

Chapter 1.12

The Agency of Mapping: Speculation, Critique and Invention

James Corner

Editors' overview

Corner's writing evokes the emancipatory potential of mapping, at a time when it was much more usual to demonise it as a form of elite discourse, facilitating governance by the powerful. Corner draws instead on the creative potential of the medium, deploying the figures of Gilles Deleuze and Félix Guattari to demonstrate the constructive agency that can be enacted through cartographic practice in the fields of architecture, landscape and urban planning. He explores four ways in which new practices of mapping are emerging in contemporary design and planning, which he terms as: 'drift', 'layering', 'game-board' and 'rhizome'. Corner concludes that mapping is not endless data accumulation but is rather better seen as a practice of relational reasoning that intelligently unfolds new realities out of existing constraints.

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Introduction

Mapping is a fantastic cultural project, creating and building the world as much as measuring and describing it. Long affiliated with the planning and design of cities, landscapes and buildings, mapping is particularly instrumental in the construing and constructing of lived space. In this active sense, the function of mapping is less to mirror reality than to engender the re-shaping of the worlds in which people live. While there are countless examples of authoritarian, simplistic, erroneous and coercive acts of mapping, with reductive effects upon both individuals and environments, I focus in this essay upon more optimistic revisions of

mapping practices (Wood 1992; Monmonier 1991; Pickles 1992; Scott 1998; Hall 1992). These revisions situate mapping as a collective enabling enterprise, a project that both reveals and realises hidden potential. Hence, in describing the 'agency' of mapping, I do not mean to invoke agendas of imperialist technocracy and control but rather to suggest ways in which mapping acts may emancipate potentials, enrich experiences and diversify worlds. We have been adequately cautioned about mapping as a means of projecting power knowledge, but what about mapping as a productive and liberating instrument, a world-enriching agent, especially in the design and planning arts?

As a creative practice, mapping precipitates its most productive effects through a finding that is also a founding; its agency lies in neither reproduction nor imposition but rather in uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds. Thus, mapping unfolds potential; it re-makes territory over and over again, each time with new and diverse consequences. Not all maps accomplish this, however; some simply reproduce what is already known. These are more 'tracings' than maps, delineating patterns but revealing nothing new. In describing and advocating more open-ended forms of creativity, philosophers Gilles Deleuze and Félix Guattari (1987: 12) declare: 'Make a map not a tracing!' They continue:

What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. It fosters connections between fields, the removal of blockages on

bodies without organs, the maximum opening of bodies without organs onto a plane of consistency . . . The map has to do with *performance*, whereas the tracing always involves an ‘alleged competence.’

The distinction here is between mapping as equal to what is (‘tracing’) and mapping as equal to what is and to what is not yet. In other words, the unfolding agency of mapping is most effective when its capacity for description also sets the conditions for new eidetic and physical worlds to emerge. Unlike tracings, which propagate redundancies, mappings discover new worlds within past and present ones; they inaugurate new grounds upon the hidden traces of a living context. The capacity to reformulate what already exists is the important step. And what already exists is more than just the physical attributes of terrain (topography, rivers, roads, buildings) but includes also the various hidden forces that underlie the workings of a given place. These include natural processes, such as wind and sun; historical events and local stories; economic and legislative conditions; even political interests, regulatory mechanisms and programmatic structures. Through rendering visible multiple and sometimes disparate field conditions, mapping allows for an understanding of terrain as only the surface expression of a complex and dynamic imbroglio of social and natural processes. In visualising these interrelationships and interactions, mapping itself participates in any future unfoldings. Thus, given the increased complexity and contentiousness that surrounds landscape and urbanism today, creative advances in mapping promise designers and planners greater efficacy in intervening in spatial and social processes. Avoiding the failure of universalist approaches toward master planning and the imposition of state controlled schemes, the unfolding agency of mapping may allow designers and planners not only to see certain possibilities in the complexity and contradiction of what already exists but also to *actualise* that potential. This instrumental function is particularly important in a world where it is becoming increasingly difficult to both *imagine* and actually to *create* anything outside of the normative.

The agency of mapping

Mappings have agency because of the double-sided characteristic of all maps. Firstly, their surfaces are directly *analogous* to actual ground conditions, as horizontal planes, they record the surface of the earth as direct impressions. As in the casting of shadows, walks and sightings across land may be literally *projected* onto paper through a geometrical graticule of points and lines drawn by ruler and pen. Conversely, one can put one’s finger on a map and trace out a particular route or itinerary, the map projecting a mental image into the spatial imagination. Because of this directness, maps are taken to be ‘true’ and ‘objective’ measures of the world, and are accorded

a kind of benign neutrality. By contrast, the other side of this analogous characteristic is the inevitable *abstractness* of maps, the result of selection, omission, isolation, distance and codification. Map devices, such as frame, scale, orientation, projection, indexing and naming, reveal artificial geographies that remain unavailable to human eyes. Maps present only one version of the earth’s surface, an eidetic fiction constructed from factual observation. As both analogue and abstraction, then, the surface of the map functions like an operating table, a staging ground or a theatre of operations upon which the mapper collects, combines, connects, marks, masks, relates and generally explores. These surfaces are massive collection, sorting and transfer sites, great fields upon which real material conditions are isolated, indexed and placed within an assortment of relational structures.

The analogous-abstract character of the map surface means that it is doubly projective: it both captures the projected elements off the ground and projects back a variety of effects through use. The strategic use of this double function has, of course, a long alliance with the history of mapping, and not only militaristically (*reconnaissances militaires*) but also ideologically (Harley 1988). Surprisingly, however, the strategic, constitutive and inventive capacities of mapping are not widely recognised in the urban design and planning arts, even though cartography and planning have enjoyed a long and mutually influential relationship since the fifteenth century (Buisseret 1998; Söderström 1996). Throughout the twentieth century, mapping in design and planning has been undertaken conventionally as a quantitative and analytical survey of existing conditions made prior to the making of a new project. These survey maps are both spatial and statistical, inventorying a range of social, economic, ecological and aesthetic conditions. As expertly produced, measured representations, such maps are conventionally taken to be stable, accurate, indisputable mirrors of reality providing the logical basis for future decision making, as well as the means for later projecting a designed plan back onto the ground. It is generally assumed that if the survey is quantitative, objective and rational, it is also true and neutral, thereby helping to legitimise and enact future plans and decisions (Giddens 1994; Porter 1995). Thus, mapping typically precedes planning because it is assumed that the map will objectively identify and make visible the terms around which a planning project may then be rationally developed, evaluated and built (Scott 1988; Söderström 1996).

What remains overlooked in this sequence, however, is the fact that maps are highly artificial and fallible constructions, virtual abstractions that possess great force in terms of how people see and act. One of the reasons for this oversight derives from a prevalent tendency to view maps in terms of what they represent rather than what they do. [. . .] [M]ost designers and planners consider mapping a rather unimaginative, analytical practice, at least compared

to the presumed ‘inventiveness’ of the designing activities that occur *after* all the relevant maps have been made (often with the contents of the maps ignored or forgotten).

This indifference towards mapping is particularly puzzling when one considers that the very basis upon which projects are imagined and realised derives precisely from how maps are made. The conditions around which a project develops originate with what is selected and prioritised in the map, what is subsequently left aside or ignored, how the chosen material is schematised, indexed and framed, and how the synthesis of the graphic field invokes semantic, symbolic and instrumental content. Thus, the various cartographic procedures of selection, schematisation and synthesis make the map *already* a project in the making (Arnheim 1970; Robinson and Petchenik 1976). This is why mapping is never neutral, passive or without consequence; on the contrary, mapping is perhaps the most formative and creative act of any design process, firstly disclosing and then staging the conditions for the emergence of new realities.

In what follows, I discuss mapping as an active agent of cultural intervention. Because my interests lie in the various processes and effects of mapping, I am less concerned with what mapping *means* than with what it actually *does*. Thus, I am less interested in maps as finished artifacts than I am in mapping as a creative *activity*. It is in this participatory sense that I believe new and speculative techniques of mapping may generate new practices of creativity practices that are expressed not in the invention of novel form but in the productive reformulation of what is already given. By showing the world in new ways, unexpected solutions and effects may emerge. However, given the importance of representational technique in the creative process, it is surprising that whilst there has been no shortage of new ideas and theories in design and planning there has been so little advancement and invention of those specific tools and techniques – including mapping – that are so crucial for the effective construal and construction of new worlds (Corner 1999a, 1992).

The efficacy of technique

A comparison between Mercator’s projection of the earth’s surface and Buckminster Fuller’s Dymaxion projection reveals radically different spatial and socio-political structures. The same planet, the same places, and yet significantly dissimilar relationships are revealed or, more precisely, *constructed*. The Mercator map stretches the surface of the globe without excision onto a flat surface, oriented ‘upwards’ to the north. The compass directions are made parallel, leading to gross distortions of land area and shape, especially as one moves towards the poles. The northern hemisphere dominates, with Greenland more than twice the size of Australia, even though the southern

island is in fact greater than three times the land area of the northern. Needless to say, this view has well suited the self-image of Europeans and North Americans in an era of Western political hegemony. By contrast, Fuller’s Dymaxion Airocean World Map of 1943 cuts the earth into triangular facets that are then unfolded as a flat polyhedron (Figure 1.12.1). Both the north and south poles are presented frontally and equally with little distortion, although the typical viewer is at first likely to be disoriented by this unusual, polydirectional arrangement of countries. Only the graphic graticule of latitude and longitude allows the reader to comprehend the relative orientation of any one location (Marks and Buckminster Fuller 1973).

[...]

Unlike the scientific objectivism that guides most modern cartographers, artists have been more conscious of the essentially fictional status of maps and the power they possess for construing and constructing worlds (Storr 1994). In the same year as Fuller’s projection, the Uruguayan artist Joaquin Torres-Garcia drew the *Inverted Map of South America* with a very distinct ‘S’ at the top of the drawing (Figure 1.12.2). This remarkable image reminds us of the ways in which habitual conventions (in this case the unquestioned domination of north on top) condition spatial hierarchies and power relations. The convention of orienting the map to the north first arose early in the global and economic expansion of Northern Europe and in response to practices of navigation. But there are many instances of other societies at different times orienting their maps towards one of the other cardinal points, or making them circular without top and bottom (the Dymaxion map is perhaps one of the few modern instances where singular orientation is not a prerequisite). Maps of this sort are still legible and ‘correct’ in their depiction of spatial relationship, but the reader must first learn the relevant mapping codes and conventions.

Another instance of critique and invention of the modern map is Waltercio Caldas’s *Japão*, of 1972 (Storr 1994). Here, the artist is mapping a territory that is foreign, or ‘unimaginable’ for many in the West. Rather than colonising this territory through survey and inventory, typically Western techniques of power knowledge, Caldas simply marks an otherwise empty map surface with very small inscriptions and numbers. These are contained by a very prominent, classical cartographic frame. There are no other outlines, shapes or forms, just small type and a few scribbles. There is no scale, no identifiable marks, no graticule of orientation, just a square ink frame. In this stark, minimal cartographic field, Caldas presents an elusive geography, an open and indeterminate field of figures that returns *terra incognita* to an otherwise excessively mapped planet. The image is also a commentary on the cage-like power of the imperialising frame: the graphic square surrounds, captures and holds its quarry, but at the same time its contents remain foreign, evasive and

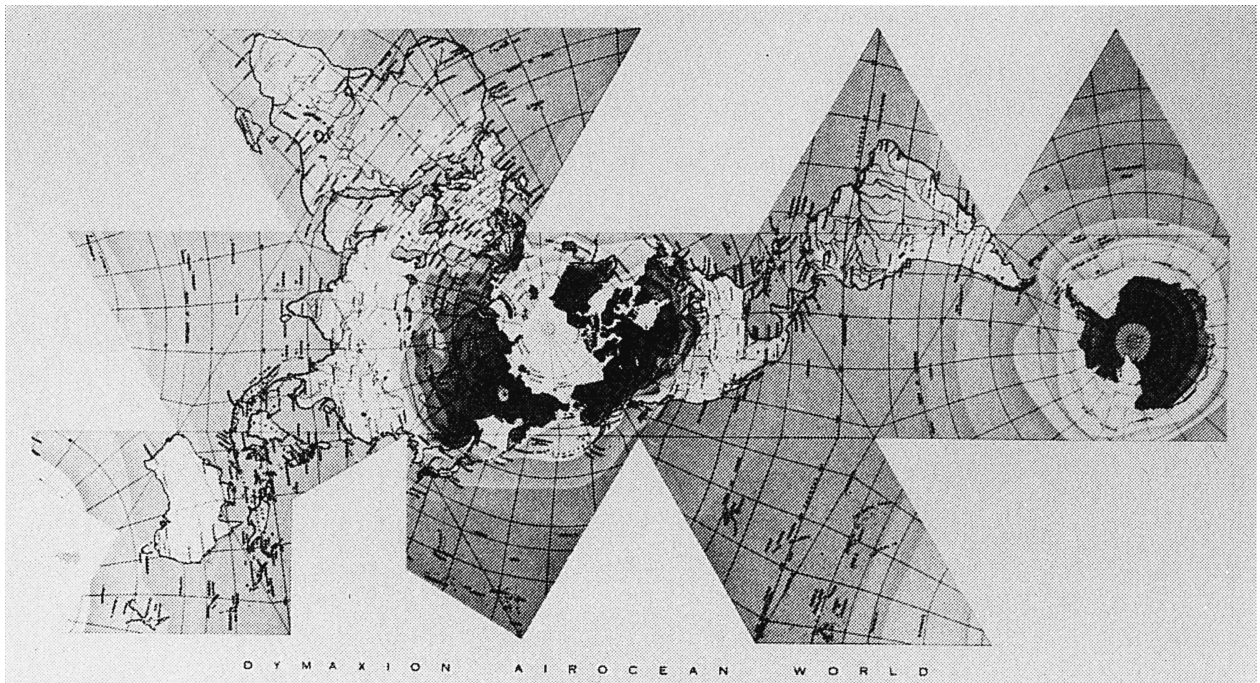


Figure 1.12.1 R. Buckminster Fuller and Shoji Sadao. (Source: Dymaxion Airocean World Map 1954.)

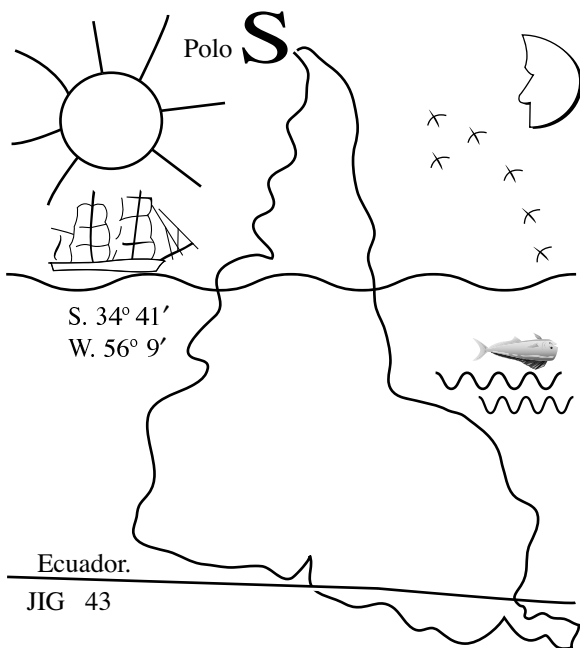


Figure 1.12.2 Joaquín Torres-García. (Source: Inverted Map of South America 1943.)

autonomous. This blank, non-figured space raises both anxiety and a certain promise – promise because its potential efficacy lies in the emancipation of its contents. The autonomous, abstract structure suggests how mystery and desire might be returned to a world of places and things that have been otherwise excessively classified and structured. In Caldas's image, such places are liberated through precisely the same measures that first captured them.

Whereas certain artists have engaged creatively with cartographic techniques, planners and designers have been less ambitious (Harrison and Turnbull 1996). Techniques of aerial-oblique and zenithal views – planimetry, ichnography and triangulation – were most developed during the early sixteenth century, and have since become the primary tools with which cities and landscapes are analysed, planned and constructed. Quantitative and thematic mapping techniques originated with the Enlightenment enthusiasm for rational progress and social reform, and these were later complemented by various statistical, comparative and 'zoning' techniques during the late nineteenth and early twentieth centuries (Hall 1988). Some advances in these techniques have occurred over the past 30 years with the rise of satellite and remote sensing capabilities, together with new computer technologies such as Geographic Information Systems, but in principle they remain unchanged. [...] With only a handful of

exceptions, the relationship of maps to world-making is surprisingly under-thought.

[...]

Maps and reality

Jorge Luis Borges's tale of a fully detailed and life-sized map that eventually tore and weathered to shreds across the actual territory it covered is frequently quoted in essays on mapping (Borges 1933). Not only does the tale beautifully capture the cartographic imagination, it goes to the heart of a tension between reality and representation, between the territory and the map. Equally referenced is Lewis Carroll's tale in *Sylvie and Bruno*, also of a life-sized map, in this case folded, thus preventing it being unfolded for practical application. The map was useless, allowing Carroll's character Mein Herr to conclude, 'so now we use the country itself, as its own map, and I assure you it does nearly as well'. In these two fables, not only is the map an inferior, secondary representation of territory but the more detailed and life-like the map strives to be, the more redundant or unnecessary it becomes. Unlike paintings or photographs, which have the capacity to bear a direct resemblance to the things they depict, maps must by necessity be abstract if they are to sustain meaning and utility. And such abstraction, the bane of untrained map readers, is not at all a failing of maps but rather their virtue.

Jean Baudrillard (1983: 2) reverses Borges's tale to make another point:

Simulation is no longer that of a territory, a referential being or substance. It is the generation by models of a real without origin or reality: a hyper-real. The territory no longer precedes the map, nor survives it. Henceforth, it is the map that precedes the territory.

Arguably, of course, the map *always* precedes the territory, in that space only becomes territory through acts of bounding and making visible, which are primary functions of mapping. But Baudrillard is going one step further here, claiming that late twentieth century communication and information technologies have produced such a blurring of what is real and what is a representation that the two can no longer be distinguished. He inverts Borges's fable to proclaim that 'it is the real and not the map whose vestiges subsist here and there' (Baudrillard 1983). Here, Baudrillard is careful to explain that this reversal does not mean that the world is scarcely more than a vast simulacrum, but rather that the act of differentiating between the real and the representation is no longer meaningful.

[...]

Reality, then, as in concepts such as 'landscape' or 'space', is not something external and 'given' for our apprehension; rather it is constituted, or 'formed', through our participation with things: material objects, images,

values, cultural codes, places, cognitive schemata, events and maps. As the philosopher of science Jacob Bronowski pointedly observes, 'there are no appearances to be photographed, no experiences to be copied, in which we do not take part. Science, like art, is not a copy of nature but a re-creation of her' (1965). [...] The application of judgement, subjectively constituted, is precisely what makes a map more a project than a 'mere' empirical description.

[...]

For the landscape architect and urban planner, maps are sites for the imaging and projecting of alternative worlds. [...] The map 'gathers' and 'shows' things presently (and always) invisible, things which may appear incongruous or untimely but which may also harbour enormous potential for the unfolding of alternative events. In this regard, maps have very little to do with representation as depiction. After all, maps look nothing like their subject, not only because of their vantage point but also because they present all parts at once, with an immediacy unavailable to the grounded individual. But more than this, the function of maps is not to depict but to enable, to precipitate a set of effects in time. Thus, mappings do not *represent geographies* or ideas; rather they *effect* their actualisation.

Mapping is neither secondary nor representational but doubly operative: digging, finding and exposing on the one hand, and relating, connecting and structuring on the other. Through visual disclosure, mapping both sets up and puts into effect complex sets of relationship that remain to be more fully actualised.

[...]

Space and time today

A creative view of mapping in the context of architectural, landscape and urban production is rendered all the more relevant by the changing nature of spatial and temporal structures in today's world. Events occur with such speed and complexity that nothing remains certain. Large numbers live in a world where local economies and cultures are tightly bound into global ones, through which effects ripple with enormous velocity and consequence. Surrounded by media images and an excess of communication that makes the far seem near and the shocking merely normal, local cultures have become fully networked around the world. Air travel and other modes of rapid transportation have become so accessible that localities can be more closely connected to sites thousands of miles away than to their immediate surroundings. Today, structures of community life are shifting from spatial stability towards shifting, temporal coordination. Public life is now scheduled and allocated more by time than centred according to place, while the circulation of capital demands an ever-more mobile and migratory workforce. [...]

Mapping and contemporary spatial design techniques more generally have yet to find adequate ways to engage creatively with the dynamic and promiscuous character of time and space today. Most design and planning operations appear somewhat outmoded, overwhelmed or incongruent in comparison to the rapidly metabolising processes of urbanisation and communication.

[...]

Through such urbanists as Reyner Banham, Edward Soja, David Harvey, Rem Koolhaas and Bernard Tschumi, anthropologists such as Marc Augé, or philosophers such as Henri Lefebvre or Gilles Deleuze, it is becoming clearer to architects and planners that 'space' is more complex and dynamic than previous formal models allowed. Ideas about spatiality are moving away from physical objects and forms towards the variety of territorial, political and psychological social processes that flow through space. The inter-relationships amongst things in space, as well as the effects that are produced through such dynamic interactions, are becoming of greater significance for intervening in urban landscapes than the solely compositional arrangement of objects and surfaces.

The experiences of space cannot be separated from the events that happen in it; space is situated, contingent and differentiated. It is remade continuously every time it is encountered by different people, every time it is represented through another medium, every time its surroundings change, every time new affiliations are forged. [...] Thus, the emphasis shifts from static object-space to the space-time of relational systems. And, it is here, in this complex and shifty *milieu*, that *maps*, not *plans*, achieve a new instrumental significance.

Mapping

'To plan a city is both to think the very plurality of the real and to make that way of thinking effective,' writes the philosopher of the everyday Michel de Certeau (1984: 94) 'it is to know how to articulate it and be able to do it.' Mapping is key here for it entails processes of gathering, working, reworking, assembling, relating, revealing, sifting and speculating. In turn, these activities enable the inclusion of massive amounts of information that, when articulated, allow certain sets of possibility to become actual. In containing multiple modes of spatio-temporal description, mapping precipitates fresh insights and enables effective actions to be taken. Thus mapping differs from 'planning' in that it entails searching, finding and unfolding complex and latent forces in the existing *milieu* rather than imposing a more-or-less idealised project from on high. Moreover, the synoptic imposition of the 'plan' implies a consumption (or extinguishing) of contextual potential, wherein all that is available is subsumed into the making of the project. Mapping,

by contrast, discloses, stages and even adds potential for later acts and events to unfold. Whereas the plan leads to an end, the map provides a generative means, a suggestive vehicle that 'points' but does not overly determine.

A particularly important aspect of mapping in this regard is the acknowledgement of the maker's own participation and engagement with the cartographic process.

[...]

[M]apping precedes the map, to the degree that it cannot properly anticipate its final form. Robinson and Petchenik (1976: 74) claim that 'in mapping, one objective is to discover (by seeing) meaningful physical and intellectual shape organisations in the *milieu*, structures that are likely to remain hidden until they have been mapped ... plotting out or mapping is a method for searching for such meaningful designs'. In other words, there are some phenomena that can only achieve visibility through representation rather than through direct experience. Furthermore, mapping engenders new and meaningful relationships amongst otherwise disparate parts. The resultant relational structure is not something already 'out there', but rather something constructed, bodied forth through the act of mapping. As the philosopher Brand Blanshard (1948: 525) observes, 'space is simply a relation of systematised outsideness, by itself neither sensible nor imaginable'; it is *created* in the process of mapping.

Mapping operations

The operational structure of mapping might be schematised as consisting of 'fields', 'extracts' and 'plottings'. The field is the continuous surface, the flat bed, the paper or the table itself, schematically the analogical equivalent to the actual ground, albeit flat and scaled. The field is also the graphic system within which the extracts will later be organised. The system includes the frame, orientation, coordinates, scale, units of measure and the graphic projection (oblique, zenithal, isometric, anamorphic, folded, etc). The design and set-up of the field is perhaps one of the most creative acts in mapping, for as a prior system of organisation it will inevitably condition how and what observations are made and presented. Enlarging the frame, reducing the scale, shifting the projection or combining one system with another are all actions that significantly affect what is seen and how these findings are organised. Obviously, a field that has multiple frameworks and entryways is likely to be more inclusive than a singular, closed system. Also, a field that breaks with convention is more likely to precipitate new findings than one that is more habitual and routine. And thirdly, a field that is designed to be as non-hierarchical and inclusive as possible – more 'neutral' – is likely to bring a greater range of conditions into play than a field of restrictive scope.

Extracts are the things that are then observed within a given *milieu* and drawn onto the graphic field. We call them extracts because they are always selected, isolated and pulled out from their original seamlessness with other things; they are effectively 'de-territorialised'. They include objects but also other informational data: quantities, velocities, forces, trajectories. Once detached they may be studied, manipulated and networked with other figures in the field. As described above, different field systems will lead to different arrangements of the extracts, revealing alternative patterns and possibilities.

Plotting entails the 'drawing out' of new and latent relationships that can be seen amongst the various extracts within the field. There are, of course, an infinite number of relationships that can be drawn depending upon one's criteria or agenda. Richard Long, for example, who has made an art form of walking, may plot a line upon a map to connect the highest to the lowest summit in sequential order, for example, revealing a latent structural line across a given terrain. Upon the same map, however, it is possible to plot a line that connects all south-facing aspects in sequential order from large to small areas, or to find a range of wet conditions that can then be set into relationship by plotting a comparative index of water characteristics. In addition to geometrical and spatial plotting, taxonomic and genealogical procedures of relating, indexing and naming can often be extremely productive in revealing latent structures. Such techniques may produce insights that have both utility and metaphoricity. In either case, plotting entails an active and creative interpretation of the map to reveal, construct and engender latent sets of possibility. Plotting is not simply the indiscriminate listing and inventorying of conditions, as in a tracing, a table or a chart, but rather a strategic and imaginative drawing out of relational structures. To plot is to track, to trace, to set in relation, to find and to found. In this sense, plotting produces a 're-territorialisation' of sites.

Thus we can identify three essential operations in mapping; firstly, the creation of a field, the setting of rules and the establishment of a system; secondly, the extraction, isolation or 'de-territorialisation' of parts and data; and, thirdly, the plotting, the drawing out, the setting up of relationships, or the 're-territorialisation' of the parts. At each stage, choices and judgements are made, with the construing and constructing of the map alternating between processes of accumulation, disassembly and reassembly. By virtue of the mapmaker's awareness of the innately rhetorical nature of the map's construction as well as of personal authorship and intent, these operations differ from the mute, empirical documentation of terrain so often assumed by cartographers.

We may now identify four thematic ways in which new practices of mapping are emerging in contemporary design and planning, each producing certain effects upon

perceptions and practices of space. I label these techniques 'drift', 'layering', 'game-board' and 'rhizome'.

Drift

The Situationists were a European group of artists and activists in the 1950s and 1960s. [...] Guy Debord, a key Situationist theorist, made a series of maps, or 'psycho-geographic guides', of Paris. These were made after Debord had walked aimlessly around the streets and alleys of the city, turning here and there wherever the fancy took him. [...] More a form of cognitive mapping than mimetic description of the cityscape, Debord's maps located his own play and representation within the recessive nooks and crannies of everyday life. Such activity became known as the *dérive*, or the dream-like drift through the city, mapping alternative itineraries and subverting dominant readings and authoritarian regimes (Figure 1.12.3).

What is interesting about the *dérive* is the way in which the contingent, the ephemeral, the vague, fugitive eventfulness of spatial experience becomes foregrounded in place of the dominant, ocular gaze. [...]

It is important to understand that the primacy of [...] the Situationist's use of maps belongs to the their *performative* aspects, that is to the way in which mapping directs and enacts a particular set of events, events that derive from a given *milieu*. But, of course, there are the recordings that come after the proceedings, and these are neither passive nor neutral in their effects either. [...]

These various practices of 'drift' use maps as instruments for establishing and aligning otherwise disparate, repressed or unavailable topographies; they are 'set-ups' that both derive from and precipitate a series of interpretative and participatory acts. Their highly personal and constructive agency make them quite unlike the detached work of conventional mapmakers. They are openly cognitive, mental maps, rendering new images of space and relationship. Moreover, the drift permits a critique of contemporary circumstances, not from outside and above (as a master plan) but from participation within the very contours and fabric of political and institutional reality. [...]

Layering

A relatively new development in the design of large-scale urban and landscape fabrics has been 'layering'. This involves the superimposition of various independent layers one upon the other to produce a heterogeneous and 'thickened' surface. Architects Bernard Tschumi and Rem Koolhaas were amongst the first to develop layering strategies in design and planning in their respective proposals for the Parc de la Villette in Paris, 1983 (Tschumi 1987; Koolhaas and Man 1995). Generally, these projects dismantle the programmatic and logistical

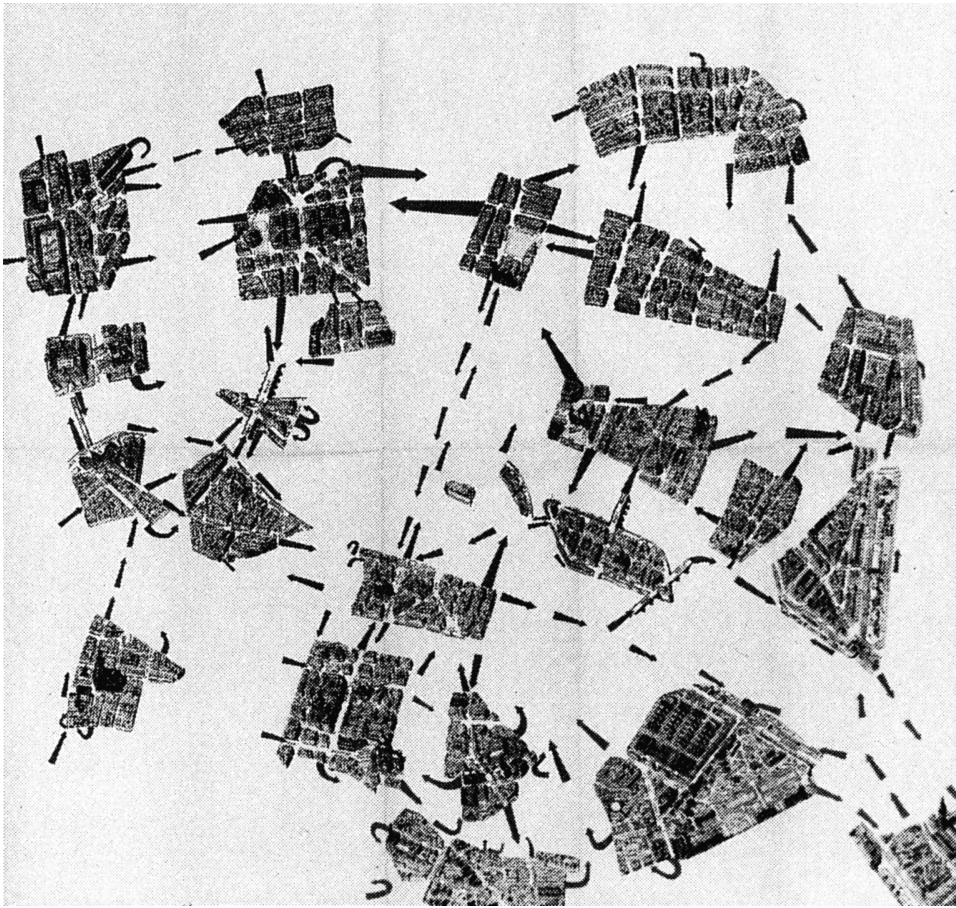


Figure 1.12.3 Guy Debord, *Discours sur les Passions de l'amour* 1957.

aspects of the park into a series of layers, each of which is then considered independently from the other layers. There is an internal logic, content and system of organisation to each layer, depending on its function or intended purpose. The layers are not mappings of an existing site or context, but of the complexity of the intended programme for the site. [...] When these separate layers are overlaid together, a stratified amalgam of relationships amongst parts appears. The resulting structure is a complex fabric, without centre, hierarchy or single organising principle (Figure 1.12.4). The composite field is instead one of multiple parts and elements, cohesive at one layer but disjunct in relation to others. Such richness and complexity cannot be gained by the limited scope of the single master plan or the zoning plan, both of which group, hierarchicalise and isolate their component parts.

[...]

Game-board

A third thematic development of mapping in contemporary design practice, and one related to the notions of performance mentioned above, has been the projection of 'game-board' map structures. These are conceived as shared working surfaces upon which various competing constituencies are invited to meet to work out their differences. As a representation of contested territory the map assumes an enabling or facilitating status for otherwise adversarial groups to try and find common ground while 'playing out' various scenarios. [...]

Raoul Bunschoten is a London-based architect who has engaged with a number of complex and contentious urban regions in Europe, and has developed a number of innovative mapping techniques for working with such sites. For Bunschoten (1996, 1997, 1998), cities are dynamic and multiple; they comprise a vast range of 'players' and 'agents'

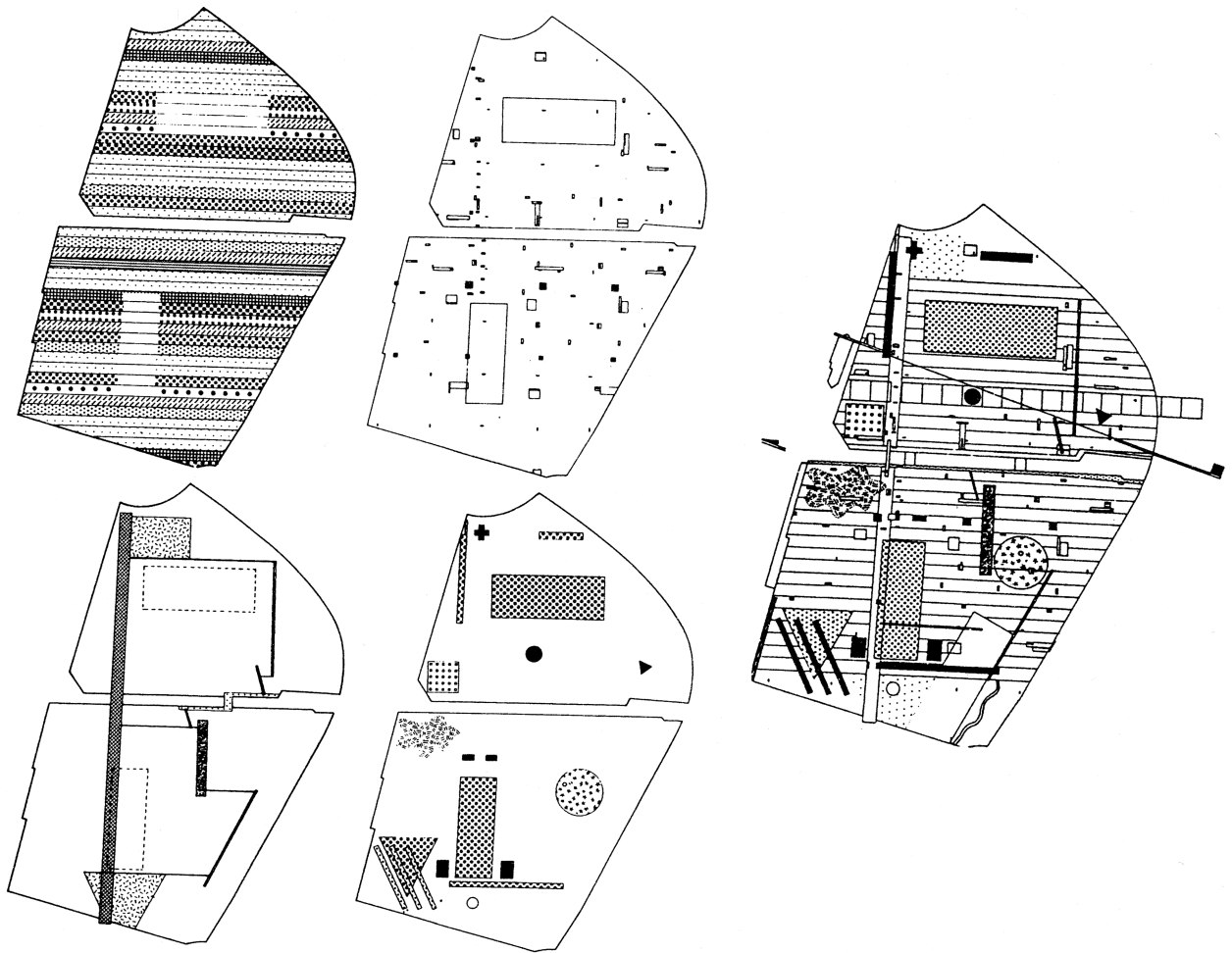


Figure 1.12.4 Rem Koolhaas layer diagrams for the Parc de la Villette (Office for Metropolitan Architecture 1983).

whose 'effects' flow through the system, continually reworking the variety of urban spaces in any given field. His approach is aimed first towards identifying and then redirecting the temporal play of these various forces. Consequently, urban design is practised less as spatial composition and more as orchestrating the conditions around which processes in the city may be brought into relationship and 'put into effect'. Bunschoten calls this 'stirring'.

[...]

In order to employ and operationalise these various conditions, they must first be made visible. Bunschoten accomplishes this by setting up a number of map frames, within which certain processes or conditions are graphically identified (Figure 1.12.5). He is careful to link the various cultural aspirations of each group to a physical space or territory distinguishing amongst 'local authorities'

who anchor conditions into specific institutions or places, 'actors' who participate with stated desires and 'agents' who have the power and capacity to make things happen. Each frame permits the play of certain thematic conditions (preservation, ecology economic development or cultural memory for instance), whilst the composite overlay of all of the frames more accurately conveys the plural and interacting nature of the urban theatre.

[...]

The graphic map provides the game-board for playing out a range of urban futures. Identified players and actors are brought together to try to work out complex urban issues within an open-ended generative structure. Diverse forms of negotiation are promoted as the survival strategies of each player unfold and become interwoven with others in reaction to changing interests and situations. Thus the

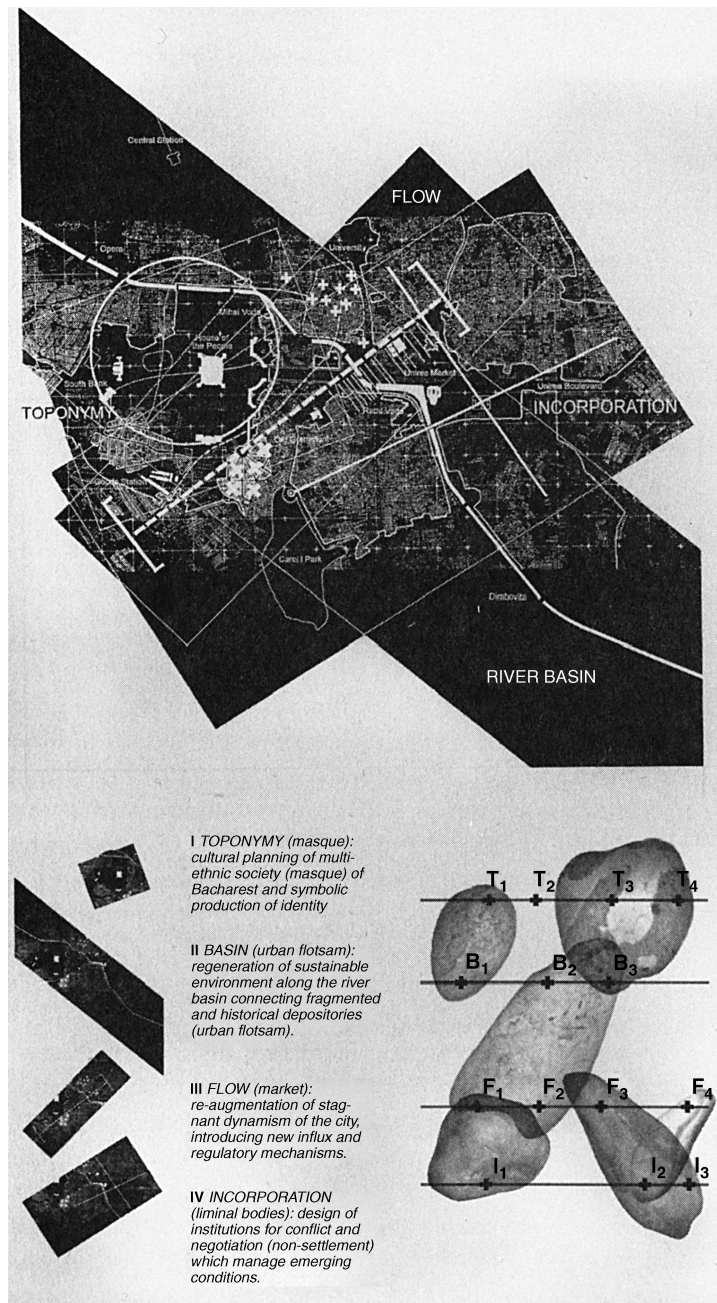


Figure 1.12.5 Raoul Bunschoten/CHORA, Four Planning Fields for Bucharest, 1996.

maps themselves are evolving structures, drawn and redrawn by the urban planner so as to permit the game to continue while also generating the necessary conditions for the emergence of an enterprising urbanity.

[...]

Rhizome

Open-ended and indeterminate characteristics can be likened to the process-form of the rhizome. 'Unlike trees or their roots,' write Deleuze and Guattari (1987: 6), 'the

rhizome connects any point to any other point ... It has neither beginning nor end, but always a middle (*milieu*) from which it grows and overflows, [constituting] linear multiplicities.' In contrast to centric or tree-like, hierarchical systems, the rhizome is acented, non-hierarchical and continually expanding across multiplicitous terrains. [...]

Deleuze and Guattari (1987: 6) draw an important distinction between 'maps' and 'tracings', describing the former as open, connectable, 'experimentations with the real', and the latter as repetitive redundancies that 'always come back to "the same"'. Hence, tracings belong to hierarchical systems of order that ultimately limit any hope of innovation – 'all of tree logic is a logic of tracing and reproduction' (Deleuze 1987: 12). By contrast, the infinitely open, rhizomatic nature of mapping affords many diverse entryways, exits and 'lines of flight', each of which allows for a plurality of readings, uses and effects.

The significance of the rhizome for mapping is encapsulated in Deleuze and Guattari's belief that 'the book' (and we might equally say the map, the city or the landscape) 'has no object. As an assemblage [it] has only itself, in connection with other assemblages and in relation to other bodies without organs.' Thus, Deleuze and Guattari (1987: 4) conclude:

We will never ask what a book means, as signifier or signified; we will not look for anything to understand in it. We will ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed, and with what other bodies it makes its own converge.

This viewpoint privileges actions and effects over representation and meaning; the concern is for how things work and what they do. Moreover, there is an explicit interest here for new kinds of affiliative relationship and interconnection. The argument emphasises probing practices of interpretation that extend previous products of culture (maps and landscapes, for instance) towards more diverse and interconnected fields of possibility their 'becoming' bodied-forth through various acts of mapping and relating.

One especially important principle with regard to mapping as a rhizomatic (burrowing and extending) activity is what Deleuze and Guattari refer to as the 'plane of consistency'. While this assumes a rich and complex array of meanings for the authors, I shall summarise plane of consistency here as a surface that is both inclusive (even of things that may not normally fit or 'belong' to any given scheme, including arbitrary 'debris') and *structuring* of new and open-ended series of relationships. Obviously if such a surface is both inclusive and structuring, the techniques and modes of representation must be both multiple and flexible.

[...]

[M]appings construct 'planes of consistency' that present analytical information while also allowing for suggestive readings/projections. They 'draw out' of common maps and landscapes certain figural and processual relationships that might occasion new landscapes. Admittedly, these mappings are not as open or rhizomatic as they might be, owing to their thematic focus, but their inclusion and incorporation (synthesis) of diverse kinds of information and possibility as well as their utilisation and subversion of dominant conventions, illustrates two important ways in which mapping might move towards more polymorphous and creative ends. They are also suggestive of how temporal, systemic, performance networks can be rendered distinct from traditional cartographic concerns with static space.

[T]he experience of spatial life today is as much immaterial as it is physical, as much bound into time and relational connections as it is to traditional notions of enclosure and 'place.' By extension, the principle of rhizomatic planes of consistency – together with the above-mentioned and closely allied themes of drift, *dérive*, layering, scaling, *milieu* and game-board structures – provides a useful model for mapping as a creative form of spatio-temporal practice in urban planning and design. In this way, we move away from urbanistic projects as authoritative master plans, concerned solely with the composition and order of static parts, toward practices of self-reflexive organisation. [...] Instead of designing relatively closed systems of order, rhizomatic mappings provide an infinite series of connections, switches, relays and circuits for activating matter and information. Hence *mapping*, as an open and inclusive process of disclosure and enablement, comes to replace the reduction of *planning*.

Conclusion

[...]

If maps are essentially subjective, interpretative and fictional constructs of facts, constructs that influence decisions, actions and cultural values generally, then why not embrace the profound efficacy of mapping in exploring and shaping new realities? Why not embrace the fact that the potentially infinite capacity of mapping to find and found new conditions might enable more socially engaging modes of exchange within larger *milieux*? The notion that mapping should be restricted to empirical data sorting and array diminishes the profound social and orienting sway of the cartographic enterprise. And yet the power of 'objective analysis' in building consensus and representing collective responsibility is not something to be abandoned for a free-form 'subjectivity'; this would be both naive and ineffective. The power of maps resides in their facticity. The analytical measure of factual objectivity (and the credibility that it brings to collective discourse) is a characteristic of

mapping that ought to be embraced, co-opted and *used* as the means by which critical projects can be realised (Corner and MacLean 1996). After all, it is the apparent rigour of objective analysis and logical argument that possesses the greatest efficacy in a pluralistic, democratic society. Analytical research through mapping enables the designer to *construct* an argument, to embed it within the dominant practices of a rational culture, and ultimately to turn those practices towards more productive and collective ends. In this sense, mapping is not the indiscriminate, blinkered accumulation and endless array of data, but rather an extremely shrewd and tactical enterprise, a practice of relational reasoning that intelligently unfolds new realities out of existing constraints, quantities, facts and conditions (Allen 1998; Beck 1994; Corner 1999a; Koolhaas and Man 1994).[...]

[...]

Instances of drift, strata, game-board and rhizome represent only a handful of techniques that mapping practices might assume if they are to play more creative roles in design and planning, and in culture more generally. These techniques presuppose any number of variations and enhancements as issues of framing, scaling, orientation, projection, indexing and coding become more flexible and open-ended, especially in the context of powerful new digital and animation media. As we are freed from the old limits of frame and boundary – preconditions for the survey and ‘colonisation’ of wilderness areas – the role of mapping will become less one of tracing and re-tracing already known worlds, and more one of inaugurating new worlds out of old. Instead of mapping as a means of appropriation, we might begin to see it as a means of emancipation and enablement, liberating phenomena and potential from the encasements of convention and habit. What remains unseen and unrealised across seemingly exhausted grounds becomes actualised anew with the liberating efficacy of creatively aligned cartographic procedures. Mapping may thus retain its original entrepreneurial and exploratory character, actualising within its virtual spaces new territories and prospects out of pervasive yet dormant conditions.

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- the world, including many examples of work inspired by Deleuzian ideas.]
- Grasseni, C. (2004) Skilled landscapes: mapping practices on locality. *Environment and Planning, D* **22**, 699–717. [An interesting example of the practical application of Corner's ideas in an Italian community mapping initiative.]
- Pickles, J. (2004) *A History of Spaces: Cartographic Reason, Mapping, and the Geo-coded World*, Routledge, London. [A largely Foucauldian exploration of the constitutive power of mapping: social chapters informed by Corner's work.]

See also

- Chapter 1.7: Design on Signs / Myth and Meaning in Maps
- Chapter 1.8: Deconstructing the Map
- Chapter 1.9: Drawing Things Together
- Chapter 1.10: Cartography Without 'Progress': Reinterpreting the Nature and Historical Development of Mapmaking
- Chapter 1.13: Beyond the 'Binaries': A Methodological Intervention for Interrogating Maps as Representational Practices
- Chapter 1.14: Rethinking Maps
- Chapter 3.9: Mapping, Modernity: Art and Cartography in the Twentieth Century
- Chapter 3.10: Affective Geovisualisations
- Chapter 4.5: The Map as Biography
- Chapter 4.6: Reading Maps
- Chapter 4.8: Refiguring Geography: Parish Maps of Common Ground

Further reading

- Abrams, J. and Hall, P. (2006) *Else/Where: Mapping New Cartographies of Networks and Territories*, University of Minnesota Design Institute, Minneapolis, MN. [An inventive edited collection that demonstrates the creative and artistic potential for mapping.]
- Anderson, B. and Harrison, P. (2010) *Non-Representational Theories and Geography*, Ashgate, London. [The useful introduction to non-representational ways of approaching