NAVIGATION WITHOUT LIMITS
Text: Oscar Rommens

Heading Out for Some Lebanese . . .

A while ago my wife, An, and I were supposed to have dinner at a Lebanese restaurant in Brussels. The place had been recommended to us by someone we knew, and An, Brussels expert that she is, convinced me to set off without a map or any kind of research. The name of the street sounded familiar to her, and she would be able to navigate us there. From Antwerp, the journey should normally take 40 minutes, but in the end it took us two and a half hours. We must have seen nearly every street on the east side of Brussels. After many detours, the inevitable arguments about the sequence of streets, and having had the opportunity to explore yet another unknown corner of Brussels, we finally arrived at our destination. This evening ramble is typical of our family's travel methodology, which, in retrospect, always generates hilarious discussions. Various friends have been suggesting for some time that we buy a 'TomTom' navigation device, that handy gadget in which one enters one's starting point and destination, the type of route desired (shortest, longest, fastest, romantic, etcetera), and that allows the on-board computer with GPS to guide the car to where one wants to go. Navigation for dummies, or better 'smarties', because you always arrive on time and there is no need for anxiety.

The aim of this essay is to reflect on the concept of navigation, without intending to present any definitive evidence or prove a theoretical position. My hope is that gathering a number of ideas and definitions related to this subject will create a broader context, able to inspire. After all, there is no getting away from it any more: today, literally everything is being mapped. In the pursuit of economic profitability, everything needs to proceed as efficiently as possible. In the interest of safety and control, everything, no matter how absurd, is researched, examined, calculated, recorded and planned in advance. Any potential deviation from a preordained course is considered illogical, delaying, dangerous and even polluting. Our Brussels anecdote is the diametric opposite of this,

namely complete randomness, the chaotic, the irrational, improvisation, intuition, pointless driving around, discovery, in contrast to ultimate control, the rational, that which is plotted out, supported, fixed, measurable, something to which one can refer.

The Evolution of the Navigation Perspective

Originally, people navigated in order to explore the world. Subsequently economic exploration and expansion became the main motives for more precise navigation. In the last several decades, new navigation techniques have been primarily developed to serve military strategies, where a particular emphasis is placed on the precise pinpointing of a location or destination and the perfect control of the trajectories. The increases in speed and the simultaneous extension of range spurred the aircraft and spacecraft industries to develop a series of technologies to prevent possible catastrophes.[1] This gave navigation a new meaning: instead of determining the position of the moving object within a setting, navigating shifted to the localization of the moving object from outside the setting itself. In other words, the perspective and the orientation of the navigation process changed from inside to outside and from bottom-up to top-down. This development has transformed the experience of navigation into a purely technological, reductionist tool that mostly uses generalizations, levelling out specific qualities and ignoring exceptions. As a result, potential phenomena on the margins are, among other things, abandoned too quickly, no longer getting the chance to develop, let alone manifest themselves. Nowadays, navigation is almost completely focused on the end point, which constitutes an objective to be reached as quickly as possible.

God is Google Earth, Google Earth Shows the Way ...

At this moment, all over the world, web users – and therefore architects as well – work with Google Maps or Google Earth,

1 J.E.D. Williams, *From sails to satellites: the origin and development of navigational science* (Oxford: Oxford University Press, 1994).

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giving a new meaning to the concept of navigation. Google Earth is a free software program launched a few years ago by Google; it has now been downloaded over 200 million times. The images on Google Earth come from different (often commercial) satellites and reconnaissance aircrafts. There are wide variations in the picture definition of the regions mapped, depending on restrictions, legal and otherwise, enforced in the areas photographed. Certain areas are regularly updated, and this process is continual. In the images with the best definition, you can clearly make out objects barely two meters in size. When a user starts the program, he or she first gets to see the globe of the Earth from space. With a click and a lateral movement of the mouse on the globe, the world quite simply starts to spin before your eyes; you are beholding the Earth as if you were a god. Using a navigation bar, you can zoom in and out from this spatial position onto any point on the planet. Any location comes on screen within seconds and reveals itself as 'reality'. As well as zooming in and out, this world map also allows you to fly over the face of the Earth. From a selected starting point, you can wander about freely or fly straight to a chosen point.

The program's photographic precision and simplicity of use generate a sensation of absolute control. What one sees is 'real'; what one does not see does not exist. Is Google Earth the new world map, or rather a 'pornographic' representation or manipulation of a reality? Is Google Earth, in its methodology, not rather a reductionist, diagrammatic machine, albeit with extremely realistic images? Does the program allow actual navigation, or does it instead simulate a game of treasure hunt on a hyperrealistic Earth globe cleaned up and retouched like a model in a glossy fashion magazine?

One of the latest geographic applications launched by Google on the commercial market is Google Street View. Its objective is simple: making street-level images available. Using automobiles equipped with three cameras each (one

facing forward, one left and one right), every aspect of potentially every street in the world is being captured. These images are integrated into the online map database of Google Maps. Up to this point, Google has done this for a number of cities in the USA. This technology was previously used by companies who developed on-board computers with map files. The big difference with Google Earth, however, is that in the on-board computers, the collected data were reduced to abstract navigation information, on the level of 'impersonal' objects (streets, trees, houses, posts, and so forth). In Google, these abstract data are replaced by 'reality' images in which, for instance, people's faces are no longer blocked out. The aim of the whole process is to personalize our view of the world. Instead of generating an image from the outside to the centre, this program creates an image from the inside out.

Walking as a Navigational Tool
Although Google is making Herculean efforts to develop different navigation perspectives and related notation forms, from top-down to bottom-up, from visual to auditory, from static to dynamic, the persistent impression is that the system consists of a large, freely accessible database or library. One could consider the 'primitive' methodology of Belgian-Mexican artist Francis Alÿs as a radically opposite approach to this. Using the technique of walking, Alÿs has developed a number of 'works of art' over the last several years, products of intuitive or planned walks through cities in which various accidental discoveries were collected and/or clever, minimal traces were left behind in the landscape. Navigating, discovering and collecting and leaving behind a footprint across cities happen simultaneously and constitute the artwork. The obsession for scientific completeness and control is subordinate to the fascination and challenge of making the invisible visible through minimal identification, intervention and interpretation, according to an individual poetic method.

Alÿs has this to say on the subject: 'The initial concept for a project often emerges during a walk. As an artist, my position is akin to that of a passer-by constantly trying to situate myself in a moving environment. My work is a succession of notes and guides. The invention of a language goes together with the invention of a city. Each of my interventions is another fragment of the story that I am inventing, of the city that I am mapping. In my city, everything is temporary.'[2] However, the walk has additional significance for Alÿs. The temporariness is not aimless or devoid of questioning; it provides the room and freedom to re-orientate oneself and re-define things. 'To walk is to think, to think is to problematize, to problematize is to critically distinguish actions and objects from the rest of the already determined world. To think, however, is not necessarily to walk, although plenty of bipedal scenarists [...] have every-where used the pedestrian impulse as a guide to enlightenment and inscription. But, walking might be as close an identification as we might have to another; providing a quotidian and intimate identification with the other as well as, for Alÿs, a useful origin for creativity and empathy.'[3]

Acceleration Leads to Punctual Navigation
Objects and people have never travelled so quickly and so cheaply from their point of departure to their destination as today. They navigate across a city or a country, over the ocean, through the air or along digital superhighways with ever-increasing speed. The way in which they do this, the degree of mastery and the access to navigation increasingly determine, to a significant extent, the economic, political and social power position of something or someone within this 'new global competition'. The ultimate control over the route, and the speed with which it is traversed, causes the route itself to become of subordinate importance, placing an extremely exaggerated emphasis on the starting point and/or end point. The art of (re-)orientating oneself during a journey is vanishing. This reduces navigation to the observation of a starting point and an end point. The line, the plane, the zone become superfluous. Inevitably, this evolution is having an impact on the development of our cities, their architecture, the way they are experienced, and the way in which we move about in them.

Forms of Navigation Trajectories – 4 Frameworks
In terms of the trajectory, we might note the following navigational frameworks:
1. One navigates from a starting point to an end point past, between or over a number of points in a linear motion. The starting point and end point are different. This is probably the most common and familiar trajectory form. All the parameters (locations, speed, direction and obstacles) are known and under control. There are no surprises. What matters is reaching the end point; the route to get there serves as scenery; there is no interaction along the way.
2. One navigates from a starting point to an end point past, between or over a number of points in a circular motion. The starting point and end point are the same. This can increase the significance of the points along the way. Every intermediate point is a provisional end point and a new starting point.
3. One navigates from a starting point to an end point, but this end point turns out to be an intermediate point. Because of new impulses or unknown factors, one needs to re-orientate oneself in order to reach the end point from this intermediate point. A certain amount of creativity or anticipation is required. Navigation here is not simply a controlled orientation mechanism but also a system of discovering, analyzing, anticipating and retracing in order to move on.
4. One navigates from point to point. There is no starting point or end point. This is in fact no longer of any importance; there is now only a field within which an action unfolds. One needs to constantly re-orientate oneself, which is not to say that one is aimless. In this respect, we can refer to the work of Jackson Pollock, but also to the *dérives* of the Situationists. In the film made by Hans Namuth in 1951, Pollock made the following reflections on his 'action paintings': 'I do not work from drawings or colour sketches, my painting is direct. I usually paint on the floor. I enjoy [working] on a large canvas. I feel more at home, more at ease in a big area. Having the canvas on the floor I feel nearer, more being part of the painting. This way I can walk around it, work from the four sides and be in the painting [...]. The method

2 Ivo Mesquita's essay, 'Ways of Going & Encounters with Francis Alÿs', appeared in the art catalogue: *Francis Alÿs Walks* / Paseos**, p. 15. The quote of Alÿs was made in Mexico City, 1993.

3 Bruce W. Ferguson, 'Restless Productions', in: *Francis Alÿs Walks* /Paseos**, pp. 55–56.

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of painting has a natural growth out of a need; I want to express my feelings rather than illustrate them, technique is just a means of arriving at a statement. When I'm painting I have a general notion as to where I am about. I can control the flow of the paint. There is no accident. Just there is no beginning and no end. Sometimes I lose the painting. I have no fear of changes, of destroying the image. Because a painting has a life of its own, I try to let it live.'[4]

Precision versus Guesswork
Navigation originally encompassed meanings like discovery, exploration and mapping. The word is derived from the Latin *navis*, which means 'ship'. The definition of navigation is 'the skill or process of plotting a route and directing a ship, aircraft, etc, along it'. Because this meaning has been somewhat lost in recent years, the great diversity of navigation techniques and resources developed over the centuries seems to have been ignored as well. Without delving into the specifics of these techniques, we can state that throughout history and right up to today, there has been room for speculation and guessing. In their drive to master precision, humans have therefore evolved a methodology of multiple readings in order to serve one and the same objective. Exact science is supplemented with an intuitive interpretation or semi-scientific supposition. The phenomenon of people preferring possible incorrectness to a temporary and complete state of uncertainty is extraordinary, certainly if humans have identified mastery of precision as their ultimate goal. In this respect, the world of navigation may not be as unequivocal as it is currently presented and communicated. It may still partly embark on discovering, mapping and interpreting the unknown elements and phenomena that might crop up in the course of a journey. By interpreting these mechanisms and connecting them with what is known, voids can be bridged and filled in.

So although the drive towards the mastery of precision is taking on exagger-

ated importance in present-day navigation, there is also a role for a complementary technique, 'dead reckoning', which is far less accurate and is usually used as a back-up or supplement when primary navigation technology cannot be used or is inadequate (for instance, celestial navigation, or using stars, is impossible when the sky is overcast, submarines can lose radio contact, and so forth). Dead reckoning (DR) is the process of 'estimating one's current position based upon a previously determined position, or fix, and advancing that position based upon known speed, elapsed time, and course'.[5]

Navigation and Architecture
As architects, we deal with the three-dimensional, but we usually navigate through our own plans in a two-dimensional and unequivocal way. Models and computer simulations are used to research and represent three-dimensional qualities and spatial relationships, but they seldom manage to reveal multiple layers – geographic or not – in a design. When the time factor also needs to be considered, we are completely disoriented. An often-used method in the architectural design process is the implementation of a route or trajectory through a building. This makes it possible for the designer, the builder and the future users to navigate through a three-dimensional structure. Often this route is introduced purely from the perspective of spatial functionality or evacuation, in the process becoming a logistical and technical test of feasibility and applicable standards related to accessibility, evacuation and user-friendliness.

In his *Maison La Roche* in Paris, Le Corbusier developed a trajectory along a ramp through the exhibition space to the library, in which particular attention was paid to the spatial and aesthetic qualities of the journey itself. The *promenade architecturale*, 'a stroll through a building along highly varied perspectives with effects of light and shadow and views to the exterior',[6] became an architectural typology. In it, navigation takes place through a building along a specially designed

route with various resting points, and the deliberate objective is to create aesthetic added value and an experience of the space. Acknowledging, as a design parameter, the movement and perception of the human body through a building, and therefore its position in relation to various points as well, formed a departure from the primary functional route through a building, representing an extraordinary step in the evolution of architectural design.

Thus the emphasis is placed on being able to lose oneself in a collection of spaces, so that each time they are experienced differently. No clear-cut routing, but rather a voyage of discovery thanks to the multitude of possible trajectories. 'After each step, you should re-orientate yourself and readjust your objective or adapt yourself according to what you have discovered.'[7] Different physical and psychological forms of consciousness are being developed, creating a different usage logic. This turns navigation into a method of discovering and mapping unknown layers. Although this form of navigation initially proceeds from the labyrinthine space, it can also become self-sufficient as a method and be applied to what we would normally experience as apparently 'clear' space, suddenly imbuing this space with other dimensions. In this, the development of an individual system of notation and writing for each layer is critical. To this end, it is also imperative that the standard architectural idiom and architectural navigation toolbox is being questioned, or expanded to include other idioms that are already fully implemented within other art forms.

Intuitive Navigation Improvisations in studio Border Conditions
In music, improvisation represents the opposite of set or determined compositions. During a performance, the experienced musician is permitted to deviate from or improvise on a theme. In its most extreme form (free jazz), nothing is set in advance. One sometimes observes among classically trained musicians that the skill of improvisation has virtually vanished, even though historically it used to be part of mastering music and musical training.

Studio Border Conditions is interested and endeavours to become proficient in the art/skill of controlled and practiced intuitive exploration of urban spatial conditions –

without aiming to elevate this to a cult. Both intuition and improvisation are part of this discourse or research trajectory and strategy. Within studio Border Conditions, work does not merely take place along a linear time-space continuum; there is an effort to achieve a process of parallel investigation, not just based on a static approach but on a dynamic one, not just from a stable premise but always in an evolving or even unstable position. It might therefore be a challenge to develop new forms of navigation for this through research and the mapping of the 'unknown' using a unique methodology. These forms need not be limited to graphics; they could just as easily be developed using the notation methods and techniques of other disciplines (text, image, sound, smell, taste, and so forth).

In this, the studio joins a tradition of researchers in other disciplines who wish to question what is known and expand through logical or illogical rationalizations and actions that aim to open up new perspectives and perhaps discover new interpretations and readings. In doing this, the aim is not so much to deny the course of history, but rather explore as yet undiscovered paths. Both what has preceded, the past, and what is as yet unexplored, the future, are of importance in these investigations as they are interested in and open to the known and the unknown, the scientific and the unscientific, the traditional and the experimental, the clear and the unclear, the visible and the obscure, instead of relying on familiar methods. Care must be taken to not merely stop at amazement, but to strive for a fundamental, conceptual and sustainable implication of this research, even if this does not always lead to ready-made realistic answers.

Purity in thinking and action is not a pre-set goal; one should be more interested in clarity. In an analogy with a consommé or clear broth, this does not so much mean a process of purification, but rather following a course that leads to a clear end result, albeit with a complex, highly individual character. Scholars and students should be allowed to open themselves, without preconceptions or limits, to whatever information comes along, and to dare to make mistakes without embarrassment. For this reason, we should, as teachers, perhaps not hope too much that something happens, but rather dare to surf along on any potential wave.

4   Jackson Pollock 51, film by Hans Namuth, from: http://www.youtube.com/watch?v=CrVE-WQBcYQ.

5   http://en.wikipedia.org/wiki/Dead_reckoning, accessed September 2007.

6   http://users.compaqnet.be/cn117945/lecorb/index.htm, accessed September 2007.

7   François Roche, *Damn Magazine*, no.14, ARCHITECTURE: STRANGER THAN FICTION / FRANÇOIS ROCHE, 2007