationalises oil production and refuses to sell to non-South American buyers), then some countries/groups/organisations/ individuals will not be able to access oil. Planners would need to start thinking through what oil does, how likely there are to be substitutable alternatives, with what impacts on whose lives, and what might be a strategy to deal with all this

for humans and non-humans to live together in an oil-less society. In this manner, *prospectives* can create awareness of 'what might be', offering an array of broad trajectories of possibilities which can open actors' minds to the potential transformation of clichéd attitudes, norms and practices. 'The objective is not to forecast the future, for no-one can tell what the future will be. The objective is to take responsibility as an organisation for the future' (de Jouvenel, nda).

The English Department for Business, Innovation and Skills is actually undertaking some extremely impressive foresighting exercises through its Foresight Programme, not least of which was that on Land Use Futures in 2010 (http://www.bis.gov.uk/foresight/our-work/projects/published-projects/land-use-futures).

Mark Purcell (2013) has recently emphasised the becoming-revolutionary aspect of Deleuze and Guattari's work, which I mentioned in the preceding Chapter. In *Anti-Oedipus* (1984) in particular, Deleuze and Guattari call for lines of flight to flee the State and capitalism. Purcell (2103: 14) reads this call in planning terms as a 'stand against state-led planning of all kinds' which 'forces us to ask both existential questions about what planning is and normative questions about whether we should be planning at all' (Purcell, 2013: 1).

I agree that as planning academics and practitioners we should be asking such questions irrespective of reading Deleuze and Guattari. I also agree that Deleuze and Guattari write about revolutionary-becoming in *Anti-Oedipus* in such terms as Purcell describes, with regard to the importance of warding off apparatuses of capture and enabling those with a stake in issues to make decisions. However, I believe that a call for a revolutionary overturning of the state and capitalism[7] reflects the mood of left-inspired academics in the late 1960s and 1970s (*Anti-Oedipus* was originally published in 1972). For planners to read Deleuze and Guattari entirely in the light of advocating 'unrestrained deterritorialisation of desire' (Nail, 2012: 17) in the 21st Century, could, I suggest, be counterproductive and lead to a wholesale rejection of Deleuze and Guattari's work. Instead, I read 'becoming-revolutionary' more in the constructive sense of *A Thousand Plateaus* (1987) – which is very different in tone to Anti-Oedipus – as transforming rather than abolishing molar organisation (see also Nail, 2012; Patton, 2000, 2012).

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[7] However, the rise of the bitcoin (BTC) as a digital currency and anonymous, peer-to-peer, electronic payments system based on an open source encryption protocol, not managed by any central authority, could be regarded as potentially a major challenge to the capitalist system. The global circulation of bitcoins as of April 2013 is worth over $1.4 billion US dollars on paper. Despite being originally developed as a system of rewards for computer-geeks who solved difficult mathematical problems, their value has increased exponentially from less than $1 US in 2011 each to $160 in April 2013, reflecting the limited number created. Bitcoins are rapidly becoming the currency of the super-rich in order to avoid taxation and other legislation (anon, 2013; Faiola and Farnam, 2013)

Deleuze and Guattari write about a conceptual apparatus for posing questions and rethinking, rather than prescribing normative end-points. As Patton (2008: 181) relates, Deleuze and Guattari present the state as 'a new mechanism of alliance rather than the embodiment of any ideal treaty or contract on the part of its subjects' (from Deleuze and Guattari, 1977: 195). This would be an alliance with new ideas proposed by, for instance, social movements, rather than attempts to capture and control them. Rather than being hostile to the idea of a democratic state, Deleuze and Guattari (1994) would rather it be reterritorialised along more socially and environmentally just lines.

Deleuze and Guattari also stress that where there is deterritorialisation, reterritorialisation always occurs. Social movements which 'fled' an existing system, such as the Taliban in Afghanistan or groups, such as the Muslim Brotherhood and others, involved in the Arab Spring across North Africa, reterritorialise according to their own rules, which effectively reinvent the 'despotic' state in a different form and may not necessarily be an improvement for many affected humans and non-humans: 'you can never guarantee a good outcome' (Deleuze, 1995: 32).

As mentioned in Chapter 5, Deleuze and Guattari's work resonates for some scholars with anarchism or anarcho-syndicalism. At this point it is useful to recall the origins of planning in Western Europe and the close relationship of Ebenezer Howard, Patrick Geddes and Lewis Mumford in the US to the anarchist philosophy of Pyotr Kropotkin and Élisée Reclus. The main inspiration of the anarchist movement was the creation, 'on the very margins of the still existing state, of an alternative society, rather than the destruction of the physical infrastructure of the capitalist state' (Tsekeris and Tsekeris, 2007: 1). Perhaps the Transition Towns movement of the early 21st Century could be described as anarchist in this manner. Transition Towns are not without 'rules', however (see Scott-Cato and Hillier, 2010).

Colin Ward taught and practised anarchist planning for over 50 years until his death in 2010 (see, in particular, Ward, 1974, 1978, 1989, 2002) and there has been a recent revival of anarchism in geography (see Ince, 2010, 2012; Springer, 2012). Saul Newman's paper in *Planning Theory* (2011) advocated a form of post-anarchist planning (post-structuralist anarchism) and Todd May (2005) looks at urban renewal from an anarchist perspective. There is even an anarchist planning website (www.anarchistplanner.org). Perhaps Deleuzoguattarian-inspired anarchist-type planning may not be an impossibility?

Can there be too much autonomy? Why should stakeholders desire be creative and liberating? Elsewhere I offer some examples (Hillier, 2002) of poor technical planning decisions being made and supported by West Australian Ministers for Planning for populist reasons.

Noam Chomsky (1999) suggests that Israeli kibbutzim come close to his ideal of anarcho-syndicalism (organised networks of small groups). For Chomsky, anarchism is not incompatible with state support for social justice: 'it leads directly to support for the people facing problems today: for enforcement of health and safety regulations, provision of national health insurance, support systems for people who need them' (1996: np). And spatial planning, one might suggest.

There are several examples of creative alternatives to decision making ranging from participatory budgeting in Porto Alegre, Brazil, which has now spread to cities internationally and is widely documented,[8] to J.K. Gibson-Graham's empirical work on alternative economies in Australia and the USA (see, for example, Gibson-Graham, 2008, 2011 and www.communityeconomies.org). There is also rising support amongst public administration and planning academics and agencies of governance for what Sørensen and Torfing (2007) term 'network governance'. Wachhaus (2011) advocates an anarchist model of network governance as appropriate to the regional scale, citing the European Union doctrine of subsidiarity as a workable example.

Anarchist thinking also possibilises rethinking territory as a relational inter-action between space and society, as Deleuze and Guattari would advocate. Ince (2012: 1653) explains how an anarchist approach can afford tools for conceiving territorialisation as 'a potentially liberating practice'. Ince suggests that it may be possible to embed within territorial practice 'certain organisational functions and structures that are at once effective in building spaces of struggle and developing modes of organisation that prefigure future worlds' (ibid). This could be undertaken through promoting and practising collective self-management of issues whilst retaining critical engagement with broader statist-capitalist society (Notes from Nowhere, 2003). Critical engagement here does not imply subordination to statist notions of territory, but rather a notion of territory as a praxis produced through the spatiality of relations, which can 'open up our spatial and political imaginations to radical alternatives' (Ince, 2012: 1646).

Well-known examples include the Occupy movement and the Zapatista Councils of Good Government in Chiapas, Mexico (see Chapter 5). Over 2,200 communities (more than 200,000 people) in Chiapas are federated into 38 'autonomous municipalities' grouped into five local self-governments or Councils of Good Government which espouse collective decision making, prioritisation of women and marginalised peoples, co-operative economics and environmental stewardship. The Zapatistas have invented a form of prefigurative politics: without overthrowing the state, they have achieved a large degree of autonomy within it, and with others outside it (Nail, 2012). One of the key tenets of good governance in Chiapas is a responsibility to human and non-human others; something which the rest of the world could perhaps learn.

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[8] A Google Scholar search in April 2013 found over 30,000 texts on the topic.

In England, the Localism movement, commenced under the Labour regime in the early 2000s and continued by the Conservative-Liberal Democrat Coalition, could possibly offer an example of stakeholder-led planning practice, if centralised directive 'guidance' and performance indicators were removed, which the Coalition government, in particular, wields as a stick (see Healey, 2011) and also provided that decisions are not dominated by powerful lobby groups, NIMBYs and/or 'the usual suspects', but are inclusive and democratic.

So, what can Deleuzoguattarian-inspired planning do?

Deleuze and Guattari did intend that every space should be smooth, but stressed the interrelationships between smooth and striated space. Their work – especially their constructivist pragmatics or cartography – offers us a potential methodology to 'intervene in the mixture of smoothing and striating forces at work in the complex spaces we inhabit' (Bonta and Protevi, 2004: 39). What is important is that the assemblages with which, and within which, spatial planners work, and the interventions which they make, should aim to be enabling rather than restrictive: *puissant* rather than *pouvant*.

Deleuze and Guattari's planes of immanence and organisation are simultaneously interwoven to mutually collude in planning and governance practices. Organisational rules, regarded as a codifying reaction to emergence (eg use classes, design guidelines etc) are immanent in their practical local expressions. The rules thus become an integral part of practice without ceasing to be an organisational intervention. Organisation, as such, becomes-immanent in practical local expressions. This is an empiricism which unfolds rhizomically, in lines and connections emanating from a middle without ends; a consequentialist approach of what might happen if …?

I would describe planning and governance practices as a kind of democratic, inclusive, 'spatial investigation'[9] proceeding by speculation, experiment and induction, which allows disparate points of view to coexist; which has a concern for indeterminate essences rather than contoured, ordered ones; for dynamic or emergent properties rather than fixed ones; and for allowing intuition and uncertainty, multiplicity and complexity rather than systematic certainties.

Deleuze (Deleuze and Foucault, 1977) argues for practical-theoretical relays which can transform the world using both theory and practice together. Theory does not cause praxis, nor praxis theory: 'both are heterogeneous components constitutive of revolutionary strategy' (Nail, 2012: 7). There should be no universal scientific models dogmatically applied. Planning academics and practitioners need to develop new concepts that help them to articulate and understand the force relations of situations, not merely to describe them or to assume they can be 'solved'. As such, the work of Deleuze and Guattari

[9]   I use the term 'investigation' in the transactional sense that regards knowledge as vicarious experience created in interaction among 'investigators'.

may offer a point of mobilisation for rethinking planning theory and practice and the relays between them.

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GA: The question I would like us to explore concerns the way we might make Deleuze useful to planning, and how viable this project is. Over the last few years there has been a growing interest in Deleuze's philosophy. Some of Deleuze's core concepts have been used to set out new ways of working in the spatial and social disciplines (Bonta and Protevi, 2006; Coleman and Ringrose, 2013.) Yet, many of these studies use Deleuze as an analytical or/and critical framework: concepts that help them understand the way the world around us comes into being and changes over time. But there are far fewer examples of studies aimed at using Deleuze as a framework for engagement: for setting-up new forms of practice, particularly in spatial planning.

Why do you think this is? Is it because Deleuze's philosophy is more suited to analysis than engagement, after all most of Deleuze's work could be seen as analytically focused (schizoanalysis, rhizoanalysis etc)? Or is it because most spatial disciplines like planning have been reluctant, or unable, to make this move from analysis to engagement?

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JH: I think that Deleuze and Guattari's work is of potential importance in helping planning researchers and practitioners to understand our worlds and environments. Moving from understanding (which is, of course, a form of engagement) to practical action is inevitably challenging, whether or not one is engaging a Deleuzean frame.

We know that both Deleuze and Guattari were on the barricades in Paris in 1968 and that Guattari, in particular, practised at La Borde clinic and was engaged in political and environmental activism. But, as Smith (2012: 124) points out, one rarely finds 'positions' in Deleuze's work: 'rather to read or write on Deleuze is to trace trajectories whose directions are not given in advance of one's reading or writing'. Reading or writing Deleuze is, therefore, itself a becoming, a production of the new.

There is quite a lot of debate about whether Deleuze and Guattari's work is normative. I think that their genealogical method of understanding (tracing) could be regarded as normative in that it suggests a useful approach to evaluate processes and events with regard to future-thinking.

Todd May (1991, 2005) argues that Deleuze and Guattari have normative views in that they suggest that we experiment with possibilities. Others reply that, yes, Deleuze told us to 'experiment, never interpret' (Deleuze and Parnet, 2002: 48), but he did not tell us how. I think that this lack of direction offers us the flexibility to

work through for ourselves how we might experiment in different circumstances, rather than slavishly following some tick-box model or check-list, which is often what happens with 'best practice' – and ideas such as Alexander's (1977) *Pattern Language* – which tend to become off-the-peg templates despite never having been intended that way.

Deleuze and Guattari offer us a series of questions that we might ask (see Patton, 2007: 5), which I have tried to translate into planning terms in a methodology of strategic navigation (Hillier, 2011b). Questions like 'what patterns of change can we identify?' 'Are force relations changing between actors?' 'How and why are these patterns changing?' 'What connections and disjunctions are occurring?' 'What control or influence can planners exercise over these issues and their relationships?' and so on.

There are now quite a few examples of people engaging Deleuze and Guattari in art and architecture practice. Peter Eisenman's *Field of Stelae*, for example. The Memorial to the Murdered Jews of Europe in Berlin is a wonderful instance of the play of vertical and horizontal and of introducing fluidity to a grid. It is also really interesting to see how visitors engage with the installation: some wandering in quiet contemplation, children playing hide and seek, families sitting picnicking and couples disappearing into the shaded central area. People experiment with the space, public becomes private and vice versa, opening up subjectivities.

The military are increasingly using Deleuze and Guattari to inform practices of 'asymmetric warfare' (see Weizman, 2007) and dealing with counterinsurgency (Naím, 2013). Naím's book, in particular, demonstrates how centralised strategy-making is eroding, not only in the military, but in corporate management and other spheres as well. Hyper-connectivity and instant global communication through mobile phones and the web have enabled the rise of effective 'micropowers'. Naím shows how 'the new breed of micropowers is opportunistically exploiting the weakness of entrenched but declining incumbents in disparate arenas. Insurgents, fringe political parties, innovative startups, hackers, loosely organised activists, upstart citizen media, leaderless young people in city squares' and others are 'shaking up the old order' (cited in Goldstein, 2013: 38). Very Deleuzean!

In education, researchers and practitioners are applying Deleuze and Guattari's concepts in the classroom, such as practices of co-learning, co-creativity in group work(see, for example, Evans et al, 2008), while Liane Mozère, who worked at La Borde with Guattari, has applied ideas of collective experimentation in early childhood education (Mozère, 2007). Noel Gough seeks out multiple, hybrid connections between texts of science education, science media reports, social studies and sci-fi novels in a rhizomic manner, enabling students to better engage with texts

and to understand their relation to the 'real world' (Gough, 2007, 2008, 2010). Many others have employed the Deleuzoguattarian concept of affect to engage students.

I have begun to explore the potential of affect in cultural heritage planning to attempt to make visitors think beyond the built form, to appreciate different stories and to challenge those who encounter the 'heritage object' to question their values, attitudes and actions. I have worked on this with regard to the incorporation of 'heritage' elements of the former saleyards and abattoirs at Newmarket, Melbourne, into new residential estates, to encourage people to look beyond their meat, to the wider food production chain of animals, farming and slaughter. Similarly, I am looking at the role of the former Women's Venereal Disease Clinic in central Melbourne in the early 20th Century nexus between medicine/health, eugenics/morality and development of planning regulations. The story also lends itself to problematisation of the subjectivation of women and prostitution as responsible for the spread of contagious disease.

I mentioned in the Chapter that Mark Purcell takes his reading, mainly of *Anti-Œdipus,* as a call for a stand against State-led planning. As I attempted to explain, Deleuze and Guattari regard the 'state' as a particular form of institutional regime, derived from sets of social relations and which constructs certain coded representations and fixities. The state, then, is a process of institutional codifying, territorialising, representing and fixing, rather than a 'thing' in itself. These processes can be challenged and destabilised as the examples in the Chapter illustrate.

Deleuze does not advocate revolution in the traditional sense of overthrow of the ruling regime or 'redemptive violence' (Tampio, 2009). Tampio (2009: 390) understands 'becoming-revolutionary' as entailing 'surveying the political landscape, attaining a certain degree of political power, inside or outside of the state, testing out new laws, policies and rhetorics, and preserving the admirable elements of the society in which one lives'.

There is, and can be, no one model of engagement. Strategic navigation, for instance, is a methodological tool-kit, a series of suggestions for practitioners to consider; to stimulate them to think about force relations rather than entities.

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