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GUILLAUME GUERRIER, OSCAR ROMMENS AND MARC SCHOONDERBEEK

On Walking, Mapping and Drawing

The 'Moon Walk Mapping'

This article presents the mapping of the Moon Walk as part of an ongoing research project by the B&T research group in which a number of walks that have changed the course of the history of mankind are investigated and mapped.¹

Introduction

The relation between walking, mapping and architecture is a profound one, one that can be retraced in a wide variety of historical moments, with one of the most immediate of these references being walking as a practice that allows one to become bodily immersed in the spatial conditions and sequences of a given environment.² In a lot of cases, these spatially-informed walks are intrinsically connected to the elaboration and enfolding of thought processes (that is the walk as a form of contemplation and meditation).³

- 1 This research project was initiated by the 'Borders & Territories' (B&T) research group at the Faculty of Architecture of TU Delft. Especially the Border Conditions graduation studio has a longstanding tradition of walking as a means to investigate spatial (border) conditions in contemporary cities. Regarding these BC walking acts, see: Marc Schoonderbeek: The Microscope as Hammer. Mapping Border Conditions. In: Marc Schoonderbeek (ed.): Border Conditions. Amsterdam 2010, pp. 20–30; Oscar Rommens. Navigation without Limits. In: ibid., pp. 260–265.
- 2 See, for instance: Rebecca Solnit: Wanderlust. A History of Walking. London 2001 and A Field Guide to Getting Lost. Edinburgh/New York/Melbourne 2006 (originally published by Viking Penguin, USA, in 2005)). In Wanderlust, Solnit argues for the uniqueness of mankind to be located in the size and function of their brain (,consciousness') as well as the ability to walk up straight without additional bodily features (,walking'), pp. 32–33.
- 3 Geoff Nicholson: The Lost Art of Walking. The History, Science, Philosophy, Literature, Theory and Practice of Pedestrianism. Chelmsford 2010.

Walks, however, are not only philosophically relevant, but have also and always been militarily, religiously and politically important. That is to say, marches on the battlefield, marches related to some kind of worldly presence of the divine and marches that are the expression of a claim to power or of protests against power have been developed, throughout the centuries, into forms of mastery, whose prevailing effects have been historically decisive.4 Remarkably or not, it is only with the Situationist International that the spatial (or urban) walks themselves became theorized.5 The person committed to walking had historically been subject to much attention, as for instance Charles Baudelaire's 'Flâneur' would attest (subsequently aided by Walter Benjamin's projecting him as being the emblematic 'modern city dweller').6 The Situationists, however, were the ones claiming that the physical encounter with random situations through walking would allow one to be confronted with the urban spaces of everyday life, an encounter that supposedly countered the implied, controlled and forcefully projected experiences of urban planning, specifically geared towards the numbing effects of the spectacle.⁷

- 4 A beautiful example of the mapping of a military march are to be found in the canonical maps by Charles Joseph Minard, for instance the one depicting the losses suffered by Napoleon's army in Russia. See, for example: Edward R. Tufte: The Visual Display of Quantitative Information. Cheshire 2001, pp. 40-41. With respect to religious walks, one can think of the dichotomy between the Camino de Santiago (the pilgrim routes to Santiago de Compostela) and the Crusades aimed at liberating Jerusalem. A similar dichotomy can be observed in political marches, for instance in Mussolini's 1922 March on Rome and Martin Luther King's 1963 March on Washington (or Mahatma Gandhi's 1930 Salt March).
- Although one could argue that The Situationist International (SI) were only founded on 28 July 1957 at a conference in Cosio d'Arroscia (Italy) and came out of three smaller groups: the Lettrist International (LI), the International Movement for an Imaginist Bauhaus (IMIB) and the London Psychogeographical Association (LPA). Especially the last group, founded by
- artist Ralph Rumney, could be considered the true origin of the SI's interest in psychogeography and walking, though it remains unclear whether LPA ever existed and subsequently the relationship, and therefore also the historical sequence of ideas and events, between the SI and LPA remain equally unclear. The SI was officially disbanded in 1972, while the LPA was re-established in 1993. In the first pamphlet of the renewed LPA: We're Back. In: ALPAN#1, the LPA's first version was actually termed to be ,non-existent' at the time of SI's formation. See online: URL: http://www.unpopular.org.uk/lpa/ elpan001/001weareback.html (April 14, 2018).
- Walter Benjamin: On Some Motifs in Baudelaire. In: Hannah Arendt (ed.): Walter Benjamin. Illuminations. New York 1968, pp. 155-200.
- For a comprehensive overview of the SI, see: Simon Sadler: The Situationist City. Cambridge/London 1998. Guy Debord's philosophical take on the contemporary spectacle society is formulated in: Guy Debord: Society of the Spectacle. London 2003.



But Guy Debord's 'theory of the dérive' 8 left much to be desired for. For one, the intrinsic randomness of the 'dérive' proved only partially the case. For example, Debord's The Naked City illustration, which has become the emblematic image of the 'dérive', turned out to be strictly prepared a priori, with, surprisingly enough, no room for any kind of deviation. The guestion has also risen whether the change of knowledge and experience through the 'dérive' has produced the lasting impression that was claimed. Especially when relating the walking act to moments of contemplation and reflection, the need to somehow register the 'dérive' beyond the imprint it has on the brain and the body (and therefore on one's Being), and onto different forms of registration and documentation, has become apparent. By now however, this 'omission' seems to have been properly dealt with, when looking at the vast array of artistic works that have evolved around walking and resulted in a wide variety of cartographic registrations.9 It is here where our interest in the mapping of walks from an architectural point of view comes into play. In this particular research project, mapping is actually considered a spatial translation: in mapping a walk sequence (which simultaneously implies the notions of time and rhythm), the mapping would normally be considered 'merely' an understanding of the spatial/territorial impact of the walk, but here the mapping of the walk is a tool of uncovering as well as 'generating' spatial phenomena. The walk is an analytical instrument in both its active and passive form, whether for its explorative quality or its post-analytical emergence of insights: a conscious crossing of the territory towards a specific purpose (material or ideological), revealing phenomena along

According to Francesco Careri, "the first Dada urban readymade marks the passage from the representation of motion to the construction of an aesthetic action to be effected in the reality of everyday life". See: Francesco Careri: Walkscapes. Walking as an aesthetic practice. Barcelona 2002., pp. 68–118, quote from p. 70.

⁸ The 'derive' itself was defined as "a technique of rapid passage through varied ambiences" in: Guy Debord: Theory of the Dérive, cited in: Ken Knabb (ed.): Situationist International Anthology. Revised and Expanded Edition. Berkeley 2006, p. 62. A similar definition had previously appeared in: Definitions. In: The first Internationale Situationniste journal. 1958. See: Knabb (ed.): ibid., pp. 51–53. The original emergence of the 'dérive' is located in the 'visit' of Dada and the 'deambulation' of the Surrealists.

⁹ See, for a proper overview, for instance: Karen O'Rourke: Walking and Mapping. Artists as Cartographers. Cambridge/London 2013.

the way, processes and characteristics of said territory in relation to its human content. It is this understanding of the relation between walking and mapping that the research will ultimately harness through the conceptualization of the walk's 'spatiality' in conjunction with the insight into specific historical events.

Walking

The premises of this research project, then, is the understanding that when a 'critical mass' of people (sometimes a handful, sometimes millions) start to walk in another, an unexplored, a wrong or even a random direction, it can destabilize and fundamentally alter a region, a nation, a culture, a continent, the world. Walking is movement with purpose and therefore imbued with meaning, so much so that an entire lexicon around the term walking has been developed: procession, ritual, march, pilgrimage, etcetera. There is a long tradition of walking in support of or simply reaching a certain goal. These goals can be material in nature (reaching a target), leading to targeted forms of exploration (military conquests) or it can be ideological in nature (achieving something), resulting in procedural walks where the act itself becomes part of the goal, such as religious pilgrimages, political marches, artistic performances, manifesto movements and the like. The walk can take many forms, and almost always results, minimally at least, in an absent-minded understanding of space. In architecture, which is after all the discipline on space, walking has been intensely tied to spatial movement, namely through the bodily experience of passing through space. Space is intrinsically dynamic, if only because of the fact that one almost never experiences space statically or in stasis. The 'promenade architecturale', first formulated as a concept within Le Corbusier's work, has been an example of an architectural principle, or guideline, of a spatial experience turned into a spatial organization. 10 Shaping the built environment in function of creating a

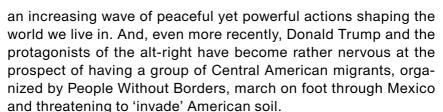
¹⁰ Flora Samuel: Le Corbusier and the Architectural Promenade. Basel 2010.



desired perspective, a desired spatial way of approaching and a desired framing of a view, in turn determines a certain way of relating to the built environment and projecting back onto it what has been observed. In his study of the Parthenon route, for instance, August Choisy revealed the conscious arrangement of architectural objects and their bespoke design in support of a religious procession. The Athenian Acropolis is not an ensemble of buildings, but the delicately designed scenographic support of a spiritual walk. 11 From then onward, the relation of walking and space has been reiterated throughout history in this continuous informational loop where one keeps determining and reconfiguring the other. Walking shapes space and territory, which in turn shapes the act of walking. But ever since the Situationist International developed their exploratory 'dérives' in the 1960s, the walk has additionally become a counter-act against the practice of top-down planning, which is criticized for disregarding the specific wishes of locals. The 'dérive' is a manner of slowing down, allowing one to absorb things, rediscover the known and to create a sense of awareness (emotional, intellectual, spatial), but also a highly ideological act cultivating forms of resistance and/ or probing of spatial alternatives.

Extending this discussion beyond architecture, it is clear that walking is having an impact on our world today. The 'refugee crisis' that emerged in Europe in recent years is one example of how the simple act of walking can have such an incredible spatial, social, economic and political impact. Even more recently, the act of walking in protest has been very prominent, with women marching across the US in protest of recent events, people marching in Poland for freedom of speech and women's rights, Israeli and Palestinian women walking jointly in a collective effort for peace, people marching in Bucharest for democracy,

¹¹ Auguste Choisy: Histoire de l'architecture, Paris 1899. Also discussed in Le Corbusier's Vers une architecture (1923) where Le Corbusier almost shamelessly reproduced Choisy's drawings, without properly referring to him. See: Le Corbusier: Towards a New Architecture. London 1987, pp. 43, 52.



Within this context one starts to wonder whether one can be more specific in describing and theorizing the spatial and architectural impact of such a powerful form of human 'expression'? What are the effects of these walks on our physical surroundings? How far, how strong and how long do they impact? Our research project attempts to give an answer to these questions using mapping as research methodology and applying it to a number of historical walks in order to uncover their inner mechanisms and their spatial impact. Accordingly, mapping and walking are used as two crucial interrelated means of understanding human history. While research into walks or mapping has been done before and is continuing at present, to our knowledge the interdependency of the two has never been explored as an instrument towards understanding social, political, architectural and historical events. 12 lt is also, as far as the research group is aware, the first time there has been an attempt at spatializing historical events, at looking what spatial and material impact the presence of the human body has had in and on the territory and, in addition, to conceptualize this impact. 13

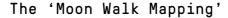
12 Timothy Shortell and Evrick Brown's important book: Walking in the European City, discusses the importance of the act of walking in urban developments, but their forms of registration remain mostly limited to photography and an occasional indicative map. See: Timothy Shortell and Evrick Brown (eds.): Walking in the European City. Quotidian Mobility and Urban Ethnography. New York, London 2014.

13 One could argue that contemporary technological means (GoogleEarth, TomTom, CIS/ GPS tracking or even the playful ,dérive'-app (the Urban Exploration App that "gets you lost in your city and lets you share that experience with others")) achieve to draw a connection between the map and the walk, but we would argue these are 'merely' forms of registrating one's movements and do not address the intricate difficulty of relating particular forms of registration with forms of documentation. With respect to a discussion of the various forms of digital mapping, see for instance: Mike Silver and Diana Balmori (eds.): Mapping in the Age of Digital Media. The Yale Symposium. Chichester 2003.



Under the title Mapping Walks that Changed the Course of History, the research team has therefore selected a number of walks. which will be translated into mappings in order to offer a reading of the underlying spatial processes encapsulated. The aim is to cover a wide range of walks in order to fully explore the potential of the walking-mapping instrument as well as evaluate the impact of walking on several scales of the territory. The relation between walking and mapping has emerged as increasingly obvious as well as increasingly complex. The process of typifying the walks revealed a number of possible classifications and a revised short list of relevant historical walks. In conclusion, the walks were perceived from two standpoints, namely an ideological and a physical one. The first addresses the nature of the walk, allowing for a classification of walks based on their purpose or aim (or lack thereof): political, religious, artistic, etc. The second deals with the spatiality of the walk, its territorial reach or ambition, its explorative character. In the end, this preliminarily resulted in the following walks considered to be relevant from a historical point of view and representative for their particular phenotype - a specific combination of purpose and spatial expression:

The Moon walk	Non-walk	Extra-terrestrial
Trilogy of Gus Van Sant	Narrative walk	Scenographical
Salt march	Political walk	Regional
Balkan route	Migrant walk	(Inter)Continental
Death row walk	Last walk	Internal
Crossing the Red Sea	Religious walk	Territorial
A line made by walking	Artistic walk	External
March on Washington	Growing Walk	National



The Moon Walk Mapping, which is classified as being an 'extra-terrestrial' 'non-walk', deals with a highly prepared and controlled walk, probably the most anticipated and watched walk in history. The moon walk was made on 21st of July 1969, when Armstrong started the official protocol at 02:39 UTC. The walk was the concrete result of an eight-year NASA research program, Project Apollo, initiated by President John F. Kennedy with the explicit goal of "landing a man on the Moon and returning him safely to the earth" by the end of the 1960s. One of the main goals was to show the US supremacy in spaceflight capability during the Cold War and the Space Race. During that preparation period, a series of calculations, tests, rehearsals and tries had been made. Nothing was left to chance for this journey and every known and unknown aspect of the space travel carefully examined and rehearsed. Different alternatives were envisioned according to various conditions and scenarios, during the lift-off phase, the space travel as well as the actual visit on the moon. After a careful lunar surface analysis of the near side of the moon, zones of interest along the equator were defined as potential landing sites. The selected one was IIP2 in the southern Mare Tranquillitatis. which was characterized as being flat and smooth.

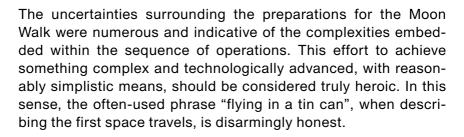
While scientists prepared this space travel, the two astronauts, Neil Armstrong and Buzz Aldrin (Michael Collins, the third astronaut, was scheduled to operate the Columbia, which was to remain in the moon's orbit), prepared their Extra Vehicular Activity, the Moon Walk. Over a period of six months, and under different conditions such as in a studio, under water, in the desert, they repeated all the actions they would have to accomplish on the lunar surface. Not only how to conduct the lunar experiments but also how to make it visible to the world. They actually orchestrated a scenography where the observer would be part of that experience. Placing the camera at the right position to record the egress and the walk, how to place the feet on the surface of the moon or how to unveil the commemorative plaque and to deploy the US flag. In this sense, the actual walk became the exact



mirror-image of the prepared walk. In order to achieve this, four different timelines were elaborated, based on different environmental restrictions. These protocols, describing a set of actions to be made in a specific sequence, were set down to the minute. Each of the astronauts had their own timeline to execute and some correlation occurred between them. The spatial set up was made in a studio at the Kennedy Space Centre in Florida. Zones had been determined in order to conduct the different experiments and avoid interferences between them.

For the production of spatial representations of the different protocols, a careful reading of the different timelines has been carried out in order to spatialize them in the mapping. The four protocols prescribed (1) a contingent timeline with minimum time for one man (the only astronaut to walk is, in this case, strictly limited in time and space); (2) a contingent timeline, with a two hours walk for one man (while time expands, the walk extends, the set of actions augments and the spatiality increases); (3) an alternative timeline, with maximum time for both men (the two astronauts acquire the full potential of the mission, 2h40min, and can use the entire spatial set-up. The only time restriction they had was the space suit, as they did not know how the space suits would handle the extreme temperature on the moon); and (4) the nominal timeline, with maximum time for both men (this is the protocol they actually followed during their extra vehicular activity. An over-planned set up which strictly focused on scientific experiments: specific tasks, to a specific location at a specific time).

When we look at the actual walk, we witness a certain perfection in the execution as it is neither a linear line nor a normal walk, and it is influenced by the divergent gravity and the heavy equipment. Yet, within this highly controlled walk, a 'dérive' occurred, namely a moment of deviation from the strict guideline as Armstrong ran over to a crater. What in this particular case defines the walk is its physicality. In that peculiar situation, the walk became mental and was thought through in order to become pure execution. It indeed became mechanical, but still: one deformation, one stretch occurred making it a topological spatial walk as well.¹⁴



Drawing

The Moon Walk Mapping, presented here, is the result of a process of drawing spatial information that was historical, well documented, and full of anticipations and expectations. The process of mapping the whole endeavor has had their intrinsic problematics and considerations, which were partly sketched above, but the act of mapping itself, the act of drawing the intricacies, nuances and complexities of the multiplicity of aspects related to the NASA Apollo 11 project has also produced some important insights into the more theoretical reflections on the act of drawing in general. A few of these will be discussed and elaborated here as a form of conclusion, as they ask for, in our opinion, a critical and quite radical reconsideration of the act of drawing in general, and for architecture specifically. These radical reconsiderations deal with insights into [1] the various relationships between the body, the image and the eye; [2] of movement; and [3] of a place really located 'outside'.

14 For the compilation and drawing of the Moon Walk Mapping, the following online sources were used, all accessed in the period between March and August 2017. URL: https:// www.honeysucklecreek.net/msfn_missions/ Apollo 11 mission/hl apollo11.html Apollo Flight Journal: https://history.nasa.gov/ afj/ap11fj/index.html; https://www.hq.nasa. gov/alsj/a11/a11.html; Training: https://www. theguardian.com/science/video/2009/jul/02/ apollo-11-astronaut-training-moon; https:// www.theguardian.com/science/gallery/2009/jul/02/ apollo-11-moon-landing; http://www.dailymail. co.uk/news/article-2252168/Preparingmoon-walk-The-ridiculous-ways-astronautsprepared-significant-moment-history.html;

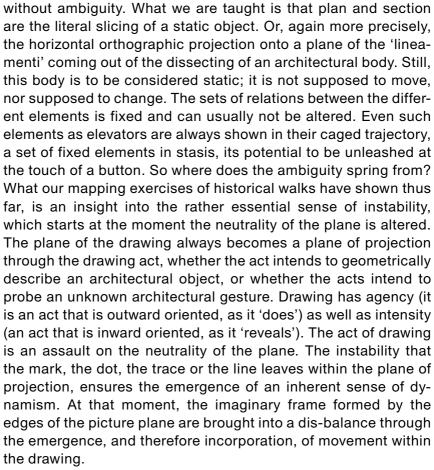
https://www.wired.com/2011/07/moon-landing-gallery/; Landing sites coordinates: https://www.lpi.usra.edu/publications/slidesets/apollolanding/; https://www.hq.nasa.gov/alsj/alsjcoords.html; Pictures: https://pics-about-space.com/nasa-apollo-1969-moon-hollow?p=2; https://www.nasa.gov/multimedia/imagegallery/image_feature_1134.html; https://www.nasa.gov/mission_pages/apollo/apollo-11.html; https://www.hq.nasa.gov/alsj/a11/images11.html#69H666; Sequence of actions: https://www.hq.nasa.gov/sP-4029/Apollo_11i_Timeline.htm; Videos: https://www.youtube.com/watch?v=6GtCvZIXeVk.



To state that to draw is to construct meaning is perhaps too much of a platitude. There is, indeed, a re-presenting that occurs in the act of drawing, a re-emergence of the object (or thing, or condition), which is like a repetition that is not in line, not quite at least, with its origin and its original. 15 In the particular instance of the Moon Walk Mapping, however, there is also a sequencing of events, an unfolding of time, a bending of the space-time continuum and an abundance of various movements that had to be incorporated. During the act of mapping/drawing, the body produces the drawn representation, most likely through hand-eye coordination, but not necessarily. In this particular case, however, there is also a doubling that takes place. The act of drawing is a bodily engagement with the depicting of the three bodies, contained in several vessels, moving through space, along curved trajectories and under the influence of gravitational fields. If the image that is produced during the act of drawing "belongs to the eye", the "corporal subjectivity of the observer" becomes "the active producer of an optical experience", as Jonathan Crary has described. 16 The expression 'the mind's eye' can thus be taken literally: there is not necessarily a correlation between what one 'sees' and what there 'is', one produces such correlation. There is, however, also a sense of completeness, a simultaneity almost, of visual sensual experience: the idea that a totality of bodily functions co-operate towards the establishing of a visionary experience in and through the drawing. Input, or stimulus, is thus connected to process and processing (as bodily act), with the result that the usually conceived neutrality and absolute autonomy of vision in drawing is replaced by temporality and relativity. The act of drawing is not the laying out of an a priori vision. but emerges out of the bodily engagement in the act of drawing. As we all know, even if only intuitively, the use of drawings in architecture is not without controversy or, more precisely, not

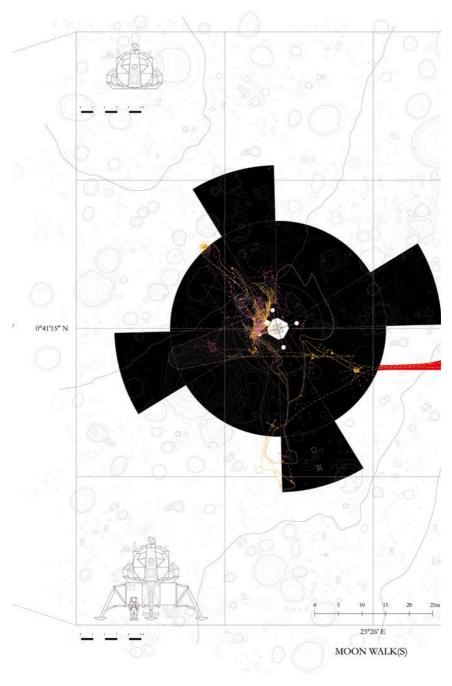
¹⁵ Edward Casey terms these acts 're-implacements', thus connecting the act of drawing to an understanding of place. See: Edward S. Casey: Representing Place. Landscape Painting and Maps. Minneapolis, London 2002.

¹⁶ Jonathan Crary: Techniques of the Observer. In: October 45 (Summer 1988), pp. 3–35. Quotes from p. 4.



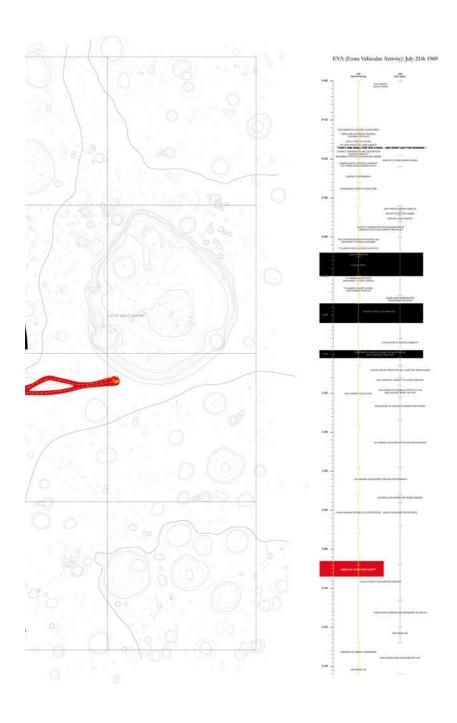
The essential act of the 1969 Moon Walk is located in the relating of an 'outer place' with carefully calculated movement. The way or path to reach it, was an unprecedented blind thrust into space. This is precisely the contradiction embedded within the Moon Walk. For to walk, is to move toward a designation located in a place, a move from place to place. And that path is either decided upon (planned, necessary and fixed) or intuitively navigated (not planned, not necessarily necessary and not by default). Entering and leaving, arriving and departing are therefore part of walking (as with architectural drawing for that matter). Both in walking





• Abb. 1: The Moon Walk. CAD-drawing (59,4 x 270 cm): Marc Schoonderbeek, Guillaume Guerrier, Oscar Rommens, 2017







and in drawing, one is always 'under way'. There is an interesting distinction, made by Heidegger and repeated by Derrida, between the notions of 'odos' and 'methodos'. Within this distinction 'odos' is considered to be 'a way' or 'a path', and 'methodos' the technique or procedure used to gain control of the way, which would ensure its success or at least increase the probability of its execution. 17 As discussed, the basic characteristic of both walking and drawing is movement. Through this 'way' embedded in both acts, any walk and any drawing indicate infinity where one is thrusted into a projective act. Architecture is therefore actually more 'odos' than 'methodos'. Namely a 'way' in which all one can 'know' are the traces revealed through the path. One thus enters into a new relationship between surface and space. Architecture is now no longer the translation from the lines in the drawing to the material/physical construct. 18 Architecture engraves, inscribes but also constructs and spatializes. The movement of the way, the restlessness of the world, becomes the very state of architecture.