

05.2016

Vol 14

Studies in Material Thinking

EXPERIENCE/MATERIALITY/ARTICULATION

PAPER 01

A Case of Poetic Measuring: Isopleth

AUTHOR(S)

Wim Goossens, Arnaud Hendrickx, Nel Janssens

ABSTRACT

In this article we explore the potential strength, relevance, usefulness and qualifications of poetic measuring within the context of architectural research. We compare conventional understandings of measuring in architecture which rely on the unification of disembodied observations with a complementary form of measuring that relies on the differentiation of embodied experiences gained through physical interactions with matter and materials. In order to foreground some of the marginalized aspects of the act of measuring we take as point of departure the design project 'Isopleth' and carefully unravel the different, intertwined dimensions that lead to an enriched experience of measuring. We suggest that poetic measuring can be effective for differentiating between qualitatively different experiences by using more complex referential units based on memories, perceptions and embodied experiences. In these complexified referential units the notion of encountering becomes paramount. To investigate this, our research practice focuses on the potential of architectural constructs in staging encounters that allow for the poetic way of measuring to become a full-fledged part of research in architecture.

KEY WORDS

poetic measuring, embodied experience, empirical case study, artefactual agency, staging and staged encounters, Isopleth.

STUDIES IN MATERIAL THINKING http://www.materialthinking.org

ISSN: 1177-6234

Auckland University of Technology First published in April 2007, Auckland, New Zealand. Copyright © Studies in Material Thinking and the author.

All rights reserved. Apart from fair dealing for the purposes of study, research, criticism or review, as permitted under the applicable copyright legislation, no part of this work may be reproduced by any process without written permission from the publisher or author. For permissions and other inquiries, please contact the Editor: smaterialthinking@aut.ac.nz>

STUDIES IN MATERIAL THINKING is a peer-reviewed research journal supported by an International Editorial Advisory Group. The journal is listed in: the Australian ERA 2012 Journal List (Excellence in Research for Australia); the Danish Bibliometric Research Index; and the Norwegian register of approved scientific journals, series and publishers.



Figure 1 / Isopleth (2014). General view, early autumn 2014. Photo by Arnaud Hendrickx.







Figure 2 / *Isopleth* (2014). General view, early spring 2015. Photo by Mattias Staelens. Figure 1 / *Isopleth* (2014). Detail, late autumn 2014. Photo by Wim Goossens.



INTRODUCTION

In this article we explore the potential strength, relevance, usefulness and qualifications of poetic measuring within the context of architectural research. A number of experiences with architectural constructs made us question the dominance of conventional measuring as a disembodied act at the expense of dimensions of measuring that are related to more embodied experiences.

We became curious about a particular agency in our 2014 design project *Isopleth* and developed an intrinsic interest in this project as an empirical case in point. To quote Robert Stake, we describe the work we present here as an 'intrinsic case study' (Stake, 1995, p. 3).

The limitations of the scope of this study are broadly defined by the design and execution phase of *Isopleth*. The focus of the study is on aspects of the act of measuring that tend to escape articulation. We approach this by departing from standard constructions of measuring—and consequently unravel different, intertwined dimensions that lead to an enriched experience of measuring. This 'unravelling' is reflected in the lay-out, which consists of four types of discursiveness that together form a multilayered account of the exploration we undertook. One layer consists of images that show the artefactual dimensions. A second layer (red text) describes the 'coming into being' of the project from a real-life experienced perspective. A third (grey background) comprises a glossary of key terms which are analytically and descriptively explained. A fourth relates some of the findings to other examples and broadens the context of poetic measuring.

As such, we establish a close reading of one case from which we distil three perspectives on measuring: observational, procedural and operational. These perspectives respectively address three key components of poetic measuring: the referential unit, the measuring process and the articulated measure. This reading concludes with a discussion of the main characteristics of poetic measuring distilled from the above.

Figure 4 / Isopleth (2014). General view, early autumn 2014. Photo by Arnaud Hendrickx.

ISOPLETH IN WORDS INTENSIVE DESCRIPTION

Isopleth is a sculpture that sits as an artificial autopoietic stratum in the micro-topology of its surroundings. It consists of a slightly black-pigmented and lightly-reinforced polished concrete slab in appearance a flat 'puddle' of concrete in a field adjoining a quasi-derelict castle. The shape of this seemingly random puddle is determined by the subtle differences in relief within the muddy terrain. As such, *Isopleth* physically materializes the abstract idea of an *isopleth* (i.e. a height, or contour line). Mapping these lines is fundamental to architectural practice since they are the reference units for understanding the topography of a particular site

As a sculpture, *Isopleth* can be understood as the endpoint of a process of measuring which incorporates both conventional and unconventional ways of reading and designing the physical environment. As a landscape intervention, it becomes the starting point for appropriation. As architecture, it can be understood as a foundation for a construction or as a stage for activities and performances to happen.



Volume 14

ISOPLETH: STATISTICS AND PEOPLE EXTENSIVE DESCRIPTION

DIMENSIONS

Area	45.05	m²
Perimeter	37.56	m
Length	11.14	m
Thickness (avg.)	22.12	cm

WEIGHT

Concrete (total)	25,000	kg	(10m3)
Cement	3,250	kg	(130 bags)
Sand	6,600	kg	(5m3)
Gravel	13,00	kg	(7.5m3)
Water	1,600	kg	(1.60m3)
Steel	200	kg	
Pigment	20	g	

POSITION

Horststraat 28, 3220 Holsbeek, Belgium. Centroid situated at 50°55'58.1'N 4°49'56.6'E Altitude +26.22m (surveyor) / +29.66m (smartphone)

TIME

Execution: 4/09/2014-10/09/2014 Launched on 12/09/2014—the first day of the inaugural Horst Art and Music Festival (www.horstartsandmusic.com). Permanently accessible.

PEOPLE

Curators of the Horst Art and Music Festival: Mattias Staelens / Gijs Van Vaerenbergh. Isopleth designers: Wim Goossens and Arnaud Hendrickx.

Isopleth executed by Wim Goossens, Arnaud Hendrickx and contractor MEG nv (Stijn Bogaerts).

COST

3,500 € (incl. 210 € VAT)

Project supported by the research platform of Architecture and The Arts (OPAK), KULeuven, the Horst Art and Music Festival (Onkruid vzw).

POETIC MEASURING THE HUNCH

Over the past years we have executed a number of architectural constructs, more specifically a series of site specific interventions and installations, as part of our research practice. We engage in the making of these constructs as a method of probing the fundamental functioning of architecture (Hendrickx, 2012). We activate them in research to offer us a very concrete and materialised medium for the invisible forces, the intangible experiences and the abstract ideas (conceptualisation) to come into being and to become intelligible through the act of form-giving.

We would like to qualify the approach we present in this paper as being both empirical and speculative in nature. Our approach is empirical in the sense that we base our reasoning mainly on the structuring of our observations of (and experiences with) a project we designed and (unusual for architects) executed ourselves. Seen as a series of experiments, this self-build execution became the primary source to reflect on the notion of poetic measuring because of the embodied and direct feedback it gives to the designers.

In the course of executing these experiments, we gradually identified a recurring theme in our work. It became apparent that we had embarked on a search for the knowledging potential of material artefacts. More specifically, we were looking for a research approach in which material artefacts are used as catalysts or actors in a process of embodied exploration of specific experiential qualities present in the artefacts themselves and in the context in which they are placed. In a first attempt to capture the specificity of this Initially, working with the architectural constructs resulted in approach we intuitively named it 'poetic measuring'. This act of a strong hunch-namely that we were actually constantly engaging naming is not categorical but operational. It is intended to facilitate with a poetic form of measuring. The issue was that this type of measuring, although omnipresent, remained unarticulated and a *prise de conscience* by turning more unconscious processes into more conscious ones. The intuitive naming also enables a contexthat this hampered its potential as research approach. Once a first tualization by identifying similar and contrasting approaches in articulation happened-through the naming-we could speculate earlier works by ourselves and others. We considered 'naming' to be further: Could this poetic measuring be a way to capture more the first step towards a framing and a deepening of the concept by adequately the so-elusive embodied experiences that are quinmore consciously implementing the approaches in new reflective tessential when conceiving, making and encountering material and creative actions. artefacts? Does this notion have the potential to be developed into a full-fledged part of architectural research? Can architectural constructs play a pivotal role in staging encounters that involve poetic measuring?

Figure 5 & 6 Top: situation plan of the site at Horst Castle, Bottom: as built plan of the concrete slab. Created on the basis of areal view pictures

Given the speculative nature and the intrinsic case study approach, the scope of the study is not to achieve an entirely new understanding but rather a refinement of understanding. The purpose of this paper is not to offer 'grand generalizations' (Stake, 1995), but instead to evolve from a hunch to a more informed intuition and eventually a clearer statement about the nature and potential of poetic measuring in architectural research. We therefore decided to develop a 'close reading' and 'thick description' of one particular project (i.e. Isopleth) as, according to Stake:

The real business of case study is particularization, not generalization. We take a particular case and come to know it well, not primarily as to how it is different from others but what it is, what it does. There is emphasis on uniqueness, and that implies knowledge of others that the case is different from, but the first emphasis is on understanding the case itself. (Stake, 1995, p 8)

Lastly, we do not aim to rigorously test the analytical thesis against philosophical, historical or theoretical concepts but rather consciously choose to speculate, in the sense of 'expressing inquisitive interest in and developing a tentative insight into' the notion of poetic measuring. References to theorists and other projects then appear in the text more associatively than analytically and they serve mainly to trigger, inspire and enhance the quality of speculation.

ON MEASURING BASE-PROCESS-SURFACE

In very general terms measuring can be defined as an operation by which we relate a property of something with a property of something else. For example, we measure the length of a wooden beam by comparing its length with the (known) length of a tape measure. The relation between the two properties involved in the measuring process is then expressed in a measure. The known property that one implements to probe the property of something that is measured serves as a reference or a base for the operation and is often referred to as the referential unit.

Basically, measuring entails activities of measuring, instruments for measuring and units of reference. In the context of our investigation on poetic measuring, then, we are prompted to remap these different aspects in terms of poetics. From our experiences with architectural constructs we would then intuitively and hypothetically say that poetic measuring frames encountering as an activity of measuring, the body as an instrument for measuring and embodied memories of earlier experiences as units of reference. This is further explored in the close reading of the Isopleth project.

As a starting point and structure for our analysis we suggest that measuring consists of at least three overlapping strata: a base—a known property of something that is in some sense comparable to that which one wants to measure; *a referential* unit, a process—the actual relating of a property with another (known) property; measuring, a surface-the expression of the relation between the two properties involved in the measuring process: a measure. These three strata will be further elaborated below.







Volume 14

The Referential Unit



Figure 10 / Simon Ashmore (November, 2014). A box of Memories I (Childhood) Reproduced with permission.

SCENE1 A FIRST ENCOUNTER WITH THE SITE

A rainy day in August—we visit the site of a medieval castle in Holsbeek (B) where the Horst Arts and Music Festival will take place. We had been invited to contribute to the festival with an artistic intervention. While wandering the flat lawn in the surroundings of the moated castle, we discuss the feasibility of carrying out a former design concept of a heated floor in this context:

'What about our heated floor in this context; this seems like the ideal condition for this design? It can become a performance stage with a view on the lake. The heating will make it perceive as a comfort-zone in the festival on parky evenings: the perfect condition for a cosy and chummy open-air concert.'

'The nearby water plane will make it an evaporation machine in the morning, producing a mysterious intensity of mist in the landscape.'

'On snowy days, the floor will appear as a geometric figure in the surrounding white carpet. It will demarcate a zone where it is relatively comfortable to stay. It would be nice to organize an open air lecture in the winter over there.'

'If we stick to that idea, we will have to make a thermographic areal picture from the site.'

Although we came up with the idea for a totally different situation, in this context the design soon became a reference for horizontality and a generic floor.

'Do you think the terrain is flat?'

'I guess so.'

'Which side of the road would be preferable to locate our floor?'

A temporarily levelled-up road manifestly splits up the site in two parts.

'Well over there, the terrain is clearly ascending towards the trees, probably due to the roots in the underground. Moreover, I have the impression that the terrain is also gently descending towards the mere.'

'As long as it is inclined as a whole, there's no problem for the floor I guess. But - having a closer view – isn't it rising the other side of the road again too?'

'If you ask me, it is. A difference of height of about 40cm compared to our position here, I assume.'

In the meantime, rain starts ponding. Shallow puddles indicate that the terrain is little permeable to water. We decide to return in dry weather conditions for measuring some height levels by means of a precise digital siphon to get a better grip on the relief of the terrain. Pending more details, we start elaborating the idea of the heated floor on the technical level.

SCENE 2 A SECOND ENCOUNTER WITH THE SITE

Second visit of the terrain—we install the digital siphon intuitively on the spot where our previous conversation took place, turning the point of reference of our observations into the datum for an objective measuring. The process of disembodied measuring by means of a precise digital siphon gradually reveals unperceivable and unpredictable structures in the micro-topology of a plain.

'336mm.'

- 'Above?'
- 'Below!'

A difference in height of 75cm between the objective measure and the perceived embodied topology on a distance of 100m suddenly turns the seemingly horizontal grassy surface into a terrain with 'important' relief.

- '312mm; 308mm; 381mm.'
- 'That's horizontal.'

'Too much difference to pour a concrete slab in situ without a mould.'

'336mm.'

'That's the same level as our first measuring point. Can you find others?'

Neutral point-wise mapping of heights passes into an intentional exploration of the site because we start focussing on mapping evenness instead of difference. From now on, we can only think of the landscape as in a terrain model: a stacked pile of horizontal planes circumscribed by contour lines.

'Maybe we should respect what the terrain dictates us and take a contour line as the shape of our floor? Just pouring concrete in a depression of the terrain and it will shape itself respecting the surrounding relief of the landscape.'

'Like a concrete puddle?'

'It reminds me of the Ancient Theatre of Delphi with the hills as an almost natural encircling tribune. As a matter of fact I think this floor will have the potential of a stage too. It will join people on the floor and others looking at them from the border as if they were actors and public.'

Touched by the idea of an autopoietic floor using a contour line in the landscape to create a perfectly horizontal surface, we decide to abandon the idea of a heated floor.

SCENE ANALYSIS OBSERVATIONAL SCENE

Scenes 1 and 2 describe observations by which two architects try to understand a site. In the case of *Isopleth*, the architects act as observers who concentrate their perceptions on the topography of the site. In doing so, they come across observations that conflict with earlier observations. These conflicting observations require a slight accommodation of their initial mental schemata of the topography of the site. Speaking in more general terms we could say that new observations recalibrate earlier experiences. Earlier experiences constructed a mental schema in the mind of the observer that acted as a reference for new experiences. Hence the calibration reference is mainly situated in the mind of the observer.

Observational Scene: A scene in which an observer plays the leading part by making new observations that force him/her to accommodate his/her mental scheme of something, could be called an *observational scene*. In this scene embodied memories of earlier experiences occur as units of reference that might be subject to change.

Referential unit: The observational scene sketches a specific *referential unit.* A mental image based on earlier observation becomes a referential unit for new observations. A new experience is related to existing experiences and in that sense is measured against an implicit expectation.

Physical interaction: The observational scene sketches a process of gaining embodied knowledge by observations that require a *physical interaction* with the site. Observation of the topography of the site requires an actual presence on the site to the observer to walk around on the site, take different points of view, and compare them.

Affordance shift: The observational scene sketches the process of gaining the insight that the terrain does not afford casting a rectangular flat concrete surface without the use of formwork.

Encountering: The observational scene sketches a specific encounter. Through observation, a shift in the experience of a specific site or context occurs.

ENCOUNTERING THE PRIMARY STRATUM OF POETIC MEASURING.



Figure 11 /

'Fallen Monarch', September 15, 1911. Mariposa Big Tree Grove, Reproduction Number: LC-USZ62-135806 (b&w film copy neg.), Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA. Retrieved 21 September 2015 from http://hdl.loc.gov/loc.pnp/pan.6a02211. As described above, in the context of poetic measuring, embodied memories of earlier experiences act as units of reference. From Scene 2 (about recalibrating earlier experiences when confronted with the particularities of a site and the discrepancies between embodied and disembodied measuring), we learn that 'encountering', as the poetic translation of the activity of measuring, is strongly related to the referential unit we defined.

To extrapolate, we internalize our knowledge of our environment and how we personally relate to it by means of cognitive structures schemata—that originate from action in this environment. According to Jean Piaget, linking knowledge and action creates 'equilibration' (Piaget, 1952/1998): that is, a constant dynamic and bi-directional process that aims at attaining a balanced relation between internal schemata and experiences resulting from actions. This way our brain does not form representations of the world, but rather of our interactions with the world. This interaction is always mediated by the body, which is always implicitly present in mental representations—in this sense all aspects of cognition are shaped by aspects of the body.

To further extrapolate, an encounter is an event that causes a sensation that doesn't fit any empirical category of recognition. It disrupts our system of knowledge. It puts to work all our faculties of sensation, memory, imagination, and thought (thereby generating embodied experiences that can start operating as referential units). A moment of creativity where our conceptual framework is reframed, takes place. This moment of affirmation and sense making can be described, in Deleuzian terms, as 'Something in the world [that] forces us to think [and is] an object not of recognition but of a fundamental encounter.' (Deleuze, 1994, p 139) According to Gilles Deleuze, the processes that characterise human experience are simply the extension of processes similar to the intensities and material forces around us (e.g. magnetic fields or sound and heat waves). They are of the same order and hardly differ. Vibrations affect our physical body and extend into the nerves and cortex, ultimately diminishing or heightening our capacity to act. By habit or routine, we structure this ever-changing field of raw intensities that affects us. We form cognitive structures that filter the continuous stream of Herakleitos in order to stabilise ourselves within the chaos of a field of raw intensities. These cognitive structures assist us in aligning our faculties, aligning experience with memory, reason, and intuition.

Here Deleuze and Guattari see an important role for art afforded by its potential to create sensory aggregates that stage these encounters. An encounter with a 'bloc of sensations...a compound of percepts and affects' (Deleuze & Guattari, 1994, p. 164) might destabilise our faculties and beckon our sensibility to grasp intensities. It opens us up for new experiences (or thoughts) that bypass the passive assimilation or recognition of what we already know, and forces us to actively accommodate our conceptual structures. In Difference and Repetition (Deleuze, 1994), Deleuze looks for an encounter that triggers a sensation that cannot find the empirical category under which an object can be recognised and that consequently forces our sensibility to grasp the pure difference in intensity as the 'sentiendum' (Ibid., p. 140)-i.e. that which can only be sensed. As an example of such an encounter we present an image of a huge sequoia tree ('The Fallen Monarch') in an unusual position.

There are many elements in our environment that we perceive in a specific way: vertical elements like towers, cranes, electricity poles or trees are experienced by looking up from the ground to their unreachable summit. When we are walking through a forest and stumble across a huge tree lying by the road, we suddenly have a different bodily relation with the tree trunk. By walking along the trunk, our proprioceptive sense, informed by the feedback of our muscles, gives us new insights into the physical meaning of the height of a full grown tree. This embodied experience of one singular tree might then trigger an accommodation of our internal schema of all towers, cranes, electricity poles or trees and maybe even scale and verticality or length in general.

TAXONOMY (1 OF 3) CLOSE ENCOUNTERS OF THE FIRST KIND

Encountering: experiencing an event that requires that the observer accommodates his/her mental schema of a (volatile or diffuse) property of something. This experience entails the disruption of embodied memories of earlier experiences that act as a referential unit (see above) for the experience.

Actor: observer Action: experiencing Link with measuring: referential unit

Referential Unit: the base, a known property of something that is in some sense comparable to that which one wants to measure.

Close encounter of the first kind: the primary stratum of poetic measuring in the sense that it tries to capture the primary layer, the base mechanism present in all forms of poetic measuring. In this type of encounter the observer is the main actor. By encountering a specific spatial constellation the observer accommodates his/her mental schemata.

First kind, subtype A: the encounter is coincidental, triggered by experiencing a random spatial constellation.

First kind, subtype B: the encounter is staged by a designer, triggered by experiencing a consciously designed spatial constellation. Where in subtype A the setting is not staged, in subtype B it is the designer who implements staging the encounter as a design tactic.





Figure 12 / Top and right: tracing and digging an *isopleth* contour line in September 2014. Photos by Wim Goossens.

The Measuring Process

THE MEASURING PROCESS THE PROCEDURE OF TRACING AN ISOPLETH LINE





Figure 13, 14 & 15 / Top: The very subtle differences in elevation were explored in relation to a reference datum provided by a very precise digital siphon.

Left & Bottom: This intensive process of measuring gradually revealed unperceivable and unpredictable structures in the micro-topology of the terrain.

Photos by Wim Goossen



SCENE 3 A PHYSICAL ENCOUNTER WITH THE SITE

First week of September—With the concrete 'puddle' in mind, we intuitively start demarcating a contour line in the proximity of the spot that already functioned as a point of reference twice before. Crawling on our knees, feeling the terrain with our hands, and scanning with the digital siphon we construct the contour line, revealing unpredictable twists and turns in the curves, often contradictory to what we expect.

'This one is draining away; our floor will become too large.' 'Let's start all over and see what happens if we take our reference 5cm lower.'

Because the surface of the terrain has few differences in height, our measurement needs to be very precise. We notice that we have to respect a maximum distance between two measuring points of about 20cm. If not, important details that characterize the expression of the shape would get lost. We use little wooden sticks painted in white to mark points of equal height. An orange rope connects them in the right order and makes the contour line visible. At the inner side of the rope, we dig in a trench of 30cm depth with a spade, transforming the graph into a physical intervention that is visible from a distance in the landscape.

'Oh, look daddy, it looks like the map of Belgium! Or is it a dinosaur? Daddy, what is it?'

'I don't know. Maybe some archaeological excavation. I'll ask them.'

'This trench is a contour line: if you would pour a lot of water over here, it would create a puddle with this shape. So this line defines a perfectly horizontal plain.'

'Really? I can't believe that!'

Two days later, we let a builder continue our work. Within the limits of our materialized line, he lowers the terrain up to 15cm under the future floor level and installs a double-welded wire reinforcement sheet. By the evening the contour is no longer a landscaped line, but has become an alienating excavation in the landscape.

SCENE ANALYSIS PROCEDURAL SCENE

Scene 3 describes a procedure by which two architects try to grasp a site. The procedure consists of dissecting the subtle topography by remapping the terrain onto height lines based on a comparison of the change in water pressure in a digital siphon. This procedure then becomes a handle to get a precise grip on the topography. Speaking in more general terms we could say that this procedure remaps an elusive property of something onto something less elusive. While from one point of view this translation reduces the original property to a comparative relation with a referential frame, from another it also expands this property with an additional layer of information. The integration of this layer in new experiences enables a recalibration of how one perceives an object, site or context as a whole.

Procedural scene: A scene in which a designer plays the leading part by executing a procedure in order to get a grip on an elusive quality of something could be called a procedural scene.

Measuring: The scene sketches a specific process of measuring. A fairly mundane measuring device is used to objectively register height. Yet the repetitive procedure leads to an anticipated measuring. The physical interaction with a site also generates more subjective, embodied knowledge of the site. By combining both forms of knowledge the elusive property of the site becomes gradually remapped into a more intelligible form.

Affordance shift: The scene sketches the process of gaining the insight that the terrain does not afford a prediction of in its micro-topology. The possible shape of a puddle or a height line can only be uncovered by means of a strict iterative procedure. If the gradually-revealed shape takes an undesirable course towards a puddle that would become too big or small, the procedure is repeated with a different reference height or in a different spot.

Staging an encounter: The scene sketches a specific staging of an encounter. Through a procedure of mapping, a shift in the experience of a specific site or context occurs.

STAGING AN ENCOUNTER THE SECONDARY STRATUM OF POETIC MEASURING.

We stated before that in the context of poetic measuring a procedure of specific physical acts can assist us in getting a grip on an elusive quality of something. By interacting with a material artefact or environment in a specific way, invisible forces (tendencies) are exposed or intangible experiences (capacities) become tangible. The elusive quality is (re)mapped into a more intelligible form. By integrating the insight this provides in new experiences, the mental schema of the thing one interacts with is altered. This recalibration of a mental schema points at an encounter, as previously described, as the primary stratum. Because one is intentionally staging this encounter by implementing a specific procedure, we can frame the execution of the procedure as 'staging an encounter'. To elaborate the procedure of staging an encounter we now explore the concept of (re)mapping.

Typically a diagram (re)maps a property of something into a property of something else. We come across diagrams in an endless variety of forms on a daily basis. We use a diagrammatic approach to (re)map almost anything: invisible forces onto colours in stress diagrams, intangible experiences of sublime vistas onto icons on tourist maps, points of equal height onto contour lines in topographical maps, a heartbeat onto a blip on a LCD screen, just to name a few. We learn from these examples that a diagram does not necessarily formally resemble the property it maps. If we do see resemblance it is only by means of analogy. In An Introduction to *Symbolic Logic* Susanne Langer states that analogy leads us 'to seeing a single "logical form" in things which may be entirely discrepant as to content.' (1967/2011, p. 33) 'It is only by analogy that one thing can represent another which does not resemble it.' (Ibid., p. 30) Applying this principle to language, Langer frames syntax as 'the logical form of our language' (Ibid., p. 31) and understanding language as a mapping of syntactical constructs onto a complex of ideas. By transposing this principle to an architectural example of the section drawing we can state: to understand a section is to appreciate the analogy between the lines, shapes and their conventions, and the intangible experiences of the spatial situation incorporated in them. The lines and shapes form a 'logical picture' of the spatial situation.

In *A Provisional Theory of Non-Sites*, Robert Smithson implements Langer's theory of analogy and logical form in a series of very influential 'mappings' called Non-sites:



Figure 16 / Francis Alÿs (2004). Still image from Railings (*Fitzroy Square*) London (video, 3:54 minutes). Retrieved 21 September, 2015 from http://www.francisalvs.com/public/railingsfitz.html.

By drawing a diagram, a ground plan of a house, a street plan to the location of a site, or a topographic map, one draws a 'logical two dimensional picture.' A 'logical picture' differs from a natural or realistic picture in that it rarely looks like the thing it stands for. It is a two dimensional analogy or metaphor—A is Z. The Non-Site ... is a three dimensional logical picture that is abstract, yet it represents an actual site ... It is by this dimensional metaphor that one site can represent another site which does not resemble it—this The Non-Site. (Smithson, 1968, n. p.)

In the oeuvre of Belgian-Mexican artist Francis Alÿs we find a wide variety of works that present a process of mapping a property of something onto something else as an autonomous artwork. For example in *Railings* (2004) the process of measuring is made autonomous by trailing a drumstick along a series of metal railings on a walk through the streets of London. Depending on the shape and the rhythm of the balusters (banisters), different rhythms and tones are produced. The city is mapped into a sound-scape that makes the omnipresence and variety of metal fences in the city of London explicit. With this simple procedural gesture of walking and trailing, Alÿs' experience of the city shifts from the visual into the acoustic and the physical as he tries his impression of London as a confused city. By recording this performance, the process of trying to understand, grasp, measure, and map is made autonomous. A similar approach—here in respect to the properties of ice in the context of Mexico city—can be found in *Sometimes Making Something Leads to Nothing* (1997) where Alÿs starts pushing a large block of ice around town in the morning, only to have it dissipate into nothing by early evening.

It should speak for itself that the procedure of (re)mapping considered as a measuring process—is not always explicitly articulated as an actual part of the outcome. For example, in the case of *Isopleth* the process of (re)mapping the height of the terrain (via the water pressure in a digital siphon) to points of equal height that define a contour line generates insights that in-form the final outcome in a more implicit way. Contrary to many of Alÿs' works, where measuring is made autonomous more often (as in the case of *Isopleth*) the process of measuring is only implicitly integrated rather than explicitly articulated in the final outcome.

When staging an encounter (in)forms an artefact (or a performance) it can be interpreted as the articulation of a measure or a staged encounter. These notions will be explored in the following part.



Figure 17 /

Francis Alÿs (1997). Still image from Paradox of Praxis 1 (Sometimes Making Something Leads to Nothing), Mexico City (video, 4:59 minutes). Retrieved 21 September, 2015 from http://www.francisalys.com/public/hielo.html.

TAXONOMY (2 OF 3) CLOSE ENCOUNTERS OF THE SECOND KIND

Staging an encounter: the process in which an artist or designer implements a procedure of specific physical acts to get a grip on a (volatile or diffuse) property of something. This measuring process recalibrates the mental schema of the thing the artist or designer is inter-acting with.

Actor: designer Action: a procedure of specific physical acts Link with measuring: measuring

Measuring: the process, the actual relating of a property with another, known property.

Close encounter of the second kind: This is the secondary stratum of poetic measuring in the sense that it describes poetic measuring as a mechanism that can be intentionally used by a designer in the design procedure. In this type of encounter, the designer recalibrates his/her mental schemata by physical acts he/ she undertakes to better understand something.

Second kind, subtype A: the act of measuring is explicitly articulated as a part of the outcome. The process of attempting to get a grip on the properties of something is made autonomous as a work.

Second kind, subtype B: the act of measuring is not explicitly articulated as a part of the outcome. The outcome of the process of attempting to get a grip on the properties of something informs a work.







Figure 18 / Top: Detail of *Isopleth* late September 2014. Photo by Anraud Hendrickx.

Figure 19 / Right: *Isopleth* approached from the southeast on a rainy day in September 2015. Photo by Mattias Staelens.

The Articulated Measure

THE ARTEFACT ARTICULATING AN ISOPLETH LINE





Figure 20, 21 & 22/ Top: A general view from *Isopleth* as approached from the southeast during a sunny day early autumn of 2014.

Photo by Arnaud Hendrickx. Middle: *Isopleth* during a rainy day in September 2015.

Photo by Wim Goossens. Bottom: *Isopleth* seen from the northwest during the

Horst Art and Music Festival in 2014. Photo by Arnaud Hendrickx.



SCENE 4 AN ENCOUNTER WITH ISOPLETH

The festival and beyond—A grey concrete slab merges with the surrounding grass field. It's hard to grasp the thickness or weight of the construct. I see the reflection of trees in the freshly polished surface. The floor has become almost immaterial or hyper-material. I visit the festival with my daughters.

'What is it, daddy? Can we step on it?'

As soon as they set foot on the surface of the puddle, the girls start using the surface as a dance floor. A hip-hop looking boy joins them and tries to impress with a break-dance performance. With a compulsory cool, he leaves the floor and starts running around the puddle as if he were practicing his weekly jogging around a midget mere. He traces a path not avoiding any sharp turn, but meticulously respecting the shape of the contour line. 'Nice floor!'

After two days of intensive and diverse use, the concrete sculpture remains in place and becomes part of the landscape. In the following weeks I regularly revisit the site to show the intervention to friends. On one of those occasions, we find some medieval knights having appropriated the floor as an arena for a sword fight performance.

Autumn falls. Little leaves cover the ground. They remain unnoticed in the uncut grass. On the smooth surface of the puddle on the contrary, they generate a pointillist texture. The black and white contrast between the leaves and the mirroring water film on the concrete intensify this impression. From a distance, there's almost no perceptible difference any more between the artificial puddle and the nearby mere surrounding the castle.

'I even didn't notice there was an artificial pond; remarkable!'

SCENE ANALYSIS ARTEFACTUAL AGENCY

The fourth scene describes the agency of an artefact within its context. In the case of *Isopleth*, the agency of the artefact depends on the emergent properties afforded by the newly-created assemblage of the site-specific concrete floor and the stratified height line, its surroundings, its historical context and a possible user. Speaking in more general terms we could say that within a certain context an artefact 'operates' in a certain way. Through resonance the artefact reveals an elusive property of its context. By marking, intensifying, attenuating, or masking, the agency of the specific assemblage—formed by the artefact, the context and the observer —generates an emergent property (irreducible to its parts) that recalibrates how one perceives the artefact and/or its context.

Operational scene: A scene in which an artefact plays the leading part by operating as a part of an assemblage that affords new properties (and hence experiences) to emerge could be called an operational scene.

Measure: The operational scene sketches a specific measure. As a substantiated, materialised measure of the terrain, the stratified height line mediates between the context and a user. It expresses a relation between its own properties and those of the site and in that sense operates as a poetic measure of the site.

Affordance shift: The operational scene is about experiencing the agency of the artefact in its surroundings. It sketches the process of gaining the insight that the puddle affords stable support. Viewed from afar *Isopleth* resembles a puddle of dirty water in a firm lawn. By approaching the artefact the perception inverts. Walking on the lawn proves it to be less firm than expected and from up closer the durable materiality of the puddle reveals itself. One notices that the puddle is a concrete floor that affords stable support, dry feet and mud free shoes, unlike the marshy plain that surrounds it.

Staged encounter: The operational scene sketches a specific staged encounter. Through the artefactual agency, an assemblage or sensory aggregate, a shift in the experience of a specific site or context occurs.

STAGED ENCOUNTERS THE TERTIARY STRATUM OF POETIC MEASURING.

We stated before that in the context of poetic measuring some artefacts can be framed as the articulation of a measure. The analysis of scene 4 showed us that the artefactual agency of this articulation an assemblage of artefact, context and observer—causes the emergence of a new, irreducible property that recalibrates how one perceives the artefact and/or its context. This recalibration of a mental schema once again points at an encounter described previously as the primary stratum. The fact that this encounter is intentionally staged by implementing the agency of a spatial constellation of artefacts within their context lets us frame this constellation as a 'staged encounter'. Now we will further elaborate this notion of the staged encounter.

In Deleuze's ontology reality is framed as the combination of the actual and the virtual. The actual is that part of reality that is differentiated in extensive attributes and qualities. Loosely interpreted, the actual refers to things (actants). The virtual is that part of reality that is unactualised, ideal, and yet a real attribute of the actual. Loosely interpreted, the virtual refers to the space of possibilities of things (agency). In *Intensive Science and Virtual Philosophy*, Manuel DeLanda defines Deleuze's virtual as consisting both of 'singularities (unactualised tendencies) and affects (unactualised capacities to affect and be affected).' (DeLanda, 2002/2013, p. 65) It is by virtue of their virtuality—their tendencies and capacities—that things of different nature might establish symbiotic relations and form assemblages.

In Dialogues II Deleuze and Parnet define an assemblage as 'a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across... different natures.' (Deleuze & Parnet, 1987/2007, p. 69) As an example of an assemblage he goes on to describe the MAN-HORSE-STIRRUP assemblage. The invention of the stirrup 'made possible a new military unity in giving the knight lateral stability: the lance could be tucked in under one arm. it benefits from all the horse's speed, acts as a point which is immobile itself but propelled by the gallop.' (Ibid., 1987/2007, pp. 69-70) In this example we see many crucial attributes of an assemblage: by exercising their specific tendencies and capacities the constituent parts of the assembly are temporarily and reversibly co-functioning so that new properties that are irreducible to the parts emerge. In short we could define an assemblage as a whole that has at least one emergent property that is irreducible to the properties of its parts.

The task of a designer in creating a poetic measure of a site is thus to implement the agency of an artefact by devising sensory aggregates that resonate with the elusive property of the site. By marking, intensifying, attenuating, or masking, this property of the artefact and its surroundings start to resonate. This resonance is irreducible to the properties of its parts and requires both parts to exercise specific tendencies and capacities. Hence we can speak of an assemblage: two heterogeneous terms (aggregate and site) establish liaisons by exercising tendencies and capacities to form a temporal whole with emergent properties that are irreducible to its parts.

In poetic measuring the observer is also a fundamental part of the assemblage. When confronted with an artefact in its context, reality is reduced in the 'eye of the beholder': perception actualises reality in a specific way, based on our bodily properties. At the same time this specific actualisation is expanded by inscribing what is perceived in the embodied landscape of memories and anticipations. This expansion enables a restructuring of what we see and makes it possible to develop a sensitivity to pick up new perceptions. In that sense our capacity to affect and to be affected by an artefactual reality (both in its actual and virtual dimensions) structures our perception and plays a central, bidirectional role in the process. This brings us back to the disruptive observation





Figure 16 / Luc Deleu (1985). Demonstration of Scale and Perspective [Installation, two sodium street lights]. Eindhoven: De Fabriek Copyright: SABAM.

Figure 17 /

Luc Deleu (1986). Demonstration of Scale & Perspective [Installation, two high-tension pylons]. Ghent: Sint-Pietersplein. Copyright: SABAM. described in the above section 'Encountering' where a tree is encountered from a different bodily perspective.

This process of encountering things from a different bodily perspective is implemented as a design tactic to devise a staged encounter by Belgian architect and artist Luc Deleu in a series of works called *Demonstration of Scale and Perspective* (1985-1988). In this series of works familiar vertical infrastructural artefacts that we come across almost every day like an electricity pylon, a building crane, or highway street lights are placed in horizontal positions on a public square or in a hangar, staging an encounter with a familiar object placed in an unfamiliar position—thus enabling a poetic measuring of the familiar object.

This tactic entails a material displacement that has an impact on mental structures on many levels much like, for example, the displacement as contained in Marcel Duchamp's readymades. There are however also clear differences: where, in Duchamp's displacement, the readymades—e.g. *Fountain* (1917), a urinal presented in the context of a museum—seem mainly selected for their conceptual significance in provoking a reframing of art, in Deleu's displacement the mundane infrastructural artefacts and urban contexts are selected for their material significance in provoking a reframing of the artefacts themselves. For example, as horizontally-placed vertical elements, they are not as much selected for their conceptual as for their experiential potential and this selection does not aim as much at affecting us conceptually as spatially.

TAXONOMY (3 OF 3) CLOSE ENCOUNTERS OF THE THIRD KIND

A staged encounter: the spatial constellation in which the agency of an artefact, that can be interpreted as an articulation or manifestation of a measure, is implemented by a designer to uncover a (volatile or diffuse) property of something.

Actor: artefact Action: artefactual agency Link with measuring: measure

Measure: the articulation; the expression of the relation between the two properties involved in the measuring process.

Artefactual Agency: the capacity of an entity to act in any given environment, the space of possibilities of things. This space is structured by the virtual dimension of the artefact, the context and the observer. Their virtuality consists of singularities (real but unactualised tendencies) and affects (real but unactualised capacities to affect and be affected). This virtual dimension determines the emergent properties the assemblage of artefact, context and observer affords.

Close encounter of the third kind: the artefact acts as a poetic measure. In other words, the artefactual agency of the articulation of a measure—an assemblage of artefact, context and observer—causes the emergence of a new, irreducible property that recalibrates how one perceives the artefact and/or its context. This entails an active role for the artefact as an agent that, in a sense, 'measures' the context.

Third kind, subtype A: A close encounter of the third kind that is instigated by the agency of an artefact that is not specifically tailored to measure a specific site. This process can be seen as a form of displacement. An artefact that is not devised in situ is moved from one place to be carefully placed in another. As a result of this displacement (movement) the artefact and the context in which it is placed are displaced (get a new significance or agency).

Third kind, subtype B: A close encounter of the third kind that is instigated by the agency of an artefact that is specifically tailored to measure a specific site.

Poetic Measuring

So far, we have presented a close reading of *Isopleth* and a careful unravelling, naming and framing of the activities, the experiences and the conceptualisations that we discerned in conceiving and making this architectural construct. This has enabled us to reformulate what was initially a hunch into what is now a more informed intuition on poetic measuring and its working. In this last section of the paper we look back and try to tie the different components of our analysis together in order to offer an overview of the journey we made.

The various visual, narrated and analytic accounts given showcase *Isopleth* as a minimal architectural gesture: providing a stable floor within slightly marshy surroundings. To be able to position this horizontal concrete slab within a plain with very subtle difference in elevation we were looking for a means to understand its topology. This can be read in the first scene (observational) that describes two architects discussing the micro-topological properties of the site for their next intervention. Like many architects they also take pride in their 'trained eye'which is experienced in making quite accurate educated guesses about dimensions, volumes, heights and so on. Most practicing architects have developed an elaborate personal set of tactics in the form of rules of thumb or tricks of the trade that inform their estimations quite effectively. When the two architects encountered a topography that resisted their know-how and produced different estimations when perceived from different locations, their interest was sparked and they were irresistibly drawn to explore this further.

As is often the case with experienced practitioners, there is a form of measuring involved that entails personal (or tacit) knowledge. This knowledge can be related to a definition of poetics that refers to the fundamental and primary intelligence that immediately grasps reality in all its available dimensions, or, put differently, it concerns itself with the fundamental dynamics of thought before the elaboration of systems (White, 1994: McManus, 2007). This primary intelligence relies on our sensibility to efficiently form global intuitions of the nature of the environment in which we are immersed. In the Isopleth case, the elusive topography is probed by more subjective tactics based on the personal experience of the person who performs the actual calibration and interprets its result. Further, we consider the degree to which embodied knowledge is used here in measuring activities (especially by consciously bringing it into a dialectical relationship with conventional measuring instruments) turns it into an activity of poetic measuring.

As we have seen, the architects returned to the site with an 'objective' instrument of measurement to verify the information gained from their trained eye. Since the perceived (embodied) topology differed completely from the measured (disembodied) registration (a difference in height between the perceived and the measured of 75cm on a distance of 100m), they started exploring the subtle differences in the topology by constructing lines that connected points of equal height in relation to a reference datum provided by a very precise digital siphon. The physical act of measuring the site revealed unpredictable twists and turns in the curves by which the surface structure of the site only gradually revealed itself, often in contradiction to expectations. The 'procedural scene' sketched a specific repetitive process of measuring that, step by step, revealed a contour line. By physically interacting with the site the architects gradually obtained an internal model of (or perspective on) the actuality of which they wanted to gain knowledge. The 'observational scene' sketched a similarly physical process.

Because the whole body and its senses acted as a measuring device, other unanticipated properties were discovered in the process of exploring the topography of the site. For example, the weight of the body served as a probe to discover the limited stability of the ground. Earlier experiences from other similar sites were blended with new ones gained from this specific site. The blended mental model served as a reference to create new insights and expectations. Bit by bit their intuitive understanding was transformed. Here, it is important to note that although normally the digital siphon, as disembodied instrument, would be considered to take the lead part in the measuring process, we experienced that in this specific case it was the physical interaction with the sheer materiality of the site (earth, mud, grass, bodies, hands putting sticks in the ground) that informed the conception and making of the artefact. While physically interacting with the site, using both their bodies and a digital siphon as measuring instruments, the architects were in a process in which the physical engagement with the material triggered a mental process of imagining what would be a 'good' *isopleth* puddle—adjusting their actions to their imagination and vice versa.

We discern here the characteristics of the Ancient Greek word poesis which includes both the notions of making, acting or bringing into being, and the notions of a making up, making in mind (referring to Aristotle's *nous poetikos*) or the active mind. This implies that the term poetic refers to a broad field of relations between matter and thought that might inform methods, ways of acting, feeling, thinking and producing in different fields. (Janssens, 2012). So what does this possibly say about the performance of poetic measuring? Based on the experiences described here, we propose—as a kind of first indicator—that the designer actually performed an act of poetically measuring a site when the embodied interaction with the materiality of a site determined the first form-giving principles of the project.

Similar to Bergsonian intuition the architects did not approach the site analytically from an external point of view, but 'enter[ed] into' its topography with a 'kind of intellectual sympathy by which one places oneself within an object in order to coincide with what is unique in it and consequently inexpressible.' (Bergson, 1912, p. 7) Rather than unifying diverse observations, this intuitive understanding affords us to differentiate specific experiences and relate them associatively to others in a less reductive manner than impersonal, so-called 'objective' or disembodied measuring would allow. The kind of measuring that aims at acquiring impersonal knowledge situates the observer outside the actuality of which she/he wants to gain knowledge. To interpret measured results more objectively in relation to other measurements, one has to agree upon conventions that are not specific to the one thing currently under scrutiny but are generalized to also apply to all other things with comparable properties. This requires the introduction of a more universal intermediate layer consisting of a scale, grid or coordinate system, a set of symbols, and a set of operations external to the specifics of observer, the measured and the context in which it is situated. This external perspective allows us to compare, calibrate and interpret results in a consistent manner so that it affords a unification of repeated observations. This kind of measuring allows us to assign an abstract number to a property of something, using standardized referential units. By artificially isolating a single aspect of a more complex system and expressing this aspect in a standardized unit, this method tends to drastically reduce the specifics of the concrete part it represents.

While working with standardized units allows for very precise relative comparison between two measures it is only by intuitively reintegrating the measurement into a larger, specific and situational frame that qualitatively different notions like big, small, hot, cold, high, low, far, close, and so on, can gain any sense. For example, cold and hot are experiences that differ in kind, yet from the point of view of a standardized unit they differ in degree. They belong to one and the same scale on which they represent only two quantitatively different positions. Working with embodied mental models as a form of customized units for measurement—as we suggest is the case in poetic measuring—inverts this situation. Certainly, we are able to discern differences between intensities of mental states. The comparison might be a little more complex and less numerically accurate, but in this case swift differentiation between qualitatively different notions is generally self-evident. When comparing sensations we might say things like 'this hurts more than that' or 'this is the hottest day I have ever experienced'.

We know from experience that these value judgments take many other things into account than merely the pure amount of pain or heat. In the example of pain the perceived intensity of the cause of the pain might be mixed in the sensation. In the example of the heat the weather of the weeks before has an influence on the sensation of heat today. Memory, perceptions, experiences, anticipations all blend together to differentiate between qualitatively different experiences. This broader scope makes relative comparison between two measures less reductive but also less numerically precise. Since our body also has a defined set of properties like its global dimensions, the reach of its limbs, the sensitive range of its senses, and so on, any measurement it performs is implicitly relative to embodied mental models of the perceiver. This allows us to make value judgments that a mountain is overwhelmingly high, a light blindingly bright or water comfortably hot while our estimation of the actual meters, lux or degrees involved in these experiences might be slightly or even considerably off-target. In this case qualitatively different notions like big, small, hot, cold, high, low, far, close, and so on, have an immediate intuitive sense.

Bergson opposes intuition to analysis as 'the operation, which reduces the object to ... elements common both to it and other objects. To analyze, therefore, is to express a thing as a function of something other than itself.' (Bergson, 1912, p. 7) This, in our view, differentiates objective, disembodied measuring and poetic measuring respectively as reductive and non-reductive, where the first is deduced from unified observations of the world, and the latter from embodied experiences in the world. Poetics involves an epistemology that departs from a kind of integrated (personal and impersonal) knowledge by combining both abstraction and sensation. It is a mode of irreductive knowledge-building different from the more scientific way of building knowledge which has often been considered reductive in the sense that scientific knowledge building (notably in the natural sciences) departs from the assumption that there is one single reality. The poetic perspective, then, is about the confluence of concrete experience and abstract knowledge (Janssens, 2012). It necessarily implies the emergence or creation of another epistemology, another way of building knowledge, the making of methods that escape from the postulate of singularity and universality and respond creatively to a world that is taken to be composed of an excess of generative forces and relations (Law, 2004).

Scientific knowledge is mostly associated with the notion of disembodied or impersonal observations of the world. A disembodied approach to measuring affords the acquisition of impersonal knowledge and aims at constructing knowledge through the unification of disembodied (impersonal, external, abstract and quantified) observations of the world. Such a scientific measuring can be seen as an analytic way of getting to know things. As said above, this approach entails a reduction of what is actually happening in the world, but also has already largely proven to be very efficient in developing more transparent, predictable and controllable systems of measurement. Clearly, architecture depends on such scientific measuring on many levels. But like any form of art, or even any form of human expression for that matter, architecture makes no sense without a perceiver. In architecture, observation should be understood in terms of an embodied experience. Calibrating such experiences entails a body and mind of a perceiver. The calibration process aims at gaining embodied knowledge of that which is measured. Although experienced properties might belong to similar categories than their objective measurement, they cannot be equated.

Architectural properties are not only informed by impersonal knowledge but also by personal knowledge gained from embodied experience. Architectural properties are not only observed from an external perspective, but also experienced empathically from within. They are not only expressed in abstract values but in concrete, experienced value judgments in relation to the perceiver's body and mind. Architectural properties are not only experienced as static quantified states, but also as dynamic qualitative processes that change over time. In order to address these architectural concerns, we looked closely at the Isopleth project and tried to articulate a different, complementary kind of measuring which we named poetic measuring. We suggest that poetic measuring can be seen as an intuitive way of getting to know things. This poetic approach is considered to be effective for differentiating between qualitatively different experiences by using more complex referential units based on a mental model that blends memories, perceptions and embodied experiences.

During this investigation we compared conventional understandings of measuring in architecture which rely on the unification of disembodied observations with a complementary form of measuring that relies on the differentiation of embodied experiences gained through physical interactions with matter and materials. As explained before, in these kinds of complex non-reductive interactions the notion of encountering becomes paramount. What an encounter with an environment affords us are capacities to affect this environment coupled with capacities to be affected by it. Arguably, this is basic to architecture since every artistic discipline aims at placing something (artefactual) in the world such that it moves us, and at (re)structuring matter in order to enhance its capacity to touch us. Our research practice focuses on this fundamental experiential aspect of architecture and therefore investigates the potential of architectural constructs in staging encounters that allow for the poetic way of measuring to become a full-fledged part of research in architecture. With the close reading of the *Isopleth* project we hope to have made a case for the further development of the notion of poetic measuring as a central activity in practice-based research.

Volume 14

Acknowledgments

The argument and concepts presented here were developed within the research unit Radical Materiality at the KU Leuven, Faculty of Architecture, Campus Sint-Lucas, Brussels, which aims to question matter as an actor and materiality from a mainly practice-based design experiential perspective. The authors especially wish to acknowledge and thank Thierry Berlemont for his feedback, constructive comments, valuable input and generous support during the writing of this paper.

References

- Alÿs, F. (1997). Paradox of Praxis 1 (Sometimes Making Something Leads to Nothing), Mexico City (video, 4:59 minutes). Retrieved 21 September, 2015 from http://www.francisalys.com/public/hielo.html.
- Alÿs, F. (2004). Railings (Fitzroy Square) London (video, 3:54 minutes). Retrieved 21 September, 2015 from http://www.francisalys.com/public/railingsfitz.html.
- Bergson, H. (1912). An introduction to metaphysics. T. E. Hulme (Trans.). New York and London: G. P. Putnam's Sons.
- DeLanda, M. (2002/2013). Intensive science and virtual philosophy. New York: Bloomsbury.
- Deleuze, G. (1994). Difference and repetition. P. Patton (Trans.). New York: Columbia University Press.
- Deleuze, G., & Guattari, F. (1994). What is philosophy? H. Tomlinson & G. Burchell (Trans.). New York: Columbia University Press.
- Deleuze, G., & Parnet, C. (1987/2007, revised edition). Dialogues II. New York: Columbia University Press.
- Hendrickx, A. (2012). Substantiating Displacement (Unpublished doctoral dissertation), Royal Melbourne Institute of Technology, Department of Architecture.
- Janssens, N. (2012). Utopia-driven Projective Research: A design approach to explore the theory and practice of Meta-Urbanism (Unpublished doctoral dissertation. Chalmers University of Technology, Department of Architecture, ISSN 0346-718X.
- Langer, S. K. (1967/2011, third revised edition). An Introduction to Symbolic Logic. New York, NY: Dover Publications.
- Law, J. (2004). After Method, Mess in Social Science Research. London and New York: Routledge.
- McManus, T. (2007). The Radical Field: Kenneth White and Geopoetics. Highland: Sandstone Press.
- Piaget, J. (1952/1998). The Origins of Intelligence in Children. New York: International Universities Press.
- Smithson, R. (1968). A Provisional Theory of Non-Sites. Retrieved 21 September, 2015 from http://www.robertsmithson.com/essays/provisional.htm.
- Stake, R. E. (1995). The Art of Case Study Research. Thousand Oaks, London, New Delhi: Sage Publications.
- White, K. (1994). Le Plateau de l'Albatros: Introduction à la Géopoétique. Paris: Grasset.

About the Authors

Wim Goossens

KU Leuven, Brussels Campus Sint Lucas Faculty of Architecture wim.goossens@kuleuven.be Wim Goossens trained as an architect at Sint-Lucas (Brussels, 2000) and graduated on the theme of multisensorial perception of space. He worked in collaboration with ARSIS, Space Syntax Brussels and VBMarchitecten before founding his own office, lava architecten. For ten years he has taught at the Faculty of Architecture at the LUCA school of Arts (KU Leuven). Together with Arnaud Hendrickx and Nel Janssens, he runs a studio in the Master of Architecture, exploring the fundamentals of the discipline and the potential of curating for knowledge production. As a researcher he is member in the RadMat Research Group. Together with Arnaud Hendrickx, he is involved in an OPAK funded project that focuses on the spatial affect in architecture and he is currently setting up a PhD on the same topic. Within the framework of his research, he is co-author of several installations that have been shown in the Museum M (Louvain), M HKA (Antwerp), Ithaka festival (Louvain) and Horstfestival (Holsbeek).

Arnaud Hendrickx

KU Leuven, Brussels Campus Sint Lucas Faculty of Architecture / and RMIT University, Melbourne School of Architecture and Design arnaud.hendrickx@kuleuven.be

Arnaud Hendrickx worked as an architect at Xaveer De Gevter architects and co-founded Rauw Architecten with Thierry Berlemont and Bart Callens. His current spatial artistic practice focusses more on artist collaborations, artefacts, installations and exhibitions than buildings. He teaches and researches the overlapping field of art and architecture as assistant professor at the Faculty of Architecture, KU Leuven, Campus Sint-Lucas, Brussels, Belgium and adjunct professor at the RMIT University, School of Architecture and Design, Melbourne, Australia. He is head of the research unit Architecture and Arts of the Department of Architecture of the KULeuven and a member of their research group Radical Materiality. He obtained a doctoral degree at the RMIT University, School of Architecture and Design, Melbourne, Australia with his dissertation and exhibition 'Substantiating Displacement'.

Nel Janssens

Campus Sint Lucas Faculty of Architecture nel.janssens@kuleuven.be

KU Leuven, Brussels

Nel Janssens is an architect-spatial planner, teaching at the Faculty of Architecture, KU Leuven, Campus Sint-Lucas, Brussels and Ghent, Belgium. She worked as an architect at T.O.P.office/Luc Deleu, Antwerp and FLCextended, Brussels. Currently she is a member of the non-profit design collective magnificentsurroundings.org. She obtained a doctoral degree at the Department of Architecture, Chalmers University of Technology, Göteborg, Sweden with her dissertation 'Utopia-driven Projective Research, a design approach to explore the theory and practice of Meta-Urbanism'. She co-edited the book Transdisciplinary Knowledge Production in architecture and Urbanism: towards hybrid modes of inquiry (Springer publishers) together with Isabelle Doucet. From January 2013 till February 2015 she held a post-doctoral position at the Strong Research Environment 'Architecture in the Making' (Chalmers).