Introduction

Measuring the World

Teresa Stoppani

Measurements

In 1913 Marcel Duchamp takes three pieces of string, one metre long, stretches them horizontally and drops them from the height of one meter onto flat canvases on stretchers. *Un metre de fil, droit, horizontal, tombe d’un metre de haut.* The twists and bends of the fallen strings are recorded by fixing them on the canvases with drops of varnish. The canvases are then cut from the stretchers and glued on strips of plate glass. This produces *Three Standard Stoppages* of 1914. These shapes are then cut into the edges of three wooden rulers, to be used as templates for some of the curves in *The Bride Stripped Bare by her Bachelors, Even (Large Glass)*, Duchamp’s masterpiece begun in 1915 and ‘finally unfinished’ in 1923. Slow, methodical, protracted in time, codified in their process but unpredictable in their outcome, the repetitions of these simple gestures unsettle the conventions of measurement and representation. The emphasis here is on the process rather than on the form. The repeated drops of the identical one-metre strings produce always different resultant measurements, given not by the length of the string but by the movement of the fall. The different configurations produced by repetition, potentially endless, reveal the inaccuracy and the
The usefulness of a survey that, because always variable in its outcomes, is always already emptied the moment it is completed. Significantly, the *Three Standard Stoppages* will not be used as templates for the shapes of the lower part of the Large Glass, where the nine *Bachelors* and their *Apparatus* are measured by geometry and represented in a classically constructed perspective, but for the curves of the upper part of the Glass, occupied by the ineffable ‘apparition’\(^2\) of the *Bride*, both invisible and not measurable. Duchamp’s meters both measure (record) and draw (trace) transformations\(^3\) rather than forms, the states of continuous change of matter and form, and the instability of their ‘finally unfinished’ representation.

**Interpolations**

In 1932 Walter Benjamin reorganizes his childhood memories in the ‘Berlin Chronicle’, a text which interrogates the episodes that he had previously narrated and systematically collected in ‘Berlin Childhood Around the Turn of the Century’. The ‘Chronicle’ is not simply a catalogue of images of objects and places remembered, but it reactivates them in the process of re-membering (re-composing). It makes a map of such memories, in the sense that it re-constructs the relationships of those memories to each other, and to the re-membering present of the narrator. This ‘map’ employs, like all maps, a set of devices, narratives
and conventions for its constructions. These are, here, the many Ariadnes⁴ who guide the narrator through Berlin in different stages of his coming of age, always feminine and embodied in turn by nursemaids, the mother, prostitutes. They are, also, the established narratives of the city as set by the example of that ‘other’ Benjaminian world that is Paris (a model and a parallel), from its published descriptive narratives to the memory place of a Proustian lost and re-membered Paris. They include, also, the personal map of a city of memory, which contains and represents the remembered objects and forms, but whose structure is constructed and organized by ‘the mysterious work of remembrance – which is really the capacity for endless interpolations into what has been.’⁵ It is only through this work of interpolation that Benjamin’s self stated ‘impotence before the city’⁶ can be overcome, and a personal ‘map’ of Berlin can be re-presented. And while Benjamin’s representation remains restricted to the writing of the city, and his map consists of the (re)structuring of its narration, Benjamin’s reference to the possibility of a graphic and physical act of mapping is explicit.

_I have long […] played with the idea of setting out the sphere of life […] graphically on a map. […] I have evolved a system of signs, and on the grey background […] they would make a colourful show if I clearly marked in the houses of my friends and girl friends, the assembly halls of various_
collectives, [...] the hotel and brothel rooms that I knew for one night, the decisive benches in the Tiergarten, the ways to different schools [...].

Mappings

These works of Duchamp and Benjamin both anticipate, in different ways, several of the issues of map-making that are addressed by the projects of Antipodes / Measuring the World. The studies, stories and images collected in this volume all propose, in different ways, a dynamic idea of ‘mapping’ as a process - not a static and defined representation of a given, but a changing image of a reality in constant change, subject to multiple interpretations and manipulations that represent space but also ‘make’ space. The projects of Antipodes / Measuring the World operate on the conventions of cartographic representations, to expose their space-making power and to unsettle them from within. Like Duchamp’s work, these projects are codified in their process but remain unpredictable in their outcomes, they question the conventions of measurement and representation, and place their emphasis on the process of their analysis rather than on the form (map) that they produce. Their maps are partial and unstable representations, which question themselves and their codes as well as the realities that they portray. Like Benjamin’s memory constructs, these projects focus not on their specific objects, but on the changing relationships between such objects,
and between the objects and their representations. They use given devices for their investigations – guiding themes, narratives, comparisons and parallels with other object and places– but their emphasis is on the ‘work of interpolation’ that produces the project.

The aim of this collective work, and of the partial – both incomplete and biased– map of the world that results from it, is to readdress the general question of mapping in relation to architecture and the city, as a possibility to comprehend and produce the complexity of space, between making (building) and representation (drawing). Mapping is explored as the ideal locus for the staging of the interaction of the two, containing in itself the multiplicity of form that neither drawing nor building alone can offer. A representation that is at the same time partial and excessive to its object, mapping contains many (and contradictory) possible projects: it is in this shift between insufficiency and redundancy of otherness that the project finds its locus.

A lot has been written, drawn, modelled in recent years on the idea of mapping in architecture. Having discovered the insufficiency of its techniques of representation –from orthographic projections, to notations, to perspective views– architecture has turned to mapping. Triggered by the theoretical redefinition and digital use of the diagram through the 1980s and the 1990s, the use
of maps in architecture –new, experimental, unorthodox forms of mapping– has become increasingly common. The persisting problem, though, is that architecture has engaged mapping mostly in a non-critical way, employing cartography as one of its techniques of representation, but often without considering that the process of mapping, more complex and more unpredictable than cartography, is already a project in itself. It produces spaces.

**Antipodes**

Choose two (random) earth lines (meridian and parallel) and move along them to measure selected elements, quantities, conditions. Concentrate in particular on changes and constants, similarities and differences as you measure along your two lines. Focus should be on the points of intersection (we call them antipodes, even if technically they are not). Represent the analysis with maps, charts, diagrams. Through this you should re-think the interpretive representations usually made in an atlas. Propose a conceptual project for the meridian and parallel you chose. The final representation of the research should be an atlas of the area you have studied. The aim is to get the scale of the world in our mind and to look at the world disconnected from nationalities, borders, races…

(Lieven De Boeck and Teresa Stoppani)
The texts and projects developed in the *Antipodes / Measuring the World* workshops and documented here all challenge, in different ways, the cartographic conventions of mapping as a static and codified form of representation, to propose a reconsideration of mapping as dynamic process. The research proposes a wider redefinition of ‘mapping’ as an active process of making space that employs and goes beyond cartography, and is in itself already a ‘project’. It suggests that it is necessary to look away from the specifics of architecture, and focus on mapping as a process, in order to better understand the possible implications of mapping in architecture.

The act of mapping is examined outside architecture, through explorations, unorthodox applications and re-codifications of cartography in a series of analyses whose scales range from the global to the microscopic, and whose topics move between the political, the historical, the geographical and the social, the personal, the emotional (both individual and collective). The act of mapping is decomposed and critiqued through an exploration and re-definition of its codes. Accurate measurements are employed to represent the subjective, the irrational, the variable, and thus expose the relative validity and partiality of cartographic conventions. Offering rigorous measurements of the impossible to measure, these projects and texts expose the
weaknesses and unfold the potentialities of a cartography redefined as ‘map-making’.

This volume presents a selection of works produced in two *Antipodes / Measuring the World* international design workshops, directed by Lieven De Boeck and Teresa Stoppani at the Architecture Academy in Amsterdam (January 2005) and at the University of Greenwich in London (June 2006). The scope of the workshops was to challenge and redefine the mapping of the world, and show that representations are never neutral, but are always already projects of spaces. The workshops produced alternative and partial representations (maps) of the world, whose aim is to challenge preconceived images of what is presumed to be known - both the object (world) and the medium (map) of representation. These re-mappings of the world produce a random and yet analytical and critical sampling that exposes the hidden projects always already at work within cartography.

The initial challenge to the conventions of cartography is placed by the research brief through the questioning of the very definition of ‘antipodes’ as opposites. The ‘antipodes’ explored and mapped in these projects are not two diametrically opposed points of the globe (in itself far from the perfect geometry of a sphere). Remote from their geometrical definition, and yet still rigorously ‘measured’, the ‘antipodes’ here are randomly identified by the intersection of two (or
more) earth lines of latitude and longitude, and determined by a journey of exploration and of multiple encounters. These ‘antipodes’ are also not necessarily dialectical opposites, but, more often and more likely, plural registers of contrasts, conflicts and convergences, differences and similarities. As such, these antipodes are never only, or just, two. They often come to coincide, or open up non-geometrical multiplicities. Redefined, they are manipulated (Fahmy), scattered (Figuereido) or coincident (Kiousis), pulsating (Krouska), nomadic (Bridgestock), psychophysical (Coronel), emotive (D’Sa) or passional (Soussonii), hypertextual (Walls) or cyber-oneiric (Sorensen).

The projects are presented here in the five groupings that articulate the Antipodes research. ‘Manipulations’ employs and reworks the accepted conventions of cartography in redefinitions and representations of measurements of time/space distances. ‘Identities’ measures the non-coincidence of physical and political geography (in its etymological sense of description of the earth) and of the social and cultural differences to which cartography is often blind. ‘Tribes’ punctures and stitches the earth through the rhythmic movements and pulses – seasonal or musical - of its most fluid populations. ‘Emotions’ invents new units and scales for the measuring of the earth (geometries), from the spatio-temporal coefficient
of historical happiness of the planet, to the lines of renegotiated domestic boundaries in the microcosmos of a room. ‘Narratives’ warps geographical and topographical discontinuities in hypertextual world-wide-web continuums beyond the seductive visuals of GoogleEarth.

Accompanied by a series of interventions –stories and drawings- by Lieven De Boeck, and reframed from the ‘outside’ point of view of Omar Fawzy and Hisham Gabr, these projects construct an alternative, partial, fragmented, impossible map of the world.

Perhaps the world was actually different from the one I had begun to perceive. [This] led me to the idea of fashioning a map that would defy every category and genre. It would be a map that would contain them all; a map hard to define, yet because of this lack of definition, a map that would begin to define itself more precisely. Nor would it be one designed to espouse any particular policy or persuasion; […] a map that would act as the prototype for all maps scattered in space and in time. (James Cowan, A Mapmaker’s Dream)

Antipodes / Measuring the World does not produce a new representation of the world. It offers, instead, through representations of representations, a collective reflection on the non-neutrality of cartography. The collective Antipodes world map, hard to define and impossible to
represent in one, defines itself – and map-making – more precisely, exactly ‘because of this lack of definition’. It is a map that in being unable to define and fix its form exposes the agency of map-making.
Teresa Stoppani

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Notes:


2 Marcel Duchamp explains the notion of “apparition” in the notes collected in *The Green Box*, a green-flocked cardboard box containing notes, drawings, photographs and facsimiles that had led to Duchamp’s *Large Glass* (1915-23), which was published in a limited edition of 320 copies in Paris in 1934. Octavio Paz summarizes Duchamp’s distinction between “appearance” and “apparition” in his *Marcel Duchamp, Appearance Stripped Bare*, New York: Arcade 1990 (1978). While ‘appearance’ is the conjoining of sensations –visual, tactile, auditory– at the moment when we perceive the object, *apparition* is the underlying, stable reality, never wholly visible: the system of relationships that is at once the mould and the essence of the object.’ (pp.130-131. My emphasis). Paz comments, ‘Apparition is not a form but a conjunction of forces, a knot.’ (p. 177).


6 ‘It was thirty years before the distinction before left and right had become visceral to me, and before I had acquired the art of reading a street map, I was far from appreciating the extent of my ineptitude’, *ibidem*, p. 4.

7 *ibidem*, p. 5.

8 For an analysis of different forms of use of mapping in architecture see my ‘Mapping. The Locus of the Project’, *op. cit.*

