

DELEUZE CONNECTIONS

**Deleuze** and  
**the City**

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## Chapter 4

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# The Impredicative City, or What Can a Boston Square Do?

*Marc Boumeester and Andrej Radman*

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[I]t is necessary first to see the machine at work before attempting to deduce the function from the structure.

Canguilhem (1992: 56)

The [. . .] City is sociology, happening.

Koolhaas (1995: 1255)

A system is simple if all its models are simulable. A system that is not simple, and that accordingly must have a nonsimulable model, is complex.

Rosen (2000: 292)

In his photographic series ‘Selected People’, the American photographer Pelle Cass displays a remarkable space-time axis reversal, the striking simplicity of which exemplifies the schizoanalysis of the city (Guattari 2013). The prefix ‘schizo’ is used to designate resistance to the paranoid fixation on a *single* (and supreme) source of all signification (Deleuze and Guattari 2003: 194). The subject-matter of his experiments takes us to a square in Boston, USA. Yet, in terms of our investigation, the choice is purely contingent. Our ambition is to map the becoming of a specific place by way of non-correlationist hetero-poietic mattering, irremovable impredicative (auto-catalytic) looping and non-local causing (Turvey 2004: 57–70). In simple terms, it is the movement that determines the space, not the other way around. As Deleuze put it in his theses on movement, ‘[the] production of singularities (the qualitative leap) is achieved by the accumulation of banalities (quantitative process), so that the singular is taken from the any-whatever, and is itself an any-whatever which is simply non-ordinary and non-regular’ (Deleuze 1986: 6). We will follow his call to renounce any order of preference, any teleology.

Our chapter will draw upon schizoanalytic cartography to concentrate on perception which occurs not on the level at which actions are decided but on the level at which the very capacity for action forms. If

representation is a means to an end (tracing), cartography is a means to a means (intervention). The goal-oriented human action cannot be used as *the* design criterion because the freedom of action is never a de facto established condition, it is always a virtuality (Evans 2003: 16–17). This antecedent level of potentialisation is proto-epistemological and already ontological. It concerns change in the degree to which a life-form is enabled vis-à-vis its (built) environment (Massumi 2011). It is precisely the reciprocal determination of the life-form and its environment (mode of existence) that makes perception a pertinent area of study. After all, *living* has interests that do not (always) coincide with those of *thinking* and it is for this reason that one perceives invariants, not forms (Gibson 1986). To depict, one has to learn to perceive form. *To design* (built environment), *one has to unlearn to perceive form*, as we will attempt to demonstrate with the help of Cass.

The *life-form* never pre-exists an event, hence the prefix ‘life’ or, more to the point, the *city-life-form*. Simpler still, action, perception and environment are located on a continuum. Only recently have biologists conceded the effect that ‘niche construction’ has on the inheritance system, whereby a life-form does not *passively* submit to the pressures of a pre-existing environment, but *actively* constructs its existential niche – the city as a case in point (Odling-Smee 2007: 276–89). Baldwinian Evolution, or evolution by epigenetic means, is achieved through accumulation and improvement of cultural artefacts and practices. The quote ‘we shape our cities; thereafter they shape us’ is to be taken literally (Wexler 2013: 185–218). This is to say that, under the onto-topological commitment, experience is not an event ‘in’ the mind. Rather, the mind emerges from an interaction with the environment. The implications for the discipline of architecture and urbanism, considering its role in the ‘evolution by other means’, remain significant and binding. It is from this perspective that we will challenge the predominant homeostatic fixation on structure in architectural thinking in favour of the event-centred ontology of relations (Bains 2006). Moreover, we will insist that relations are irreducible to their terms (Deleuze and Parnet 1987: 55). The process – counterposed to the metaphysics of substance – seeks to grasp existence in the very act of its becoming (Guattari 2008: 19–45). Architects cannot take geometric ideologies as their starting point. Instead, as Guattari would have it, they need to think in terms of ecologies, that is ‘transversally’ cutting across the scales of the socius, the psyche and the environment.

## Urban Schizoanalyses

The City as the ‘noumenon closest to the phenomenon’ has to be theorised by keeping both mechanistic reductionism and vitalist essentialism at bay (Deleuze 1994: 222). This is the lesson of Deleuzian ‘machinism’ which maintains a strict distinction between virtual singularities as irreducible emergent properties of systems (the problem) and the actual system itself (the solution). To put it bluntly, let scientists and engineers focus on problem-solving. No one does it better. However, a problem always gets the solution it deserves. What we want to claim for art and architecture is the domain of problem-making (counter-effectuation). Human beings might be excellent at passive *adaptation*, but in the Anthropocene they must become better at active existential *niche-construction*. Instead of changing habitats as migrants do, they are forced to change habits as nomads do (Braidotti 2010: 215). Paradoxically, nomads stay put. They take intensive travels, rather than extensive. In the first part of the chapter we will embark on one such intensive journey at the end of which four lessons will be drawn. In the second part we will change the speed of delivery and style of argumentation in order to speculate on a new image of thought. This image of thought reconstrued as ‘thought without an image’ is not restricted to the representation, correspondence or adequation of a self-identical object to a self-identical subject, but foregrounds the reciprocal determination of the knower and the known. As the feminist philosopher Claire Colebrook recently put it:

Not only could there not be a subject as some fully self-present substance that subsisted and persisted before and beyond all relation, for the very self as identity must refer back to (and therefore be different from itself); but also, any supposed ground from which relations would unfold must itself be effected from relations. [...] the actualized world of constituted terms does not exhaust what can be said to be: actuality emerges from virtual tendencies, and those tendencies could always create new systems and new terms. (Colebrook 2014: 63)

First, a few caveats and one concrete example are in order. Architects are proverbially good at primary or predicative properties such as lengths, heights and depths. Take a ruler, take an object and juxtapose them. What the discipline needs to unlock are relational properties. An example of such an impredicative property is a walk-on-able surface where the conditions and the conditioned are determined at one and the same time. *Affordance* is expressed by one’s relation with another object (like a primary property) and actualised in one’s relation with another

object (unlike a primary property). This neologism was coined by the founder of the ecological approach to perception, James Jerome Gibson:

[A]n affordance is neither an objective nor a subjective property; or it is both if you like. An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer. (Gibson 1986: 129)

This puzzle has eluded us across three centuries. Primary and relational properties are two different yet complementary concepts sustaining two different yet complementary causalities, related to the dynamic and static geneses respectively (Deleuze 1994: 89, 183). The impredicative loop is built by interacting (actual) parts that cause an incorporeal (virtual) effect, which in turn becomes a (non-dynamic) quasi-cause by determining the degrees of freedom for the very interacting parts.<sup>1</sup> Proscription: the a priori. Prescription: cartography.

### Any Square Whatever

In this part we will address the issue of how the urban milieu defies analysis based on primary properties, description and intentionality or phenomenological surveillance. We propose to regard the municipal or metropolitan fabric solely as a conjunction of flow, as an actual, physical and virtual aggregate which stretches along several temporal and spatial axes. We will map this relational space by examining a single image by Pelle Cass. To that end, it will be imperative to switch recursively from the mode of analysis, to the analysis of image, to the image itself and back again. With the mode of analysis we indicate a static type of visual examination of a digital reproduction of the digital file, now located in the printed environment of a book, or even as an electronic book. The analysis of the image itself provides more difficulty, because we cannot speak of *the* image. It is not only the continuous change of milieu (field or plane) which modulates the experience of the image, but also the continuous change of the beholder which changes the image. The temporal consequences of recognition in re-seeing cause the image to become its own context. After all, the image can never be unseen. Even the very anticipation of the image creates a pretext for seeing the image for the first time – not to mention the cultural, gender, age and other backgrounds which have already charged each viewer with a completely different set of perceptual sensitivities. Then there is the image itself, which can never be understood as anything other than *what it*

*does* with the viewer at the specific moment that it is viewed. An image is immanent, it is not a representation of something else, just as every depiction is already a selection of all there is to a certain situation.

In his photo series 'Selected People', Cass exemplifies a 'fitness landscape' which itself resists reification. In the image called 'Shoppers 2, Quincy Market, Boston' (see Fig. 4.1) we can see a pedestrian surface which appears to be a square filled with a blend of North American people walking in a multitude of directions. Although the image reveals no information about the connecting streets or places, all present on the image seem to have a vague sense of bearing and seem to strive to stay on a specific track, albeit in a very casual way. There seems to be a balanced selection of persons in terms of gender, race and age, and there is no hint of violence, threat or misbehaviour. The picture was taken on a warm day, most of the 'inhabitants' of the image wear summery outfits, yet there are no distinct shadows, suggesting that the square was overcast during the time the photograph was taken. At first glance the image appears to be a 'natural' depiction of a mild afternoon in a leisurely environment – presumably an area near the Quincy Market in Boston, as the title suggests. The photo was not taken from an exceptional angle, but perhaps out of the window of an adjacent building. The artistic style does not seem to have an urge to draw much attention to itself, nor is there any trace of complicated procedure in terms of production or any specific technical requirements in order to make this image. The only anomaly that is at first detected is a seemingly predominant penchant for orangey-yellow colours in this city. Then there is the crowdedness of the place, which does not seem to bother any of the actors in the frame. Yet this first impression is deceptive.

On second inspection, the number of 'inhabitants' of the image is much smaller than at first appears to be the case. We observe that most of them are duplicated, triplicated or multiplied many times over. This immediately explains the previously detected anomalies. The colour dominance is caused by the multiplication of a handful of people wearing outfits in the same hue. Secondly, it is clear that the deceptive mutual unawareness is caused by the fact that they were never in a crowd to begin with. They simply could not see each other at the *moment* they were there. Note that for many it is possible to see the other(s) from their position, but not at that particular moment, procuring a first step in what we have called space-time axis conversion. The method used here must consist of layering several images taken from the exact same angle and position, in which only a few of all the possible postures are actually used in the final product. This tells us that what we see is already a



Fig. 4.1 'Shoppers 2, Quincy Market, Boston' by Pelle Cass (2013)

selection of possibilities and cannot be mistaken for a non-constructed depiction. Even the colour scheme comes into question again. It could well be that the author of the post-production of the photograph only chose those with a certain tint of yellow for the image.

The author must also have made a second choice, to do with the 'credibility' of the image. If any of the people were superimposed, creating multiplications of themselves, or blending with others, that would immediately alarm us. Despite the fact that the image is already highly manipulated and heavily hyperrealistic, having people blend into each other would make it worse, which is a nice indication of the elasticity of our imagination. The author must have invested much care in 'giving everyone their own niche', and thus limiting all potential options dramatically. Once the woman with the trolley was featured more or less in the middle of the image, most subsequent options were already rendered impossible. As soon as all the photographer's 'free gifts' were placed (such as the girl with the ponytail facing herself or the woman with the sarong), the rest had to follow automatically. Note that we have not even begun to address the 'content' of the image itself, or its 'meaning' and connotations, and we will not do this either, as it is completely gratuitous. It does not matter if it was winter, or if the people were Polish, or if the woman with the trolley was placed first in the image. The image

is 'industrially' produced, only following the drift of its inhabitants based on very pragmatic rules and principles. The image is not an image about subjects. Rather, it goes straight to the heart of the matter: the urban flow. And this is what makes this image so strong.

The (photo-)camera has often been seen as an extension of the eye, an artificial medium in the way McLuhan would describe an 'extension of man' (McLuhan 1964). The tool is used as a hylomorphic instrument to carve a soul out of the optical sensation. It enables us to witness the *vivre* and style of the artist in charge of the production. Cass, however, uses the instrument in a different and, we would claim, 'constructionist' way. The obvious quality of photography is to instantly freeze time and the quality of cinema is to bring us the movement image. Bodies are not described in movement, but instead the continuity of movement describes the object. In fact we could not even describe Cass as a photographer, not only because he manipulates his products in the way an editor of a film would do, but because he photographs literally everything. Yet it is the *selection* he makes and the intervals he chooses to put in between each section that defines what he does. We could call him the *intervalist*. The strength of this mix lies in the fact that Cass specifically uses some weaknesses of both photography and film. Photography does not excel in sequencing (at least not in one picture) and film does not shine in arresting time or in creating time out of space (but it does excel in the creation of space out of time). Thus Cass draws upon the weakest points of both these media to create this new world, the existing-yet-never-directly-visible momentum 'no longer recomposed from formal transcendental elements (poses), but from immanent material elements (sections)' (Deleuze 1986: 4).

### **Lesson One: Haptic Space**

There are four good reasons for this lengthy exposure of the image. Firstly, the image shows us all the basic principles that drive and create the city in all its appearances. And the abstraction imposed upon it helps us to see different patterns and grids, attractors and repellers, drives and affects. We see the futurity, which holds the potential of multiple actualisations. Of all the physical, mental, economic, affective and physiologic flows, we see only a few highlighted. The selection is already made, that is why we are in no need of a narrative, for it does not matter why someone is moving from this spot to the next, or why some paths are more often chosen than others. What matters is the mere fact that it occurs and that we can witness it, following a single basic

rule: no person can create the same space at the same time as someone else. Paths can be slightly diverted or temporally disrupted, affective encounters may cause slowing-downs or speeding-ups or path changes, but on a *metamodelling* level all will remain the same (Watson 2009).<sup>2</sup> We are witnessing a meta-stable system in progress, spatially compressed to enable temporal expansion. It is the description of space being produced by time. Time is the third dimension, not the fourth. Any shape of *chronos* stands to *kairos* as a Euclidean *optical* space stands to a *haptic* topological space. This means that the first movement creates a space that is forever occupied. This first space will set the agenda for the emergence of the next and so on. And even long after the first space has been vacated it will never be non-space again, it will always be charged by its own quasi-causality. It has dictated the next step and the next. *The square has never been empty*. And that shows itself most clearly in the editing of Pelle's image; once the first person is placed the whole grid snaps into place, a mild grid, but a grid nevertheless. The established relations are only ever *contingently obligatory*. Unlike those that are *logically necessary*, these relations are not conceptual but immanently causal (DeLanda 2006: 31).

## Lesson Two: Absolute Survey

Secondly, there is the most pragmatic level. It is about the place itself: the square, which allows for a multitude of engagements. In our case this place is used primarily for transit, and a variety of destinations of the inhabitants of the image suggest that there are several options to connect different points. We can also see that there is a tendency towards the vertical crossing of the square but because of heavy manipulation we cannot be sure of that. Or can we? The applied abstraction serves as a filter, a stroboscopic filter. It only illuminates the situation with a certain interval, rendering deeper layers and patterns of flow visible by way of 'absolute survey' or the capacity to surpass the given (Massumi 2014: 36, 77). This Spinozian 'third kind of knowledge' precedes the emergence of the phenomenological 'aboutness' and its finite movement from one discrete part to another. The survey is absolute by virtue of its 'infinite speed' that reveals a consistency of the heterogeneous whole without reducing it to the parts (Deleuze 1984: 148). It shows the chatoyancy of the city.<sup>3</sup> In the image we can see two market stalls at the edge of the compass card. They were probably not allowed to be located in the middle of the place, as that would excessively disrupt flows. This type of intervention by municipal regulations is often mistakenly thought to be contributing

to city making, while we all know that laws are always constructed *ex post facto*. A beautiful example of (a comment on) phallic thinking is the short film by John Smith *The Girl Chewing Gum* from 1976. As with our Boston image, it takes a while to realise that the ‘instructions’ given in the film are in fact descriptions of the scene that immediately follows. The film is edited in such a way that the sound precedes the image and the tone of the voice is set in an instructive mode, rather than a descriptive one.

### Lesson Three: Energetics

Thirdly, the image addresses flows as a two-step sling. Let us assume for a moment that life-forms are driven by two forces and not dispute or discuss the nature or origin of these forces. The first layer could be called desire (aka aspiration, aka agency) and the second one affect. To be clear, this is not an attempt to classify affect as a secondary force, or to mimic Sylvan Tomkins’ classification of putting affect into nine categories (Tomkins 1995). But could we regard ‘autonomous’ drives (as the need for food, sex, shelter, warmth, etc.) as being the deep attractors in Waddington’s epigenetic landscape (Chreod) and name them *desires*, and could we take ‘connected’ drives (as interactions, stimuli, preferences) as specified forms of drives and call them *affects*?<sup>4</sup> In that case – in relation to Waddington – affects can be seen as accelerators, the differences that make a difference, and the desires can be seen as the strength of the attractions (Kwinter 2008: 40–5). The depth of attractor is desire, the angle of elevation or decline is affect. In this image we can see that some inhabitants have clear goals, they walk with a pragmatic purpose, coming from one place to go to another. Yet the exact path is never completely predictable; along the way there can be diversions, obstacles, interactions (positive or negative), attractions, collisions (or the avoidance thereof) and so forth. In other cases we can see people being driven by the need for interaction; they meander around the place in search for interaction (shopping, inspiration, ‘das mittendrin sein’, flirtation, perversion and so on). The need for interaction can be seen as a meta-drive as it provides us with the potential to resolve the myriad of specific drives (molecular perspectivism of drives, not of molar egos). Perhaps it is more precise to refer to it as an intra-action. In contrast to inter-action which presupposes molar individuals that *precede* their interaction, Karen Barad’s neologism signifies the mutual constitution of ‘entangled agencies’ that remain *antecedent* and exterior to the *relata* (Barad 2007: 33).

## Lesson Four: Posthumanism

We come to the fourth and final lesson that we can learn from the image: debunking a system of vanity and the megalomania of correlationism, or how to break through the anthropocentric frame of reference. The market had been there before the marketplace as such existed. This square is just an expression of the infra-action which resonates transindividually (Massumi 2015: 14). The wound was always here, we just lived to embody it (Deleuze 1990: 148).<sup>5</sup> The flow dictates its causes; roadside-restaurant as the ultimate new city, completely attuned to modern flows, converters, hubs, the parking lot. Post-surveillance, auto-surveillance, engendering, emplacement. Meta-narrative, sub-narrative. Religiosity, despairing, clairvoyance, abiogenesis. The voyeur, the *flâneur*. They all belong to *this* world. In his *Difference and Repetition* Deleuze gives due credit to his nemesis' achievement: 'Kant is the one who discovers the prodigious domain of the transcendental. He is the analogue of a great explorer – not of another world, but of the upper or lower reaches of this one' (Deleuze 1994: 135).<sup>6</sup> The transcendental, it must be underscored, is not transcendent but always a product of immanence or 'thisworldlyness' (Deleuze 2001: 25–33). For our purposes, it is worth remembering that Deleuze and Guattari tether transcendence to the State while making a strong connection between immanence and the City: '[Cities] develop a particular mode of deterritorialization that proceeds by immanence; they form a *milieu of immanence*' (Deleuze and Guattari 1994: 87). The irony of Pelle's image about flows is that it shows so clearly that the days of pilgrimage are over. The image comes to you, you don't need to go to the image.

## Grades of Sense

There is arguably no greater influence upon architectural thinking than René Descartes and his metaphor of the ghost in the machine. The ecological psychologist Michael Turvey provides an updated version of this metaphor (Turvey 2004: 57). Nowadays, to establish a link to the outside world, the ghost has all the digital media at his disposal. Let us briefly revisit the three Cartesian 'grades of sense' as spelled out by Turvey. The first one is strictly physical and accessible through science in general and mechanics in particular. The second grade of sense is more challenging as it concerns *qualia*, or secondary qualities. It is hybrid, physical *and* mental. How do agitated molecules of carbon and oxygen become the experience of redness and warmth of colour? The answer to

this (hard) question lies in probably the most influential scientific metaphor of all times, namely that the relationships between the two grades follow from the mere arrangement of the machine's organs every bit as naturally as the movements of a *clock* follow from the arrangements of its counterweights and wheels (Whitehead 1957: 32; Descartes 1985: 99–108). The third, mental grade of sense concerns the notions of formal systems and goes beyond the mechanistic conception just described. It took a few centuries for this quasi-rational symbol-manipulating process to catch on.

Before listing the influential assumptions originating in the seventeenth century, let us note that the current discourse around Speculative Realism is divided on the very issue of primacy of the first two grades of sense, derivative of the 'bifurcation of nature' that Alfred North Whitehead denounced as the most serious error of modern western thought (Whitehead 1957: 26–48). The editors of the recent *Speculations* issue on twenty-first-century aesthetics offer a helpful broad-brush picture of a new struggle between rationalism and empiricism within contemporary speculative philosophy in general and its take on aesthetics in particular:

[F]or the contemporary rationalists, mathematics (Meillassoux) and science (Brassier) dictate the discourse on and the place of aesthetics within the larger framework of epistemology with the concomitant intent to hunt down any manifestation of the, in their view, illusory 'immediacy thesis'. The empiricists (Harman and Grant, but also Shaviro and Morton) in turn insist upon 'immediacy' and a theory of taste in disguise holding that we immediately taste something before we conceptually know it. (Askin et al. 2014: 29–30)

The authors concede that the dichotomy is too neat. Yet, it is symptomatic enough of the contrast between, on the one hand, the resilient seventeenth-century assumptions of inertness, context-independent parts and local (contiguous) cause and, on the other, the twenty-first-century hypotheses of self-organising matter, systems with irremovable impredicative loops and non-locality. Drawing upon Turvey, we will demonstrate that it is high time we dismantled the ghost-in-the-machine model so that neither the ghost nor the machine survives (Turvey 2004). For this we need to update our inadequate all-too-representational toolbox. There is no better testing (groundless) ground for the task than the City. As Guattari put it, 'the aesthetic rupture of discursivity is never passively experienced. It leads to heterogeneous levels which must be related to a heterogenesis' (Guattari 1987: 82–5).<sup>7</sup>

## The Clock as the Image of Thought

Let us list the essential seventeenth-century mechanistic assumptions. First, *locality* dictates that all causes are local by contact. From the angle of aesthetics, the question is: what might be taken as the proximal, contiguous cause of some particular experience? Aesthetics is defined here in the most general sense of sensory or, *per negativum*, the opposite of anaesthetic.

Second, *matter* is passive and inert, lacking any morphogenetic capacity. If a thing itself moves, then one part of it must be the mover and another part that which is moved. It is in this way that the absence of self-cause or self-motion gets resolved. Here the ghost-in-the-machine becomes the unmoved mover.

Third is the *entailment* assumption, the legacy of Newton, who proposed the *single* entailment mode whereby the present entails the immediate future. In contrast to Aristotelian categories of causation, Newton holds that only an efficient cause is properly causal. Causal chains flow from parts to whole and never the other way around. This is the *predicative* direction, the way one writes computer programs. The lack of reflexivity effectively eliminates the possibility of *auto-catalysis* with interdependent parts. It eliminates a quasi-formal cause related to Deleuze and Guattari's 'exteriority of relations', or the relation that is exterior to its terms and as such presents 'a vital protest against principles' (Deleuze and Parnet 1987: 55).<sup>8</sup> There are two more (reductionist) assumptions that follow from the entailment assumption: the *component* and *superposition* assumptions. The former posits that parts are context-independent while the latter states that the whole is the sum of its parts. In spite of the inadequacy that the 'interiority of relations' suffers in the realm of biology and psychology, had it not been for these mechanistic hypotheses the whole enterprise of modern science would have been unimaginable. In the Deleuzian parlance the 'image of thought' expressive of this paradigm is the *clock*. In the context of this chapter, we would have to imagine the City as the Clock. If we take the clockwork city and break it into its constitutive parts, they retain their particular functions. In other words, synthesis becomes analysis in reverse. According to Turvey, the pure reversibility of putting together and taking apart prescribes both the ghost and the machine:

The two assumptions of local contiguous cause and inert matter give us a prescribed ghost. Entailment is recursion in which the present, and only present, entails the immediate future. And, with context-independent components, analysis and synthesis are reciprocal and components entail

function. These give us the machine, they prescribe the machine [...] (Turvey 2004: 59)

What would be the ‘thought without image’ which rejects identity as the governing principle and instead embraces multiplicity, singularity and pure (non-dialectical) difference (Deleuze 1994: 132, 147)? Perhaps the hypotheses of *non*-locality and *active* matter taken together will suffice to proscribe the ghost, while *multiple* entailment modes and reflexivity with context-dependency will proscribe the machine (Turvey 2004). Of the two, the machine might turn out to be the tougher nut to crack. In the case of the city, the material, formal, efficient and final causes are not only indiscernible but also constantly mutating. The interacting parts produce the emergent distributed whole, which in turn constrains the parts. ‘The parts compose the whole, which comprises the parts. The definition of what the parts are is dictated by the emergent distributed whole’ (Turvey 2004: 64). Following the distinction which Deleuze appropriates from Henri Bergson, one ought to distinguish between the *actual* traits of a physical system and the *virtual* – real but abstract – thresholds at which it either adopts or changes those traits.

### Cracks in the Street

It should be obvious by now that not all causes are by contact. Already in the mid-1950s Gibson challenged psychological orthodoxies by claiming that perception did not require a simultaneous composite in the brain, a representation (Gibson 1986). Moreover, amodal and ambulant perception (of the indiscernible) is not an exception but the ‘rule’.<sup>9</sup> In other words, we do perceive the imperceptible (prehension). Life-forms perceive potentials (for action) directly and never re-emerge as self-identical in becoming. They respond to perceptual *signs*, not to causal impulses (Bains 2006: 63). As far as Gibson is concerned, the real problem is not the presupposed poverty of stimulation but the poverty of entailment, given that *not* all potentiality is (already) an accrued value. Georges Canguilhem cautions against facile analogies:

Clearly, an organism has a greater range of activity than a machine. It is less bound by purposiveness and more open to potentialities. Every aspect and every movement of the machine is calculated; and the working of the machine confirms how each calculation holds up to certain norms, measures or estimates; whereas the living body functions according to experience. Life is experience, meaning improvisation, acting as circumstances permit; life is tentative in every respect. (Canguilhem 1992: 58)

It is worth pointing out that non-local causation extends beyond the psychological register or existential grasp. It is coextensive with the lived experience but not reducible to it. It is a feature of all *open* heteropoietic matter/energy systems as opposed to closed deterministic ones which exist only under laboratory conditions and in digital simulations. It is the feature of the impersonal non-organic life.

*Vibrant* matter as the second ‘ghostbuster’ is equally pertinent for its ability to wake architects from their correlationist slumber (Bennett 2010). By endowing matter with agency of its own, the unbearable narcissism of the anthropos and the bad habit of hylomorphism start to evaporate. Self-organising matter does not need the imposition of a transcendent form to organise its putative chaos. The way Rem Koolhaas contrasted two paradigmatic cities is telling in this respect:

Paris can only become more Parisian – it is already on its way to becoming hyper-Paris, a polished caricature. There are exceptions: London – its only identity a lack of clear identity – is perpetually becoming even less London, more open, less static. (Koolhaas 1995: 1248)

Finally we turn to the *machinism* of impredicativities, which is not to be confused with either organicism or mechanism, agency or structure. We ought not to separate the doer from the deed, as the Nietzschean maxim goes. Complex systems, such as cities, contain impredicativities that cannot be removed. The term was introduced by the founder of non-linear dynamics, Henri Poincaré. Put simply, you cannot offer an understanding of actual parts in the absence of a virtual whole. Simpler still, *what is defined participates in its own definition* (Wolfendale 2014: 246). Yet the abduction problem seems to have gone unnoticed in Parametricist quarters, judging by their synoptic ambition to be achieved through simulation. In the words of the architect Ingebor Røcker, ‘[t]he formal exuberance characteristic of parametricism’s architecture and urban planning scenarios pretends to cope with societies’ and life’s complexities, while in fact they are at best expressions thereof, empty gestures of a form-obsessed and strangely under-complex approach to architecture and urbanity’ (Røcker 2011: 97). Newtonian syntactic formalism is simply not abstract enough when it comes to complex systems. As we have argued, simple systems can be captured predicatively, complex systems cannot.<sup>10</sup> The most important logician of our times, Kurt Gödel, proved conclusively that one can never convert impredicative into predicative. It is not the result of the alleged limit of our minds, Turvey cautions. It is the limit of predicative perspectives on entailment: ‘Predication without impredication is not powerful enough;

syntax without semantics is too feeble for understanding explanation and entailment' (Turvey 2004: 61). To put it laconically, the digital can be generalised (logically formalised) while the analogue is always singular, i.e. eco-logical. In the words of the semiologist Paul Bains:

[U]nivocal, semiotic reality – the reality of experience – is not reducible to the mind's own workings (e.g., as in the Kantian synthesis) nor is it to that of a prejaacent external physical world in which the mind has no part. It is a limitless interface where the line between what is and what is not, independent of interpretative activity, is a constantly shifting [asignifying] semiotic process. (Bains 2006: 68)

No wonder Deleuze insisted that the smallest unit of reality is the assemblage, *agencement* (Deleuze and Parnet 1987: 51). 'Thinking with AND [. . .] instead of thinking for IS: empiricism has never had another secret' (Deleuze and Parnet 1987: 57). The assemblage preserves certain symmetries and breaks others. Meta-stability rests on both difference *and* repetition in the relation of mutual determination. This is not an epistemological principle, but an ontological one. If the seventeenth-century concepts have given us remarkable discoveries, the next revolution based upon impredicativity will be nothing like what we have seen before (Rosen 2000). It is key to most phenomena of the universe, not the few we have tackled thus far. The extension and comprehension of a concept are inversely proportional. The more specified the concept, the fewer the objects subsumed by it. By contrast to the vertical (transcendentally organised) State, we will never know conclusively what the horizontal city can do (Deleuze and Guattari 1994: 89). It is not about bringing all sorts of things under a single concept of the city, but about relating each city to the variables that determine its mutation, its becoming (Deleuze 1995: 31). After the proscription of the a priori, the prescription of cartography becomes unavoidable. The non-mimetic mapping of affective capacities and virtual tendencies renders visible a condition 'that is no wider than what it conditions, that changes itself with the conditioned and determines itself in each case along with what it determines' (Deleuze 2006: 50). Deleuze has never had another formula except for the  $N - 1$ . It is an ecological formula that spells out 'subtract the meta-signifier'. Bring into existence. Do not judge (Deleuze 1997: 135). That is *the* injunction of immanence.

## Notes

1. A dynamic genesis moves from an encounter with intensity in sensation to the thinking of virtual Ideas, while a static genesis moves from the virtual Idea through an intensive individuation process to an actual entity.
2. By contrast to a scientific paradigm, Guattari characterised his metamodelling activity as an 'ethico-aesthetic paradigm'.
3. Cat's eye effect.
4. This neologism of Conrad Waddington's denotes the necessary path of any becoming. It is a 'figure of time'. As Sanford Kwinter explains, a Chreod refers to an invisible but not imaginary feature in an invisible but not imaginary landscape on which a developing form gathers the information and influence necessary for it to make itself what it is.
5. Deleuze's reference to Bousquet's poem whereby the wound becomes not an effect but precisely a quasi-cause.
6. Deleuze referred to his book on Kant as 'a book on an enemy'.
7. On the issue of asignifying rupture, see Hauptmann and Radman (2014).
8. Autocatalytic process produces more of what is there. Autocatalysis drives pattern formation by making components interdependent. It is thus causal in the formal, not efficient, sense.
9. Amodal perception is a term which describes the full perception of a physical structure when it is only partially perceived; for example, a table will be perceived as a complete volumetric structure even if only part of it is visible. See Noë (2002).
10. In abductive reasoning, unlike in deductive reasoning, the premises do not guarantee the conclusion.

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