Minor and Speculative Architecture
Ed. Sha Xin Wei
August 2011

Introduction

This volume of essays concerns the implications for the built environment posed by emerging technologies from computational media, mechatronics, sensors, ubiquitous and pervasive computing and sensate or active materials, combined with techniques from more conventional technologies of architecture and theater. While a lot of contemporary architecture is focused on capital intensive applications with special emphasis on security, utility, and work, we propose to take a different tack and speculate on alternative opportunities for poetry, poiesis, and, to deliberately recuperate a term from Weber, enchantment. Contemporary conceptual architecture often exudes relentlessly modernist or post-modernist forms conceived more for the screen than for habitation. We propose alternative modes of architecture in minor key that enact modes of dwelling and becoming rather than illustrate non-living, unlivable concepts. We do this by a combination of means: artist's descriptions of their own architectural experiments, historical context, conceptual argument, and socio-technical critique.

We speculate on the potential for poetic architecture afforded by the emerging technologies of what we call "minor architecture," though of course, we will discuss what one could mean by "softness," "responsivity," and "soft architecture." As a beginning point, soft architecture refers to built environments that respond flexibly and pliantly in three scales of energy: the micro-scale of small moments of sensor data or textures of sound or light or air and other physical materials, the meso-scale of bodies in motion, and the macro-scale of social movements and urban plans.

Specifically, the themes we explore include: liveness of space, peripheral awareness, tactile perception (e.g. manual chronostasis), sense of presence (e.g. in sleep paralysis), felt awareness of corporeal vulnerability, and distributed material agency.

Contributors include Erik Conrad on soft architecture and computer science, Harry Smoak on critical issues raised by responsive environments as public experiment, Flower Lunn on the wild and the sublime in the city, Karmen Franinovic on playful augmentation of social space, Elena Frantova and Lisa Solomonova on felt presence in an animate space, Christoph Brunner on parkour / free-running, Jean-François Prost on adaptive actions as urban interventions, Hugh Crawford on the Mad Housers, Deleuze and the American pragmatists, Ron Broglio on dwelling and the phenomenology of habitation from the perspective of thinking matter, and Sha Xin Wei on minor or poetic architecture after Alexander, Arakawa & Gins.

Most of these essays have appeared in a special issue of issue of AI & Society (volume 26 issue 2, 2010). For the book version, we hope to include one or two more contributions that explore topics related to the theme of minor and speculative architecture, along with updates from original contributors.

Table of Contents

Contact

Sha Xin Wei, Ph.D.
Canada Research Chair, Media Arts and Sciences • Associate Professor • Fine Arts and Computer Science • Concordia University
EV06-769, 1515 Ste-Catherine West • Montréal, Québec • H3G 2W1 • CANADA
1-650-815-9962 (m) • 1-514-848-2424 x 5949 (o)

AI & Soc (2011) 26:113–122
DOI 10.1007/s00146-010-0290-6

EDITORIAL

Minor architecture: poetic and speculative architectures in public space

Xin Wei Sha

Published online: 16 September 2010

Computer science and software engineering has adopted the term "architecture" to describe the composition of large, complex sets of interoperating code that often contain multiple concurrent operations. "Software programmer", "software engineer", and "systems architect" denote an increasing scale of experience and ability to carry out systemic analysis and design. The status accorded to the software architect mimics in some ways the status accorded architects proper. On the lee-side of the tipping point where more media attention is paid to computer media and informatic technologies than to 20c media of cinema, radio, and television, it is easy to forget the enormous capital and power bound up in the industries of our physical built environment, and the intellectual and social prestige worn by its designers, the architects. This issue of AI & Society focuses on the encounter between the new potentials for architectural environment, the design of the built environment, and the emerging computational media and built environment. By convention, we can date the contemporary epoch of this encounter between computational technoscience and the art of the built environment back to the origin of the MIT Media Lab in the School of Architecture, now given a global currency with the advent of sensor-equipped "smart" buildings, computationally augmented materials, and everyday nanotechnology. While participant in the creative research into some of these mixtures of new media and architecture, we take this opportunity to lay out a critical and poetic perspective as well.

X. W. Sha (✉)
Topological Media Lab, EV-7-725, Concordia University, 1515 Ste-Catherine West, Montreal, QC H3G 2W1, Canada
e-mail: xinwei@mindspring.com
URL: http://topologicalmedialab.net

We have invited artists and researchers to reflect critically on this recent history, and take stands, or draw attention to alternative approaches.

In the modern and post-modern eras, architects have adopted large conceptual frames to house and motivate large capital projects: Le Corbusier and modern urbanism; Peter Eisenman and deconstruction; Rem Koolhaas and shopping centers; Bernard Cache, Greg Lynn, and the Deleuzian fold, and so forth. One may question the degree to which these architects inhabited the conceptual terrains from which they extracted these notions. And even if they did traverse those territories comfortably, one can ask how the notions they extracted really worked in the material and social operation of the built structures that were justified by appeals to those concepts. Resetting a gemstone on a tiara however lovely, nonetheless leaves behind all the suprahumanly rich, glacial processes of the earth from which it was taken. To take one example, to reduce Gilles Deleuze's The Fold (Deleuze 2006 (1988)) to two-dimensional surfaces in Euclidean three-space seems to be a rather formal interpretation of Deleuze's concept of the fold, a concept which has an ontological, aesthetic as well as geometric character (and although a geometry, like anything made by us humans, can be interpreted from an esthetic point of view, geometry is as much dynamics and proof theoretic structure as esthetics). Deleuze's fold has as much to do with a boundless process of ornament, of Baroque excess, as it does with interpenetration between the world of the living and the world of the dead. Even more subtly, as Tirtza Even has observed, things can have variable and varying degrees of existence with respect to one another, and so Deleuze's fold takes an ontological meaning as well as formal one.[1]

[1] Tirtza Even, private communication, April 2002.

1 Art

Returning to architecture's appeal to rationalizing system builders, perhaps one of the most cogent analyses of the Western "will to architecture" appears in Kojin Karatani's Architecture As Metaphor in which he identifies the "irrational choice to establish order and structure within a chaotic and manifold becoming" (Karatani 1995, 17). To take another exterior critical vantage point, as Barbara Hooper put it in her essay, "Urban Space, Modernity, and Masculinist Desire": "Among the knowledges, sciences, and powers producing the geopolitical order of hegemonic modernity, architecture contributes two important elements: the idea that built forms alter human consciousness and behavior, thereby transforming nations and populations; and the provision of a method for materializing this order" (Hooper 2002, 55).

Despite their diversely post-modern status, Lynn, Eisenman, Koolhaas nonetheless represent architecture as a major key: high profile, high touch, and capital-intensive. Even the most well-intentioned urban design can have its imperial inflection. Of course the designerly surface of such architectural discourse, oriented to the photograph and the plan, bears little resemblance to the richly and locally conditioned work of architects of everyday spaces, or to the experiments by artists who play with super-corporeal spatial relations in the built environment. I have in mind artists like Gordon Matta-Clark, Arakawa and Gins, or 10 × 15 but also emerging artists like Anne-Maria Korpi and Flower Lunn, speculative designers like Karmen Franinovic, and counter-architectural groups like DARE-DARE.

By excising gigantic solids from house, warehouses, and other abandoned buildings, Matta-Clark deconstructed the syntax of domestic and private architectures (Matta-Clark 2007). However, he did more than conduct a semiotic investigation of the formal algebra of modern architecture in industrial and post-industrial spaces. It was also a phenomenological inquiry into the essence of an astrologically oriented space of ritual, transferred to derelict and banal buildings in eidetic variations that he conducted with his own body. But in further gesture, the bravura, the élan with which he cut a multi-story slit in a derelict warehouse to follow the moon casting itself into the waters of the river was an act not merely of analysis, but of poetry.

Madeline Gins is also a poet, with a more literary imagination, who has toyed with architectural discourse by haunting it with aspirations to philosophy (Gins and Arakawa 2002). But by calling for a crisis ethics repudiating the universal belief in mortality, is Gins and Arakawa proposing a program or simulacrum of a program? Their concepts encoded as thought experiments encoded as koan's: snail house, perceptual landing spot, and most evocatively: organism that persons, encapsulate a wealth of related notions poetically derived (and here I intend to pun on the Situationists) from Humberto Maturana and Francisco Varela, Maurice Merleau-Ponty, Martin Heidegger, and many other erased sources.

2 Minor architecture

What this Special Issue's contributions propose here is a radical, "minor" architecture closer to the work of fiber artists or the playful architectural and urban inventions by Roche, DSV & SIE.P/B:L (Eclats 1999). By minor, I am referring explicitly to Deleuze and Guattari's notion of a minor science opposed and alternative to the major science that feeds the state's war machine (Deleuze and Guattari 1987 (1980)). Some qualities of the alternative architectural practice that we are posing are: playful, critical, anexact, ephemeral, invisible, situated, touching, haptic, and above all, light. A given example may not share all of these qualities, but as a group, they form a set of examples bearing family resemblances.

This issue may be regarded as a cluster of tentative approaches to architecture in the register of experiment rather than purely positive or positivistic and abstract developments of concept. Or when they are statements, then they are conceptual way-stations, landing spots for processes more or less delicately exploring the condition of inhabiting a built space with multiple poetic valences. As such these installation events at the scale of architecture constitute what we can regard as art as a vehicle in architectural practice.

What does architectural scale mean? In the simplest sense, this means built structures that are large enough to accommodate one or many humans. Typical media art installations require a lot of comparatively fragile equipment and human attention, and last for a few days or weeks at most. Architecturally designed structures are durable human-made configurations of matter, capital, and energetic processes built to last years, and centuries. Architectural constructions carry explicit and implicit presumption that they can endure, survive, and persist in the bumpy flow of everyday living. And the largest consideration is that, while architectural sketches can be as lightweight and provisional as any graphic design sketches, the built structures can commit some of the largest amounts of capital concentrations outside of military capital: billions of dollars and up. The condensation of capital around architected buildings dwarfs the money spent on flat art or media art. Moreover, this capital is highly complexly patterned as infrastructure. As Jane Jacobs has pointed out in detail, the experiments carried out in a massive scale in the world economy since World War II have largely failed to escape quasi-periodic catastrophes due to systemic complexity and

brittleness (Jacobs 1985). Can we do otherwise with architecture today?

3 What is an experiment and what is speculation in the built environment?

Some of our essays started from practical problems such as the brittleness of complex computational systems, or the homogenization of materials and the homogenization of practice or even of everyday life. What the essays do not share, to their credit, is any one methodological approach to their problems. Some of them content themselves with raising problems, and attempting to make strategic comments in situ. All of them do respect the value of experiment and improvisatory practice. Some of these experiments begin with questions, but most start from positions prior to a well-formed question. A scientific investigation begins with a well-formed question, but a philosophical investigation ends with one. Therefore, in this sense, many of our speculative architectural installations resemble philosophical investigation. Nonetheless, some of these investigations have proceeded long enough to yield questions that can serve as temporary landing spots (to "detourne" Gins and Arakawa's term) for our investigation.

How can a space be transformed into a question about the experience of inhabiting that space? How can the experience of space, which is infinitely thicker than any linguistic description of that experience, be made more marvelous by material poetry?

How can matter infused with responsive media, be used poetically in built space, rigorously, radically, yet lightly? By matter I mean symbolic matter, which fuses physical matter with metaphor and value.

How can we shape matter if it is not only physical substance but metaphor and media as well?

4 Ethico-esthetic approaches from the world rather than ego

To paraphrase Maturana and Varela from their book, The Tree of Knowledge: What is said is always said by someone. In other words, it is a conceit to make so-called objective statements like: "This tree is green", or "This man is schizophrenic". This insight inherits from phenomenology's way of treating experience as an undisassociable complex of subjective consciousness, plus an act of conscious regard, plus an object of regard. The key adjective here is undisassociable: no object can stand on its own, owning observable predicates that are well defined in splendid isolation. What this implies is that the qualities of symbolic matter are not just predicates of an atomic object, but a joint function of an observer, the object of regard, and the situation. There can be no separation of the object from its context or from the contingency of how, and from what perspective it is regarded.

So, any architecture that purports to make a statement about space and inhabitation of space should be posed in a different way that accounts for this relational approach to being together. Pushed to a more social logic, ultimately we are not relationally together in a space, but a place, a distinction with which Heidegger was concerned in his essay "Building Dwelling Thinking": "The bridge gathers the earth as landscape around the stream… [I]t gathers the fourfold in such a way that it allows a site for it. But only something that is itself a location can make space for a site. The location is not already there before the bridge is…. The bridge does not first come to a location to stand in it; rather a location comes into existence only by virtue of the bridge…. Raum means a place cleared or freed for settlement and lodging…. The location admits the fourfold and it installs the fourfold" (Heidegger 1951, 150–152).

The materials with which we make our poetic installations necessarily are also tissues of value, or in particular, tissues of affect. And when we evaluate a work as being light or heavy, we are simultaneously making judgments of visual/aural/sensorial qualities, as well as, of the effects on the organisms that partly coincide with, or to use a more familiar Heideggerian verb, dwell in a place.

I do not say that matter thinks, or that the Earth thinks; that would be a naive and worse, an anthropocentric way of conceiving the world, unless one very carefully re-interprets several terms. Nor am I am speaking of higher or lower forms of consciousness. And in fact, it may be much more fruitful to speak of experience without going into the thicket of defining who is conscious of what. And this would require relinquishing altogether the scientific as well as humanistic concentrations on the Subject that we have borne since Descartes.

5 Poetry versus design

Seeing something as something else. One of poetry's powers is to indicate that which we cannot explicitly capture in language. Poetry can direct our attention to or project us into a perspective or a position that not be readily attained by deductive method.

One problem with design as it is practiced in the academy is that it can seem heartless, that its conception of the social seems to have little connection with felt experience or historical archive. It demands first a problem, a specification that conceptually bounds the process of making and reflecting even before it begins. Even "open-ended"

design processes seem to do this by not questioning the frame of the investigation. For example, a procedure found in the design process is to throw up by a random association words and phrases and then sift them into categories or a network of relations. Such a net kills the fish. More sophisticated techniques include borrowings of terminology detached from their ethical, esthetic, or historical connotations or implications, and with insufficient sensitivity to the implied critique of the positivism embedded in design's will to build or to architect. To be fair, to question the framing of a question is a philosopher's work, and to question historical or social frames a historian's or anthropologist's work. This special issue provides a forum for questioning some of these frames.

6 Size, scale

Something about the epic seems to be quite the opposite of what I am trying to point to. One of the pleasures of poetry whose form derives from oral culture is the condensation of thought, aspiration, emotion into a compact form, a bundle of words that can be savored durationally with only the technologies of memory constituted by poetic form.[2] So if we wish to savor a built structure durationally, we must construe it as an event, an entity saturated with time. But perhaps the product of its duration and its spatial commitments is less fruitfully described as geometry than as articulating a metaphor.

On the other hand, I do not wish to suggest that poetic architecture is reducible simply to the miniature, with its hint of preciousness. Condensing semiotic extent into a compact form can amplify its symbolic value, but compactness can take many modes, certainly not merely spatio-temporal scale. A simple mode of compactness could be the breath—the corporeal energy—needed to recite the piece, but this is by no means the only bound on a poetic form. Another is the casting of signs into a repeated pattern of stress and release, which may or may not last a short time in recitation.

An essential aspect of poetry is its power to suggest what words do not depict and to sustain a multiplicity of symbolic interpretations at the same time. As with accounts of dreams, there is no requirement of rational consistency, nor certainly any functional utility. Although speech act theory (Austin 1975; Searle 1980) could provide a gloss for how poetry works in a functionalist way, aligning poetry with speech acts puts "I dub thee knight (and make a material change in the world by conferring land and serfs to you and your heirs)" in the same category of statements as "Good men, the last wave by, crying how bright/Their frail deeds might have danced in a green bay". Yet these two statements have such different effects in the world—one has a directly illocutionary force, and the other a passionate but non-interventionist description of a state of the world—that it is hard to see how they could be aligned. In fact, they need not be aligned.

This same non-necessity, this absence of a homology between poetic and functional expression provides the opening for proposing a poetic architecture on its own terms. The question then arises: What do we get when we transpose the poetic to the architectural, when we make material interventions in our built environment at the architectural scale, as defined above?

What it is not: although it may be spectacular, poetry is not spectacle in Guy Debord's sense of the word (Debord 1994 (1967)). That is, poetry articulates thought in certain modes of metaphor; it does not stop thought the way that spectacle does, but provokes, enables, articulates thought.[3] Nor does poetry necessarily present a problem to be solved by the poet or the reader in order to articulate an affective experience.

7 The problem with methodology

Although poetry is experimental and rigorous, it is not methodological. Knowing how one poem works syntactically or structurally does not yield a deterministic way to systematically generate a set of poems of equivalent symbolic or affective power. I believe the same can be said of architecture. Of Christopher Alexander's 15 principles for life-giving form in built-space and nature (Alexander 2002–2004), Helga Wild observed that although these constitute plausible dimensions along which to array retrospective analysis, they are not prescriptions for success.[4] These principles include such formal patterns as: "strong centers", "interlocking pattern", "no two alike", and, quasi-transcendentally, "good shape". That is, while these

[2] I use compact mindful of its topological meaning: closed and bounded in a complete topological space.

[3] Poetry versus spectacle? As an exercise for the reader, consider the following two examples of architectural scale public installation events: Rafael Lozano-Hammer and Brian Massumi's HUMO: Huge and Mobile, exhibited at the Ars Electronica festival in Linz, Austria, February 3–7, 2003; and Elizabeth Diller and Ricardo Scofidio's Blur built for the Swiss Expo in 2002. HUMO, mounted what was then the world's most powerful projector on the back of a pick-up truck, to project 60 × 60 m images onto buildings, malls, advertising billboards, etc. in unannounced and unregulated fashion. In a different scale of ephemerality and visibility, Diller and Scofidio's Blur was a varying cloud 300 feet wide by 200 feet deep by 75 feet high formed out of mist shaped from 31,500 high pressure hoses drawing water from Lake Neuchatel. (Diller and Scofidio 2002) How do these work as poetry or spectacle?

[4] Helga Wild, private communication, March 1997.

formal principles can be used by a designer to articulate why a design works, they cannot be applied in any systematic way guaranteed to create a place infused with the unnamable quality of life that Alexander sought (Alexander 1979).

The problem with methodology lies exactly in this: that it must always look back to antecedent cases, and generalize from precedent a stable form within which new practice is supposed to take place. However, it is quite hard to resolve the tension between precedent form and fresh expression, which is why I adjoin a second term to poetry: speculation. In speculative practice, the ambition is not to replicate existing form but to extend expressions into fresh meaning. At the same time, these extensions stem from a trellis of forms generated from past practices, forms that seem attractive according to contemporary norms.

8 Propositional, performative, poetic, and *poietic*

If we interpret architecture according not only to its archive but also to its generative practices and processes, we have to consider who or what is doing these practices and who or what are engaged in these processes. In other words, we must be concerned with the performative aspect of the co-construction of the event in a work of architecture. How can architectural process generate fresh material conditions and systems from antecedent structure and material? To explore this question leads us to consider two kinds of questions. The first is the degree to which architects and the composers of events design their material work as speculation or proposition about how some range of potential events may be conditioned by a built structure. The second is the extent to which the experience of the work emerges by connotation or suggestion rather than denotation or deterministic function. A speculative work proposes a fresh set of potential, relations between people and their environment in a range of potential events. In this sense, speculative architecture is poietic as well as poetic.

9 In this issue

This special issue of AI & Society concerns the implications for the built environment posed by emerging technologies from computational media, mechatronics, sensors, ubiquitous and pervasive computing and sensate or active materials, combined with techniques from more conventional technologies of architecture and theater. While a lot of contemporary architecture is focused on capital-intensive applications with special emphasis on security, utility, and work, we propose to take a different tack and speculate on alternative opportunities for poetry, poiesis, and, to deliberately recuperate a term from Weber, enchantment. Contemporary conceptual architecture often exudes relentlessly modernist or post-modernist form. We propose alternative modes of architecture in minor key that enact modes of dwelling and becoming rather than illustrate non-living, unlivable concepts. We do this by a combination of means: artist's descriptions of their own architectural experiments, historical context, conceptual argument, and socio-technical critique.

This special issue contains two artist statements and eight essays. Some of the essays are written by practitioners. The contributors are Ron Broglio on dwelling and phenomenology of habitation; Christoph Brunner on Parkour as a mode of "personing" through movement in the city after Arakawa and Gins; Erik Conrad on the implications for artificial intelligence (AI), raised by computationally augmented environments, regarding the body and animate space after Lefebvre; Flower Lunn on the wild, and the possibility of the sublime not centered on the human-subject; Karmen Franinovic on playful augmentations of social space; Jean-François Prost on critical interventions realized in ephemeral and marginal spaces of the city; Elena Frantova, Lisa Solomonova, Tim Sutton, and Tore Nielsen[5] on the sense of felt presence in an animated space; and Harry Smoak on the critical potential for practices of explanation versus practices of experimentation after Morse Peckham.

In the course of preparing this volume, we discovered with pleasure, many critical and conceptual resonances between the contributions, so let me surface some of those resonances by closing with a thematic introduction to the essays.

We speculate on the potential for poetic architecture afforded by the emerging technologies of what we call "soft architecture", though of course, we will discuss what one could mean by "softness", "responsivity", and "soft architecture". As a beginning point, soft architecture refers to built environments that respond flexibly and pliantly in three scales of energy: the micro-scale of small moments of sensor data or textures of sound or light or air and other physical materials, the meso-scale of bodies in motion, and the macro-scale of social movements and urban plans. This initial phrase, whose content has been speculative, has called forth a rich set of responses clustered around the following themes: the body's relation to space; the experience of dwelling and presence; movement and play; the turn away from anthropocentrism to the machinic and the material; expressive, critical, political, experimental

[5] Thanks to Tore Nielsen, Ph.D., Director, Dream and Nightmare Laboratory, Hopital Sacre-Coeur; Professeur titulaire, Département de psychiatrie, Université de Montréa, Montreal, Canada.

practices; technology; and the minor. So it makes sense that the most appropriate title for the volume, given these essays' critical and ethico-political stances, is indeed Minor Architecture.

10 The body's relation to space

By convention, architecture may be said to be concerned with proportional relations between human bodies and their material surroundings. Of course, these relations are inflected by historical and cultural processes, but three contributors focus in particular on the body's relation to space from phenomenological and post-phenomenological approaches. As Ron Broglio put it, in addition to the explicit concern with building and place, we can attend to the "unspoken awareness of surroundings and unconscious attentiveness to environmental and cultural situatedness". Broglio lucidly traces the corporeally mediated experience of space, drawing from Merleau-Ponty, and more contemporary theorists of corporeal experience, but radically departing from the metaphysics of subjects and objects, mind, and body. Broglio cites David Seamon's example of a man who, while driving in a familiar neighborhood, turns left from habit instead of going straight in a particular novel instance. This example, to which we can each add examples from our own ordinary life experiences, draws attention to how our experience of space conditions the body's habits, and conversely, how our body's habits, or in Broglio's provocative formulation, our incarnate mind, conditions the experience of space. In so doing, Broglio avoids the uneasy and ultimately reductionist portmanteau "embodied cognition" by taking the bold step of extending the category of that which thinks to matter. We will return to this. Taking a different critical response to our cognitivist inheritance materialized as the computer science of artificial intelligence and as the engineering of "interactive" environments, Erik Conrad draws attention to how "user interaction" design essentially reduces the human organism to a finger and an eye. In its stead, Conrad draws from Lefebvre's triads of corporeal experience and spatial practice. For Lefebvre, corporeal experience is a triad: perceived, conceived, lived; and the experience of space is another: spatial practice, representations of space, representational space. Constructing a set of relations linking pairs of corporeal and spatial experience, Conrad arrives at a concept of space that is alive. Just as Broglio's essay warrants a non-anthropocentric reinterpretation of thinking that can extend to stuff, Conrad's essay analogously warrants an extension of the quality of liveness. To be clear, neither author is appealing to a vitalism that naively attributes cognitive or biotic qualities to matter or space. To take familiar example, in English, we can say that a hall is acoustically "live" or "dead" or anything in between. And, extending from the acoustic, the liveness of a built space was an essential ingredient in what architect Christopher Alexander called the quality without a name.

Given that living bodies are also temporal entities and living spaces site events, we are led to consider bodies changing their relations in space, most canonically in movement. Christoph Brunner addresses this most directly and provocatively by looking at "Parkour" or "free-running" as a set of corporeal practices in urban space that produces both new kinds of dynamical spaces and, drawing from Arakawa and Gins, new kinds of bodies as well: contingently formed "organism-persons".

11 Dwelling and presence

Attending to such corporeal and spatial practices gives purchase on a set of their effects clustering around dwelling and presence. Ron Broglio first presents Heidegger's sense of dwelling as the essential reflexive comportment of human inhabiting a place: "Buildings bring together what Heidegger calls the fourfold of earth, sky, divinities, and mortals…[R]ecall Heidegger's… examples of a dam and a bridge. The dam changes water levels and flora and fauna while the bridge changes relationships between stuff on the two sides by making passage easier… Each era shepherds different things into the open… In the contemporary era with rockets, jets, and… global warming, human building (from missiles to skyscrapers) reveals the sky differently from former eras. How we build both dictates and furthers the grounding by which we dwell. An inquiry into dwelling provides a look at the fundamental means by which we comport ourselves and construct". Broglio refracts this concept of dwelling through a Whiteheadian lens: "to dwell is to build and move objects to set up new relations which establish new configurations of entities. Broglio subtly shifts the emphasis from how a human subject inhabits a space of objects, to Whiteheadian entities continuously "prehending" one another. Hugh Crawford, working from a sympathetic philosophical perspective, draws attention to the invisibility and "hapticity" of the "dynamic, unfolding process" by which Thoreau comes to site, and build with his hands and tools the hut on Walden Pond.

Complementing reflexive accounts of dwelling and presence, Liza Solomonova, Elena Frantova, Timothy Sutton, and Dr. Tore Nielsen (Director, Dream and Nightmare Laboratory, Université du Montréal) report on their experimental investigations of what they call "felt presence"—the sense of a being in the same space as you, but who is not there in the flesh. Their pair of essays present three intertwined investigations: a survey of related

phenomena in literature and folklore, controlled observational experiments of felt presence in sleep paralysis, and responsive environments inducing a sense of felt presence. Perhaps, the most interesting feature of this collaboration between a group of sleep researchers and media artists is the supplementary approaches to the phenomenon, and the contrasting designs of the respective experiments. The sleep researchers filtered out most of the world by placing the subject in as reduced an artificial environment as possible, and varied a sharply limited stimulus, in order to observe the "natural" emergence of the phenomenon. The media artists, by contrast, tried to build the richest possible facsimile of an everyday interior space in all its messiness and staged a rich array of media effects in order to induce the phenomenon.

Flower Lunn complements these accounts of dwelling and presence with a careful, artistic reconsideration of landscape and its relation to particular modes of subjectivity that used to labeled as the sublime. Lunn makes two profound moves, from site to landscape, and from scale of the humanly surveyable to the scale of the super-individual industrial and post-industrial wilderness. Whereas many of the examples cited in the related discussions of dwelling and presence, from Thoreau's hut to the room of The Other experiment, is bounded by a compact locus of event and object, in other words, a site, everything the perspective Lunn transports the discussion to the surround, i.e. landscape. This brings an associate mode of subjectivity rather distinct from the Romantic experience of landscape. Lunn characterizes the post-industrial sublime as "an aesthetic that does not herald, as Trig writes, 'the halo of ascent, but the flickering resonance of descent and gravity'".

In light of these reflections and experiments, an engineer, architect or artist can ask: what expressive or experimental approaches to co-constructing and inhabiting an environment could make sense under the conditions that obtain today? We will return to Lunn's own response later, but turn to a third cluster of themes addressing this question.

12 Play

The body in motion, especially movement that generates an event not fully determined by a priori conditions, if that were possible, could be said to be in a state of play. Rather than start from a notion of play predicated on a priori syntax and goals, however, the contributors in this volume, in particular Karmen Franinovic, study technological and urban settings that permit open, conditioned but improvisational play. Broglio prepares the ground theoretically with a general discussion of Merleau-Ponty and David Seamon's environmental and phenomenological approach to how a body in movement inhabits and makes its place from a physical space via "body-ballet", "time–space routines", and, moving away from focusing just on the body as an a priori ground, "place-ballet". Taking inspiration from Deleuze and Guattari's distinct appeal to "geological" and aschematic modes of articulation, Christoph Brunner examines Parkour, or free-running, against Arakawa and Gins' example of an "architectural body" being formed as the result of a fleshy body-in-motion continually placing or fitting itself into its environment by passing attention over a set of perceptual landing sites. Whereas Brunner attends to the expressive, rehearsed folk practices that work with the physical urban surfaces as built, Franinovic looks to the computationally augmented "responsive environment" as an alternative spaces of architecturally conditioned improvisational play. Franinovic considers a series of examples ranging from Gordon Pask's cybernetic systems through the TGarden responsive environments built by Sponge and FoAM, to outdoors public spaces, augmented by electronic sonic devices invented by Zeroth (Franinovic and Yon Visell).

Arguably the boldest conceptual move shared by many of the contributors is to set out from the familiar waters of the Cartesian subject into new materialities. In considering the wild, Lunn is not so much concerned with the boundary of the human or the social, but with the wild, the inhuman non-human that colonizes the industrial and now post-industrial "wastelands" that lie beyond the scale of an individual human organism's experiential capacity, or that courses in and constitutes plant-directed processes, a vegetal wild as implacable as the matter of Antonin Artaud's "theater of cruelty". This venture away from human-centered and social-centric concepts of the built environment also requires a reconceptualization of technology and its materialization: the machine. For this, we have a substantial theoretical resource in Felix Guattari and Gillles Deleuze. As Harry Smoak put it, for Guattari, "machines are never merely expressions of technology or technique (know-how)… [but rather] expressions of something processual and axiological… [T]he machinic is something very different from what normally comes to mind when we think of something as mechanical…. [T]he machinic [apparatus] spans the physical, the biological, the affective, the symbolic, the social, and the institutional producing specific enunciative effects that are reproducible but are not themselves representational". This last point is essential, and in fact characterizes an entire genre of research around what one might call the technologies of performance, expression, and enunciation, as opposed to technologies of representation. The deep point is that such apparatuses can condition a built environment for not just one program but for multiple kinds of event: a performance, a scientific experiment, a logistical exercise, or an explanatory panel.

Erik Conrad takes on most directly the dematerialized and disembodied design of "interactive" environments as inflected by artificial intelligence research and cognitive science. Conrad adapts Lefebvre's elaboration of the corporeal and spatial structure of the everyday an alternative reading of space inhabited by body. Thus, computational media as the media of "space alive" replaces "intelligence" supposedly designed into computational infrastructure.

13 Practice

Given such approaches to corporeal and spatial practices, dwelling and presence, movement and play, and given the emerging techniques and technical apparatuses for conditioning events in the built environment, we can adopt a diverse set of attitudes with respect to the design of the built environment: experimental, critical, expressive, practical (political). Frantova, Solomonova, Sutton, and Nielsen demonstrated a range of experimental designs. With Dr. Nielsen's Dream and Nightmare Laboratory, Solomonova and colleagues conducted scientific experiments under "controlled" conditions and as sharply defined phenomena as could be arranged with their apparatus. With the Topological Media Lab, Frantova and colleagues built a simulacrum of a living room with old furniture and reproductions of Renaissance and 19c paintings, augmented subtly by finely graduated sound and controlled lighting. The visitors were led through carefully prepared, timed sequences, with questionnaires before and after the event. Jean-François Prost and Harry Smoak approach events more as critical interventions using "one-off" constructions—technical apparatuses that are built to be used only once. Prost's Adaptive Actions project essentially called for individual actions using relatively ephemeral props: a set of stairs built to scale a low wall, a set of ordinary lamps carried by participants into the night streets on long extension cables, for example. What these share is a strong performative element, although they are not pieces of theater in the conventional frame. Nor are they performance art in the sense of problematizing the artist's body or psycho-social subject, being more actions that problematize aspects of public or urban space. Brunner's study of Parkour (free-running) exemplifies a parallel critical turn from being concerned with questions of identity to more critically mobile interventions, symmetrized between human subjects, explicit objects like buildings or props, and infrastructures such as street lighting and zoning code. Speaking of zoning brings us to legal versus political framings of public space, a principal critical concern underlying Hugh Crawford's essay about the Mad Housers, drawing critically from both from the inheritance of the US civil rights movement and from Gilles Deleuze and Felix Guattar's notion of the minor. Crawford links the quality of invisibility of Thoreau's literally hands-on craft of building a rustic hideaway with the work of the Mad Housers who build temporary, un-sanctioned shelters, and deposit them in the hidden spaces of the city where homeless camp. These are wild spaces even if they may be regulated by the state. Moreover, the homeless and the Mad Housers temporarily and tactically inhabit improvised situations in unregulated ways that are always external to the economy and to the program for which the infrastructure—property, lighting, roadways, ventilation, sewage—is designed. This tactical quality of the Mad Housers' work and the homeless tailoring and dwelling marks them as exemplars of de Certeau's, and Deleuze and Guattari's unruly modes of habitation.

14 Technology

If architecture is the material configuration of a physical environment conditioning the potential events that may occur, technology is the means by which we modify the material configuration in systematic ways. In this sense, every essay in this issue critically engages technology, but several authors are particularly explicit. Conrad zeroes in on serial (i.e. uni-dimensional) processing, or perhaps more to the point, if–then logical, linguistic, or semantic programming, as opposed to signal level, audio or visual processing, or texture processing. With respect to computationally augmenting the corporeal experience of space, Conrad writes: "The problem here is grafting a computing problem onto a spatial problem. Designing spaces is a problem of creating experience, not intelligence. Experience, much like space, is thick—it is not merely a void when not filled with prefabricated or pre-existing objects of attention. To thoughtfully (critically) embed computational media into the environment, we need an understanding of the environment that does not reduce it to a meaningless void (or the information that a computer can extract from it)". Taking a designer's perspective complementing the computer scientist's perspective, Franinovic surveys technologies sustaining playful activity in public space, ranging from Cedric Price and Gordon Pask's cybernetically inflected systems, to the TGarden responsive play spaces, and sound devices inserted into public space. However, what needs further discussion, perhaps in an associate volume, are the significant gulfs between the DIY (Do-It-Yourself), ad hoc, creation of technologies for esthetic and social speculations created as one-of-a-kind interventions in public space; the engineering research which is not oriented toward making robust tools, toolkits or finished apparatuses for particular esthetic or social creative

projects but to generate publications in technical journals or "demos" in technical conferences; and creating an apparatus to professional production standards but adapted to host philosophical, ethico-esthetic experiments (Topological Media Lab).

15 Minor architecture

The essays challenge along many directions what Broglio called the "architectural ground" of "cognition, visibility and presence". They challenge the restriction of experience to cognition, the cognitive agent as solely a human agent, the separation of space from body or event, the conceit that a space has only one program, the alignment of architecture with the rationalization of space, and more fundamentally the teleological design of the built environment. On the other hand, these essays suggest many positive alternative concepts, attitudes, and practices that may collectively be characterized as practices of the minor, performing "aikido" with some of what Foucault called the instruments of governmentality. These alternatives include: the wild (Lunn), infestation (Lunn), deterritorialization (Broglio, Crawford), and the invisible, ephemeral, haptic (i.e. hands-on), and tailoring or structured improvisation by the inhabitant. As Crawford writes: "[m]inor architectures as events in smooth space do not partake of traditional architectural visibilities. The minor is not meant to be seen, or at least, its perspective is subordinated to haptic and affective practices. Therefore, there can be no consistent style in any traditional sense of the word…. This loss of visibility… raises the importance of the affective…. Dwellers of smooth space feel their way through processes invisible to state planners, and experience both dwelling and self in a potentially profoundly different fashion".

However, positive the propositions, they are made without the self-certainty of design or psychology or cognitive science, or even positivistic user-centered design. As Isabelle Stengers wrote in her essay "Beyond conversation" (Stengers 2002) this approach would "refuse any kind of settlement, conversational or otherwise, which excludes those who are already excluded, even if this exclusion appears to be an inclusion. As Deleuze said, to think (or create) is to think 'in front of' or 'for' 'analphabets, dying away rats or alcoholics.' This does not mean addressing them, or helping them, or sharing hope or faith with them, but not insulting them with our power to justify everything. Thinking with them 'in front of' us means thinking with the feeling and constraint that we are not free to speak in their name or side with them." Instead, these speculative propositions take definite esthetic and ethical positions, but "stammered" to borrow from Stengers.

The neologism inspiring the discussions that generated the essays in this special issue was "soft architecture", connoting both the computational and the supple or pliant. Although the essays found more substantial footing in the critical, ethico-esthetic, and technical earths of minor, smooth, baroque practice, it is perhaps fitting to close this introduction with Flower Lunn's reflection on the original term: "Soft Architecture is just that—a product of softness. It is not so much the material nor the environment that makes it soft, but the process of creating it, whether a surface, space, environment, or experiment. Softness is a lightness, a sensitive receptivity to ecologies: to materials, to social dynamics, to the feel of spaces surrounding us. Letting these guide and teach us, we, as creators, have a patient trust in the cycles of time and events that lead a process to fruition…[S]oftness connotes a way of working that is a reintegration, that includes the whole of the self—space for pain and joy to speak, quotidian experiences and fears and playfulness alike guide a project. The project then becomes a seed for a variety of experiences to result in the viewer, as the poetic is the power to evoke. The conditions for this blooming are soft: flexible and attentive. Instead of the making of a statement, there is an attending to. This is a service of self to the process of creating a negative space; a room, a chamber, a pod that is a space to be, to play, to experience, to realign, to connect, to fly, to molt, to open up, to escape evade the syntax of hard architectural design and accompanying ideas of self, to come back…. It is very recent in our collective history that we do not experience, at least ritualistically, an architecture that evokes that of the womb. Beginning with tents and caves, hollows and forts, artists working within the… field of soft architecture…[are exploring]… other ways of treading upon this earth" (Lunn 2008).

Acknowledgments I compliment the energetic group of artists and critics who participated in the Topological Media Lab's soft architecture seminar over years 2007–2009. Together with the contributors, we are grateful for the intellectual and artistic companionship offered by fellow travelers including Ann-Marie Korpi, Helga Wild, Patrick Harrop, Ayesha Hameed, Gabriel Levine, Michael Fortin, Toni Dove, Madeline Gins and Shusaku Arakawa, Erin Manning, Brian Massumi, and members of the TML, the Dream and Nightmare Lab, and the SenseLab.

References

Alexander C (1979) A timeless way of building. Oxford University Press, Oxford

Alexander C (2002–2004) The nature of order, 4 vols. Center for Environmental Structure, Berkeley

Austin J (1975) How to do things with words, 2nd edn. The William James Lectures 1955. Clarendon Press, Oxford

Debord G [1994 (1967)] The society of the spectacle. Zone Books, New York

Deleuze G [2006 (1988)] The fold: Leibniz and the Baroque. Continuum, London; New York
Deleuze G, Guattari F [1987 (1980)] A thousand plateaus: capitalism and schizophrenia. University of Minnesota Press, Minneapolis
Diller E, Scofidio R (2002) Blur: the making of nothing. Harry N. Abrams, New York
Eclats (1999) Temps fugace, temps précaire, Quaderns D'arquitectura I Urbanisme vol. 224 décembre. In: Ortega L, Mestre J, Bercedo I (eds) Editorial Formentera, S.A., Barcelona
Gins M, Arakawa S (2002) Architectural body. University of Alabama Press, Tuscaloosa
Heidegger M (1951) Building dwelling thinking. In: Poetry, language, thought. HarperCollins Canada/Harper Trade, 2001
Hooper B (2002) Urban space, modernity, and masculinist desire: the utopian lusts of Le Corbusier. In: Bingaman A, Sanders L, Zorach R (eds) Embodied utopias: gender, social change, and the modern metropolis. Routledge, London
Jacobs J (1985) Cities and the wealth of nations: principles of economic life. Vintage Books, New York
Karatani K (1995) Architecture as metaphor: language, number, money, writing architecture. MIT Press, Cambridge
Lunn F (2008) Soft architecture (unpublished abstract)
Matta-Clark Gordon (2007) Gordon Matta Clark: you are the measure. Whitney Museum of American Art; Yale University Press, New Haven Connecticut
Searle J (1980) Speech act theory and pragmatics. D. Reidel, Dordrecht
Stengers I (2002) Beyond conversation: the risks of peace. In: Daniell A, Keller C (eds) Process and difference: between cosmological and poststructuralist postmodernisms. SUNY, New York

AI & Soc (2011) 26:123–128
DOI 10.1007/s00146-010-0291-5

ORIGINAL ARTICLE

Soft architectures for everyday life

Erik Conrad

Received: 1 January 2008 / Accepted: 13 August 2010 / Published online: 16 February 2011

Abstract Technologies not only change "external reality" but also change our internal consciousness, shaping the way we experience the world. As the reality of intelligent environments is upon us—ushered along with the age of ubiquitous computing—we must be careful that the ideology these technologies embody is not blindly incorporated into the environment. As disciplines, engineering and computer science make implicit assumptions about the world that conflict with traditional modes of cultural production. For example, space is commonly understood to be the void left behind when no objects are present. Unfortunately, once we see space in this way, we are unable to understand the role it plays in our everyday experience. In order to make computationally enhanced spaces that are meaningful at the level of the everyday, we must exorcise the notion of intelligence from their design and replace it with life. Henri Lefebvre's discussions of the space of everyday life provide a framework to help conceive this transition.

Keywords Everyday space · Representational space · Ubiquitous computing · Henri Lefebvre

E. Conrad (✉)
University at Buffalo,
The State University of New York, Buffalo, NY, USA
e-mail: erik.conrad@peripheralfocus.net
URL: http://www.peripheralfocus.net

1 Main discussion

1.1 Transforming consciousness

From Mark Weiser's 'Sal' (Weiser 1991) to John Stors Hall's 'utility fog' (Hall 2006), the past two decades of ubiquitous computing research have been marked by the impending reality of drastically and dramatically computationally enhanced space. However, even with a growing research community and dramatic increases in computing power with corresponding decreases in cost, this future has yet to arrive, and it does not appear to be just around the corner. One could point to the seeming youth of ubiquitous computing as a research area to explain its unfulfilled dreams. However, work on intelligent environments predates Weiser's seminal 1991 essay, "The Computer for the 21st Century", by at least 25 years—dating back to experiments in architecture and cybernetics in the 1960s and 1970s.

In the early days of computing, the belief that advancements in 'thinking machines' would unfold as quickly as other recent and ongoing technological achievements was widely held. In 1948, Alan Turing believed that a "sure" way of producing a thinking machine would be to substitute each part of a human with the corresponding electronic machinery—television cameras for eyes, microphones for ears, etc.—and allow it to "roam the countryside" so that it "should have a chance of finding things out for itself" (Turing 1948). The promise of intelligent machines led to speculation among architects about the exciting prospects of designing intelligent environments. This enthusiasm dwindled as the potential of artificial intelligence proved overstated due to misconceptions about (1) what is possible to achieve with computers and (2) the nature of intelligence itself. Curiously, even

though ideas about what a computer is and what a computer can do are very different from what they were over 40 years ago, when it comes to ideas about intelligent environments, current notions bear a striking resemblance to the earliest speculations. Although the computing machinery now available is an order of magnitude more powerful than that of the initial dreams and experiments, current applications lack the magic inherent in those earliest proposals. Projects such as Superstudio's *Supersurface*—a physically ubiquitous information/utilities grid spread across the landscape that would sustain a contemporary nomadism—or Archigram's *Walking City*—literally a city that could sprout legs and walk about—reflected a utopian ideal in new technologies, or at least the excitement of possibilities limited only by the imagination.

1.2 Toward the age of ubiquitous computing

Early development in information technology followed the legacy of industrial interface design. In the early twentieth century, as automated machines replaced humans in the workplace, the design goal was to eliminate participation wherever possible. In this industrial context, machines were generally dangerous to human bodies, and minimizing their interaction was an issue of safety. The momentum of this design strategy has proven difficult to overcome as consideration for the user has lagged behind their need to interact with computers. As information technology becomes part of the social infrastructure, it demands design consideration from a broad range of disciplines. It can be argued that appropriateness now surpasses performance in importance in technological design. "Appropriateness is almost always a matter of context. We understand our better contexts as places as architecture" (McCullough 2004).

Somewhat appropriately, 'context' is a popular topic in current ubiquitous or pervasive computing research (Abowd and Mynatt 2000). Most early papers, and even some recent ones, make a point of saying that context is more than just location. The information included as context changes from researcher to researcher, but a couple of typical variables are time, identity, identity of others, etc. Location is often described as a set of Euclidean coordinates (e.g. <x,y,z>), a room, a building or increasingly, a latitude and longitude if using GPS. The overwhelming majority of these research environments are designed for work settings and are focused on applications such as "How can we tell when a meeting is taking place?" so it can presumably be recorded. Context here is the information that can be extracted from the environment with current sensor technology combined with the computational system's ability to match that information to a pattern.

How does the computer participate in the world it represents (Dourish 2001)? This question illustrates the design challenge that results from the conflict between the "(quintessential) product of engineering" (Penny 1997) and all of the "spaces" that it inhabits. Computation is a fundamentally representational medium, and as the ways in which we interact with computers expand, so does the importance of attention paid to the duality of representation and participation. The focus of this attention, and the place where this conflict is potentially best solved, is at the interface, the point or area in which the person and computer come into contact.

Although computing's realization of the importance of the social space in which computers participate is a step forward, it is primarily focused on work environments. Social and spatial interactions as they relate to the production of capital are important, not the implications of technology on the everyday. However, computing has become part of the ambient, social, and local provisions for everyday life, and as such it becomes important to look at the larger impact of computation on culture. Computing has revolutionized almost every discipline and is continually increasing its presence in day-to-day life. However, it reifies an ideology that subordinates the experience of the physical.

In order to enact the power of computational systems, one must first recast the problem into a format that it is able to parse. Computers process information. In order to work with anything that would normally fall outside of our commonsense notion of information, it must undergo an informatic conversion. Some problems translate well, but others that we are less able to articulate do not.

1.3 Serial thinking

These research agendas make assumptions about what is possible for a computer to know and do in the world, reflecting a tacit belief in what it is "to know". Dreyfus expounded the inherent philosophical problems regarding the possibility of intelligence as early as 1965, and AI research has done an excellent job of pointing out what intelligence is not. Proving a mathematical theorem and playing an excellent game of chess were at times thought to be activities that represented the pinnacle of human intelligence. Researchers were unsurprisingly optimistic when it turned out that these tasks were well within the means of the technology. However, by the 1980s, it was realized that tasks that human beings take for granted as being simple, like recognizing a face, or crossing a street, proved to be very difficult computationally. Ultimately, it proved to be easy to implement systems that reflected adult-level reasoning skills, while difficult to impossible to implement the perceptual-motor skills of even a cockroach. Dreyfus

(1992) articulates that the difference between "knowledge-that" and "knowledge-how" is non-trivial in determining whether or not computers are capable of human intelligence. "Knowledge-that", or propositional knowledge, can be implemented by a logical, rule-based system. A system can contain all of the facts of biology and rules of the physics of light yet not know *how* to see. "Knowledge-how" is derived from experience and can be difficult to impossible to communicate with words alone.

The nuts and bolts of making complex intelligent machines represent only half of the philosophical problem underlying the design of intelligent environments. The other half of the problem is that if intelligence is information processing, then humans are just more complicated information processing machines. In the development of ubiquitous computing systems, what intelligence means expresses itself as being for whom we imagine the space being designed.

The conventional computer interface—display(s), keyboard, mouse—illustrates the underlying assumptions about the world that are present in its design. These assumptions are in conflict with what we commonly understand as everyday experience. First, the computer interface only engages the body in a very limited way. More importantly, the underlying metaphor for interaction here is vaguely that of a dialogue. The "user" and "computer" are engaged in an input/output dialogue. Ignoring for the moment that this metaphor is potentially not very useful when applied to a space rather than an object, the style of 'dialogue' as enacted by the computer interface is a rather limited one. It is serial in nature, and information can go only one way at a time. The serial nature of the interface is exemplified by the fact that in the model of the user in the interaction, the focus can only be on one exact location at any one point in time—the location of the mouse. This seemingly inconsequential interface detail is emblematic of the contradiction between the world as it is represented by traditional computer hardware and the world as lived. It is also emblematic of a world in which there is no possibility of parallel interaction. The implicit serial model of interaction is revealed to be lacking when applied to more complex problems such as vision. Modeling human vision with a computer "brain", video camera "eye", and serial logic proved much more difficult than originally expected. Part of the problem was the belief that the human brain operated like a computer, and that visual perception was a serial process. The model was as follows: (1) photons leave light source, (2) they are reflected off of an object, (3) they enter the eye through the lens and strike the retina, (4) the brain creates a mental image based on this sensory data, and (5) it matches patterns in the image to patterns in the memory to identify objects. The problems with this simplified model are many, but for our purposes, the most important is that the signals in our visual system do not operate in such a simple manner. The signals from sensory stimuli that represent visual information are actually massively parallel in nature, with origins much more diverse than the retina alone. For example, information from the muscles that position the eyeball, as well as other posture information, greatly contributes to what we experience as the visual field. Additionally, there are numerous feedback and feedforward effects present in the visual system, for which a serial model is unable to account. This model of interaction does not reflect the reality of experience or biology between human and environment.

In many intelligent environment or ubiquitous computing systems, this diagram changes, albeit slightly. One configuration is essentially identical, with the exception that the room, or building, is the interface and the user is inside it. Like the desktop computer, it relies on the system being fast enough to provide the illusion of carrying out multiple processes simultaneously. Another model consists of many small, serial machines embedded in the environment that may or may not be connected via a network. These architectures are still founded on the serial processing of a world that is information, and may be incompatible with the reality of thinking and living in the complex world of relationships in which we are embedded.

1.4 The everyday environment

I propose that despite a firm grasp of what computers can do, approaches to intelligent environments are still wrought with the misconception that their goal should be to create intelligent environments. The problem here is grafting a computing problem onto a spatial problem. Designing spaces is a problem of creating experience, not intelligence. Experience, much like space, is thick—it is not merely a void when not filled with prefabricated or preexisting objects of attention. To thoughtfully (critically) embed computational media into the environment, we need an understanding of the environment that does not reduce it to a meaningless void (or the information that a computer can extract from it).

A useful way to approach these problems is through Lefebvre's notion of the everyday. The everyday is the glue that holds what we normally consider our experience together. If the memorable events of one's life are blades of grass, then the everyday is the dirt that holds it together (Sha 2005). Through Lefebvre, the everyday becomes a spatial condition, one that breaks down nicely into categories that allow us to dissect how computing fits into space and ultimately how its troublesome ideological foundations can be reconciled with our experience of everyday space.

The problem of designing intelligent environments is in some ways an old problem of overlapping the abstract and

the concrete. Instead of context, a person's environment can be understood as their everyday spatial condition. Through the lens of the everyday, we can see that the solution is not intelligence, but life. Life becomes the goal of design, life as both experience and the creation of experience.

Henri Lefebvre's dissection and discussion of space provide a rich framework to contemplate the intersection and overlap of architectural and computer-mediated spaces. Lefebvre believes that any attempts to understand the contemporary world that ignore spatial considerations are both partial and incomplete. The meanings that we attribute to space are inextricably bound with our understanding of the world in which we live. Our basic understanding of the world originates from the sensory spatial relationship between our body and the world. Conversely, the computer is a product of "a nineteenth and early twentieth century scientized approach to the world: that mind is separable from body; that it is possible to understand a system by reducing it to its components and studying these components in isolation (that the whole is no more than the sum of its parts); that the behavior of complex systems can be predicted" (Lefebvre 1974).

While useful, I would like to suggest that this is not necessarily the world in which we would like to live. If we combine the field of computing with a different set of underlying assumptions, we may be able to create a world that is richer.

Our understanding of space is directly related to our understanding of the space of our body, which has long been sundered in Western culture by the Cartesian duality. If we do not accept this separation, what is the resultant space? This new understanding can change the ways in which we live and imagine the present—including how we can use computational media as a 'tool for thinking' in the precipitant space.

1.5 A new sense of space for computing

Lefebvre confronts considerations of space that reside "comfortably enough within the terms of mental (and therefore neo-Kantian or neo-Cartesian) space". His central claim, that space is a social product, directly challenges the predominant "idea that empty space is prior to whatever ends up filling it". Lefebvre's re-conceptualization of space is, at least partially, related to his conception of the body and its place in Western culture: "Western philosophy has betrayed the body; it has actively participated in the great process of metaphorization that has abandoned the body; and it has denied the body" (ibid.).

Lefebvre describes the body, as he does many things, in the form of a triad: perceived—conceived—lived. Introducing a third term into the equation already destabilizes any notions of Cartesian duality. The body, as simultaneous subject and object, "cannot tolerate such conceptual division" (Lefebvre 1974) and can be liberated through a production of space. This occurs, in part, through the distinction between physical, social, and mental space. Lefebvre states: "Social space will be revealed in its particularity to the extent that it ceases to be indistinguishable from mental space (as defined by philosophers and mathematicians) on the one hand, and physical space (as defined by practico-sensory activity and the perception of 'nature') on the other" (Lefebvre 1974).

All interactions with computer systems are at some level a social activity. Computation can be both a tool of and structuring force behind the relationships between people, institutions and practice. Even if one uses a computer in isolation, there is a social interaction present between the user of the system and the designer of the system. A user only knows how to use a computer system through a shared set of social expectations. Empty space thickens when mixed with information, making space itself an interface, and thus part of social space.

The unique properties of social space allow it to become the site for reconciliation between the physical and the mental, and the concrete and the abstract. Going one step further, social space can be broken down into the triad of spatial practice—representations of space—representational space. Lefebvre describes each as follows:

1. Spatial practice, which embraces production and reproduction, and the particular locations and spatial sets characteristic of each social formation. Spatial practice ensures continuity and some degree of cohesion. In terms of social space, and of each member of a given society's relationship to that space, this cohesion implies a guaranteed level of competence and a specific level of performance.
2. Representations of space, which are tied to the relations of production and to the 'order' which those relations impose, and hence to knowledge, to signs, to codes, and to 'frontal' relations.
3. Representational spaces, embodying complex symbolisms, sometimes coded, sometimes not, linked to the clandestine or underground side of social life, as also to art (which may come eventually to be defined less as a code of space than as a code of representational spaces) (Lefebvre 1974).

Spatial practice is closely related to perceived space. It is the space secreted by society, recursively reifying it. The perceived can be thought of as falling between that which is sensed, the raw experience, and what we believe, or the conceived. Beliefs and expectations alter or condition perception, which we then take as given. This notion is exemplified in experiments in change blindness. A simple

predisposition, such as trying to count the number of passes a group makes with a basketball, can make one completely oblivious to a blatant dynamic event, such as a person in a gorilla suit dancing among the players (Simons and Chabris 1999). For Lefebvre, the perceived of everyday space falls between daily routine and the infrastructure that allows it—the actual routes and networks that organize the daily routine. Ultimately, it is in spatial practice that the effects of ubiquitous or pervasive computing design will be felt and internalized. Computing is part of the infrastructure that organizes daily life.

Representations of space refer to conceived space. It is the space of scientists, architects, urban planners and all who privilege the cognitive over the perceptual or lived. It is the dominant space in our society, and it is the space of contemporary visual and computing cultures. It is a mental space separated from physical space, or abstract space imposed on concrete space.

Representational space corresponds to lived space. This is where meaning resides. It is "directly lived through its associated images and symbols". It is the passively experienced space that overlays physical space, which the imagination is able to change and appropriate. Representational spaces "tend toward more or less coherent systems of non-verbal symbols and signs". In trying to infuse spaces with life through computational media, the goal is to move the design of computing systems from representations of space to representational space, from conceived to lived space.

These spaces are not always clearly differentiable; they overlap and intermingle in varying intensities. Lefebvre states that in order to understand these three moments of social space, one can map them to the body. The spatial terms (spatial practice, representations of space, representational space) are analogous to the bodily triad of perceived—conceived—lived.

Lefebvre seems to imply that these triads are in some ways analogous although different. If social space reconciles the duality of the mental and the physical with a nature that is both abstract and concrete, one may also argue that representational space holds a similar position between spatial practice and representations of space just as the lived does between the perceived and conceived. If all interactions with computer systems are social, and the social is the space of embodiment, where physical and mental co-mingle, this is where we should begin to rethink design. The layered interfusion of spaces presented by Lefebvre provides a rich framework for thinking about the possibilities of designing computationally mediated environments as they extend into everyday space, while reflecting a careful negotiation between technology and human beings (Fig. 1).

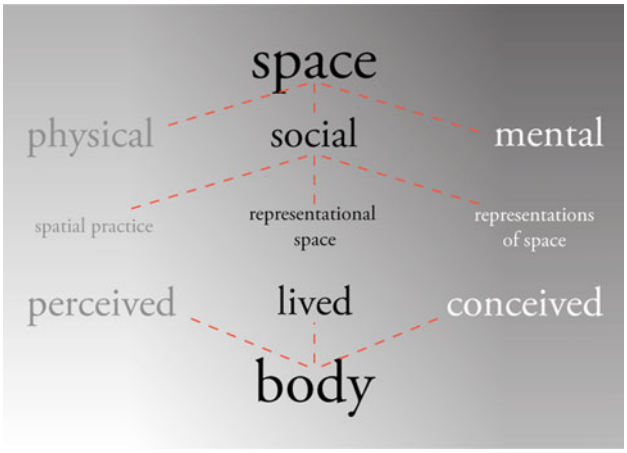

Fig. 1 Lefebvre's triads

2 Conclusions

How do we use computational media to make meaningful spaces? The tacit philosophy of the machine may be ill-equipped for this task. The problem is one of perceived divides between mind and body, body–environment, and environment–mind. If we choose to keep these categories, Lefebvre's articulation of the everyday can provide a framework for their reconciliation. Ultimately, it is at the level of the everyday, the lived, in which we wish to make a difference.

Lefebvre dissects the everyday spatially, into physical space, mental space, and social space. Social space is special in this breakdown, since it operates between and overlaps with both the physical and the mental. Social space is necessarily physical in that it is comprised of individuals. It is also necessarily mental, or abstract, in that part of its manifestation is non-physical. Lefebvre further breaks down social space into yet another triad that somewhat reflects his original structure of the everyday. Social space can be dissected into the triad of spatial practice, representations of space and representational space—representational space being a space of *meaning*.

Lefebvre describes the body in the triad of perceived, conceived, and lived. Here, the lived is the special term, reconciling that which is perceived with that which is conceived. By aligning Lefebvre's various triads, a pattern emerges where everyday life, social space, and meaning correspond to the lived body.

In this diagram, the chasm between physical reality and abstract thought is filled with life. In the pursuit of creating environments that are meaningful for everyday life, an emphasis solely on intelligence results in an imbalance. With this methodology, the pursuit of design is not intelligent environments but a *space alive*.

References

Abowd G, Mynatt E (2000) Charting past, present, and future research in ubiquitous computing. ACM Trans Comput Hum Interact 7(1):29–58

Dourish P (2001) Where the action is the foundations of embodied interaction. MIT Press, Cambridge

Dreyfus H (1992) What computers still can't do: a critique of artificial reason. MIT Press, Cambridge

Hall JS (2006) Utility fog: the stuff that dreams are made of. Lecture: Subtle Technologies, Toronto

Lefebvre H (1974) The production of space. Blackwell, Malden

McCullough M (2004) Digital ground: architecture, pervasive computing, and environmental knowing. MIT Press, Cambridge

Penny S (1997) The virtualisation of art practice: body knowledge and the engineering world view. CAA Art J 51(3):30–38

Sha XW (2005) Ethico-aesthetics in T* performative spaces. In: Kuzmanovic M, Boykett T (eds) On transient realities and their generators. Kibla, Slovenia, pp 22–39

Simons DJ, Chabris CF (1999) Gorillas in our midst: sustained inattentional blindness for dynamic events. Perception 28:1059–1074

Turing A (1948) Intelligent machinery. National Physical Laboratory report

Weiser M (1991) The computer for the 21st century. Sci Am 265(3):94–100

AI & Soc (2011) 26:129–136
DOI 10.1007/s00146-010-0292-4

ORIGINAL ARTICLE

Architecting play

Karmen Franinovic

Received: 14 May 2008 / Accepted: 13 August 2010 / Published online: 14 September 2010

Abstract From the grotesque pavilions hidden in sixteenth century Italian gardens to the temporary structures in public space in the 70s and recent digitally augmented environments, architectures of play have long been designed to engage explorative experiences. The uncertainty of play allows us to probe new behaviors, to poke into the boundaries of subjectivity and to interact with people, things and systems in unexpected and unfamiliar ways. In this essay, we explore how an interactive system, situated in public space, may foster explorative activities and enable the transformative power of play. Through the analysis of several computer-augmented architectures, we examine what interactive qualities might enhance the transformative power of play. Beginning with the Fun Palace, an early attempt to use cybernetics in order to encourage visitors to experiment with their habits, we move to contemporary projects including some of the author's own work. The latter takes the advantage of existing public locations in order to insert exploratory play into everyday life. Through analysis of these projects, we discuss whether such environments raise our responsibility toward others within our surroundings; whether they enable us to transform our own established behaviors; and whether they empower us to reclaim public space.

Keywords Play · Interaction · Responsive architecture · Physicality · Public behavior

K. Franinovic (✉)
Zurich University of the Arts,
Interaction Design, Zurich, Switzerland
e-mail: karmen.franinovic@zhdk.ch
URL: http://www.iad.zhdk.ch

K. Franinovic
Zero-Th Association, Zurich, Switzerland
URL: http://www.zero-th.org

1 Introduction

1.1 Constraints of public space

To design within public space is to design within the space of tensions, such as those between fixed architectural elements and transient urban flows, or those between different groups encountering each others in public. These tensions are reduced and sometimes rendered invisible through careful urban design, concealed commercial strategies, social rules and techniques for the control of public behavior. Shaped by the latter, we often perform automatically—our physical and social actions are based on common-sense practices and learned behaviors. We conduct ourselves according to different contexts: in the office or in the bar we change our social roles (Goffman 1959). Our physical gestures, such as walking, sitting, or shaking hands, express the fashion of the time or identify us as part of a specific social group (Mauss 1934).

These embodiments of behavioral norms are rarely challenged, especially when exposed to public eye. Rather, they are reinforced through the design of public areas. An example is *Muzak*, a background sound design for commercial areas. It is based on the idea that certain social groups identify with a particular style of music. The background sounds have proven to be capable of shaping human behavior: specific musical content attracts certain consumers, while reducing the loitering of other, undesired visitors. Such subtle techniques sonically preselect the people inside and around commercial areas and extend them beyond their physical limits. Obviously, their purpose is to accommodate the private interests of shop owners rather than to enrich public life (Sterne 2006). Easier to perceive are the "hard constraints" set by architectural elements and urban infrastructure. Buildings, parks, and

transportation systems frame and shape the transient flows of humans and machines. Such management of movement, established though urban design and planning, directly affects human encounters and the use of public space. A well-known example is the proliferation of highways and suburbs in North America, where urban developers and car industry joined forces to produce profit without considering and designing for pedestrian life.

American highways, as well as *Muzak*, reduce the chances of encounters between strangers of different backgrounds. These hard and soft systems, seamlessly embedded in our lives since childhood, support the non-egalitarian uses of urban space. They encourage us to keep our distance from the people with whom we share the world. Could playful activities challenge such behavioral patterns?

1.2 Transformative power of play

Sports, music, cinema, and other entrainment industries offer play as an activity based on clichéd modes of competitiveness and adventure. Play is sold and controlled because, as theater director Victor Turner argues, it has the power to challenge the established structures: "Playfulness is a volatile, sometimes dangerously explosive essence, which cultural institutions seek to bottle or contain in the vials of games of competition, chance and strength, in modes of simulation such as theater, and in controlled disorientation, from roller coasters to dervish dancing" (Turner 1983). These control mechanisms are the result of the fear caused by one of the most interesting qualities of play: its transformative power.

As much as it can be a social and cultural phenomenon, transformation though play can also be an empowering personal experience. Theater director Eugenio Barba described play as an unpredictable strategy for personal exploration: "The body is deconstructed so that it can be re-created according to the plan. Plans are not fixed. They change, sometimes slowly, sometimes suddenly" (Barba 1986). It takes bravery to embark on such an unpredictable and transformative experience. Yet play is often not taken seriously. After all, it is only play: a temporary event that one can leave at any time (Huizinga 1986). But the experiences of play may be so powerful as to transfer and to extend into everyday life. Dostoyevsky described this invasion of play into the quotidian in his novel *The Gambler* (sometimes translated as *The Player*). The main character subordinates himself to a particular kind of play—gambling—and feels its effects on every aspect of his life. Immersed in play, he cannot return to his daily activities.

If play can so pervasively invade our lives, than it offers an opportunity for personal and collective transformation. However, one requires great prudence in selecting which kind of play one wants to engage with. The qualities of the game encourage certain types of behaviors: playing a computer game or playing basketball stimulates different kinds of skills and emotions. Considering the variety of game and play potential, how can we stimulate exploration that allows us to question and to transform our own personal and social behaviors? And what is the role of the architecture and the environment in which such exploration takes place?

2 Designing an architecture of play

The *architectures of play* are not composed of the physical building alone, but also entail the flows of light and sound. In the case of interactive environments, those tangible and ephemeral structures are affected by the software system. Most importantly, social interaction is an essential part of the overall ecology of play: an architecture of play cannot exist without the people who activate it. The relations between players, which are created in interaction with their surroundings and constantly transforming, can hardly be predicted or interpreted through computing. Yet many creators of playful environments have attempted to do so.

2.1 Automaticity: delegating action to architecture

Joan Littlewood, a British theater director, created works that aimed to develop new forms of social and political expression. However, she was unsatisfied by the limitations of theatrical productions and the ways in which these engaged the participation of the audience. Littlewood dreamed of creating a public architecture that could accomplish similar goals to those she had in her theater works: to enable visitors' active participation without the engagement of a performer and to engage in critical explorations of the quotidian through play. The result of these ideas was the *Fun Palace*, an architecture of play that would be based on an interactive system open to accident and founded on evolutionary processes whose goal is unknown (Littlewood 1964).

Littlewood invited architect Cedric Price to design a building that would encourage playful activities for its inhabitants. His architectural proposal had no fixed form or plan (Banham et al. 1969). It was a flexible frame with movable modules: smaller cells that hosted cooking and washing services and large volumes such as auditoriums. The functional juxtapositions, Price believed, would create new types of social activities. Rooms, walls, and walkways were to be automatically re-arranged, and resources such as sound, light, temperature, and humidity would be modified to create different atmospheres. Such spatial transformations

were to have been based on visitors' desires and enabled by a cybernetic system. Price and Littlewood had invited cybernetician Gordon Pask to program an environment that could adapt to the needs of its inhabitants and engage their participation. He proposed the retrieval of information about visitors' needs based on the incessant tracking of their activities (type, size, location, quality, quantity) through electronic sensors and other monitoring devices. Based on the gathered information, the cybernetic system would compare people arriving to those leaving the building, causing it to change its shape.

Pask designed the system based on his idea that architecture must serve and, at the same time, control its inhabitants' behavior (Mathews 2007). In contrast, Littlewood's original plan was to raise visitors' awareness about the constraints through which traditional architecture and social norms shaped their activities. Her idea was to create an environment which would allow for the reflection and change that once relied on professional services such as psychoanalysis: "therapy for everyone: men and women from factories, shops and offices, bored of their daily routine, will be able to re-enact incidents from their own experience in burlesque and mime and gossip, so that they no longer accept passively whatever happens to them, but wake to a critical awareness of reality" (Littlewood and Price 1968). Littlewood valued discussion and antagonistic interactions and stated that the Fun Palace "must provide the creative conflict about ideas that can replace mass murder" (Littlewood and Price 1968). Pask, on the other hand, hoped to avoid any kind of conflict by relying on an automatic decision-making system (Pask 1969). For example, if an equal number of people wanted to perform different activities, the system would try to accommodate both by creating two functional spaces. As the core of the project became the mathematical prediction models applied to social and psychological dynamics, the *Fun Palace* appeared to change from an exploratory toy to a control machine of an automated society.

The *automaticity* of cybernetic system might have been the main reason for this change. All the architectural transformations were automatic and based on the input data collected through surveillance mechanisms. The system allowed for minimal direct interaction from the visitors. The only directly addressable interface was the Pillar of Information, proposed by artist Roy Ascott, with which visitors could perform inquiries and through which the system could learn more about visitors' interests.[1] By preventing *voluntary interaction*, design choices conflicted with Littlewood's original plan of fostering participation and transformative behaviors. The active engagement of visitors was substituted with the intelligence of an artificial system. Yet both Price and Littlewood never abandoned the idea of play as a strategy to reclaim public agency—Later Price said, "What do we have architecture for? It's a way of imposing order or establishing a belief, and that is the cause of religion to some extent. Architecture does not need those roles anymore… Creating a continuous dialogue with each other is very interesting; it might be the only reason for architecture" (Price 2003).

[1] Personal discussion with Roy Ascott in Vienna at Consciousness Reframed: The Planetary Collegium's IXth International Research Conference in 2008.

2.2 Complexity: location and timing of media responses

As in the *Fun Palace*, many contemporary projects capture visitors' actions without their permission and react responsively without the visitors willing engagement. For example, in Camille Utterbach's piece *Untitled 6*, simply stepping into the installation triggers changes of the video image (Utterbach 2007). Although the feedback to their movement is direct and immediate, visitors do not necessarily make a decision to act: their every movement triggers the response of the environment. This is sometimes the result of the artist's desire to create an immersive experience and is often due to the computer's difficulty in recognizing the participants' intention. In video-tracking systems, human intention is often oversimplified as the quantity of movement: if people move more, their will to act is inferred to be stronger. This limits the potential and richness of participants' interaction with the environment and the people in it (Franinovic 2005).

An alternative to such simplified feedback loops are complex systems designed for responsive media spaces (Sha 2002). The latter combine software evolution models with interfaces embedded in visitors' garments and their surroundings. The algorithms transform the media environment on different time scales: the long responses related to the overall evolution of the space, its temporal behavioral state responses, and the short-time response to individual actions. Similarly to original Fun Palace concept, these architectures are designed "to evolve without a specific goal and to encourage a multiplicity of interactions and behaviors" (Kuzmanovic and Gaffney 2005) (Fig. 1).

The *txOom* environment (FoAM 2003) is the second in the series of three projects originating in the T-garden research that explored such evolutionary behavior of play spaces (Sha 2005). In it, the participant's movements affected the sonic and light atmosphere as well as the material boundaries composed of FoAM, lycra, electroluminescent wire, and sand. Tangible and wearable interfaces distributed the loci of activity throughout the space. Because they required less direct attention than, for example, a video screen, a stronger sense of immersion was

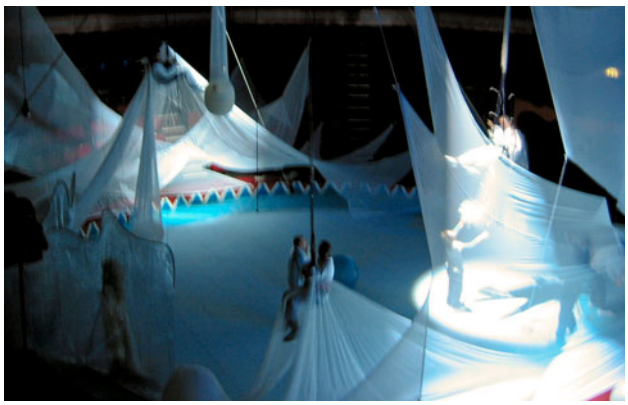

Fig. 1 txOom (FoAM 2003) responsive environment in Hippodrome in Great Yarmouth

created. Rather than interacting with the fixed points of control and display in space, participants could intuit fields of activity and spatially engage with them using their whole bodies. Although most of the media response was global, the individual gesture performed with the costume-interface was directly coupled to the video projected on the floor. This response in immediate proximity of the player was easily perceivable and highly engaging: as one was moving within the projected image of cloud or smoke, one could send waves toward others in the space.[2]

Shaping the sound, becoming tangled in textiles or swinging in the air, participants became a part of a media ecology in which everything seemed to be connected to everything else. Immersed in rich sonic and luminous dynamics, they sometimes had difficulties in identifying the results of their own actions. One of the participants said, "…never was I aware of altering the environment by my own actions, which was a pity" (Boxer 2002). The rich media feedback seemed not to allow participants to distinguish between the effects of their actions and those of other participants on the changing environment. This often resulted in repetitive bodily movements, as if participants wanted to affirm their intention to perform a certain action and reveal its effects on their surrounding. The *voluntary interaction* appeared to be blocked by the lack of transparency in coupling participant's action to media response and the complexity of the behavior of the environment.

While simple mappings between the quantity of motion and media feedback allow for an easy understanding of the effects of one's actions (as is the case in Utterbach's work), complex systems risk confusing visitors, who may not be able to perceive a response to their actions in the myriad of environmental changes. The latter are often interpreted as automatic behavior on the part of the environment, because those changes cannot be perceived as linked to participants' activities. As a result, participants do not feel aware of and responsible for the transformation of their surroundings. Rather, they are mesmerized by its evolution, which appears to be independent from their actions.

2.3 Tangibility and scale: architectural politeness

Richard Schechner argued that the sensation of looseness in play emerges though activities rather than from physical structure of the environment (Schechner 1993). The coupling between actions performed and media feedback enables participants to become aware of the influence of their behavior on the environment. However, the physicality of the interface and the control over it plays an important role as well. In *txOom*, immersive media and soft, comfortable materials helped participants to relax. Participants, however, felt constrained when wearing certain costumes, which was also the intention of the designers. Some of them felt that the situation was out of their control: when hung in the air by bungee cords, one had to rely on the person pulling one up and down, which required a great amount of trust.[3] The incapability to autonomously act, and the dependency on *txOom* performers who managed the bungee cords, removed, to a certain extent, the visitors' responsibility for their behavior.

The *Hinge Dimension* project (Franinovic and Wilson 2007) explored how the physical structure of the environment affects the transparency of its responsive behavior. The goal was to enable citizens to *voluntarily* change the physical and media architecture of a public location. A church was filled with large screens that could be moved around a pole acting as a hinge (Fig. 3). A movement of a single screen would result in local and global transformation of sound and video image projected on the wooden ceiling of the church. Participants could arrange their surroundings in a labyrinthine and chaotic fashion, or organize it in clusters or corridors. The modification of the overall structure influenced sonic and light composition, which reflected the changing potential of the space for the flow of people in the location (clustered, directional, diagonal structure…) (Fig. 2).

The *Hinge Dimension* environment responded only when visitors physically grasped its architectural elements. Without the intention to transform the spatial structure, nothing happened, except the resonance of the past activity, which slowly faded into the background. The direct link between visitors' actions upon the architectural elements and the resulting changes in the sonic and luminous atmosphere facilitated their understanding of the system. Satisfied with the immediate response, some participants

[2] Author's personal experience of *txOom* installation at Biennale internazionale di Arte Giovane in Turin, Italy in 2002.

[3] Personal discussion with one of the txOom visitors, Zurich, 2006.

Fig. 2 Hinge Dimension (Zero-Th 2007) at Enter Unknown Territories festival in Cambridge, UK. From the inside of the labyrinth, participants can sense its changing structure through sonic and visual responses of the environment

quickly abandoned the installation. Others stayed longer and discovered the evolving behaviors of the space. However, in no case was the link between oneself, the response of the environment and other people in the space lost. The physicality of interface allowed for such directness and facilitated awareness while maintaining the complexity and richness of an evolving system.

In contrast to the soft materials used in *txOom*, the atmosphere generated through *Hinge Dimension* did not provide a cozy setting. The white-walled labyrinth, enclosed in cold stone architecture, and the changing behavior of the system provided a rather challenging context. Cold and hard surfaces caused participants to perceive the environment as "scary and moving", "eerie and wicked" or "sinister, innocent and pure at the same time" (Hinge Dimension comment book, in archives of Essex dance 2007). Another participant wrote: "Felt like being underwater in a way. The white cloth of the walls and the church setting gave the feel of a hospital almost. Otherworldly experience". The players cautiously but exploratively moved within the structure, partially due to the austerity of the setting.

What occasionally obstructed the interaction in *Hinge Dimension* was the scale of the wall-like interfaces. Some participants shied away from interacting with the large physical interfaces of the labyrinth. One visitor wrote "I was very polite to the space until I was immersed and than enjoyed the changing space" (Hinge Dimension comment book, in archives of Essex dance 2007). In discussion, we discovered that she felt responsible, and partially guilty, for changing the public architecture. The austerity of the building contributed to these feelings, as did the scale of the change she was about to create. This experience of "architectural politeness" emerged with the awareness that by transforming a shared environment one affects other cohabitants. Over the time, this sensation vanished and players focused on using the installation to meet strangers, or to confuse others by rearranging the space.

Although, as Schechner argued, the activities of play are essential in creating the sensation of looseness, the physical structure of the environment has an important role as well. Most participants will shy away from interacting if the interface is too large or if it resembles something that humans do not usually engage with such as building's walls. Moreover, when the response from the system is so large that it affects everyone else in the location, participants tend to reduce their actions.

2.4 Situatedness: blurring the boundaries of play

Comparing play to ritual and sacred performances, Johan Huizinga argued that the most important characteristic of play is its spatial separation from ordinary life: "A closed space is marked out for it, either materially or ideally, hedged off from the everyday surroundings" (Huizinga 1986). The FoAM group chose to situate the *txOom* experiment in the closed space of a circus in the small town of Great Yarmouth, because it allowed them to bring a magical *txOom* world to isolated community groups (Muller 2002). In the rite of passage from everyday to imaginary space, visitors' feet were washed and massaged, and they were dressed in beautifully crafted garments. Relaxed, participants would sink into a dream world, leaving behind their quotidian worries. The outside world of ordinary life and the inside world of magic were strongly separated.

Contrary to Huizinga, Schechner argued that no fixed space–time boundaries should be established in play. He introduced the flexible concept of a net to describe play space: "a porous, flexible gatherer; a three dimensional, dynamic, flow-though container" (Schechner 1993). *Hinge Dimension* installation had porous boundaries: it allowed the entrance of anyone at any time without preparatory procedures. Visitors would often expect to enter an empty church and be surprised by the world they found inside. This direct link made the entrance less magical than in *txOom*, but it made the connection to ordinary life outside of the chapel stronger (Fig. 3).

A step further in merging play and everyday life was taken in the *Recycled Soundscapes* project (Franinovic and Visell 2004), in which a set of sculptures enable participants to play with an architecture of invisible sonic structures, directly in an open urban space. The three sculptural interfaces have no written or verbal explanation, and interaction with the system is consequently a process of discovery (Fig. 4). The large red Beludire interface allows

Fig. 3 Recycled Soundscapes (Zero-Th 2004) at Resonances festival 2004 in Paris

Fig. 4 Sonic Bowl: soundscape collected in the bowl is molded through participant's action

for the listening and recording of distant and transient sounds, which would otherwise be difficult to hear. Once captured, the amplified sounds are echoed following a soft gong sound from loudspeakers integrated within the other two instruments, called Sonic Bowls. The replayed sounds communicate to the player that his or her recordings have been stored in these other sculptures. Sonic Bowls can be used to compose the new soundscape out of recorded sounds. This soundscape is generated through different kinds of spinning of the reflective black dishes, the moving parts of the Sonic Bowls. In this way, one hears and creates a multiplicity of voices molded through one's physical actions (Fig. 4).

The installation forged a connection with existing sonic and social activities (Franinovic and Visell 2007). Some participants recorded their own voices and were eager to find them within the sonic memory of the location accessible through the Sonic Bowls. When listening to their recordings, they might heard a bird, a statement very different from their own, or their own words mixed with other voices. Through this strategy of remixing, the designers' goal was to avoid the use of the system to affirm an established participant's identity (by recording and playing his or her statements), but rather to challenge it. The Beludire opened and extended the sonic as well as the social space of the installation into the existing surroundings. Just as distant ambiances and sound sources were made more proximate, the user of the Beludire felt closer to, and experienced a more intimate relation with, visually distant strangers. Reflexively, the device's conspicuously surveilling nature did not leave many passers-by indifferent to its use. This relation was sometimes understood by the observed individuals as an invitation to communicate and to play, and at other times as an intrusion into their private spheres. Through interaction, the play space continued to shift between centrifugal and centripetal agency. It was capable of becoming for some, a closed and insulating system, and of forging connections to those that were removed from their spatial vicinity for others. The project shows how the porous and flexible boundaries of play, as proposed by Schechner, may be created through an interactive system.

Recycled Soundscapes inserted itself, as a net, into an everyday context. The extension from the installation space into the surrounding area was enabled by the choice of the medium. Sound, as transient and pervasive phenomena, involved all the passers-by in the location—even those who did not have any interest or time to interact. Using the Beludire, players would reach out into the sonic domains of passers-by, including them in play. Questions emerged: "What makes a conversation in an urban area private? What can one do with the transient non-tangible information floating in the public? How close can one come to a stranger?" The use of sounds existing in the location allowed participants to explore and to play with what was already present in their daily life. By playing with what is already there, participants engaged with the existing social relationships and actively tackled questions related to the auditory use of public space.

3 Conclusions

The projects presented show that the architectures of play can help us to engage with established behaviors in public space. Unfamiliar physical and social experiences in which we normally would not participate can be encouraged through play. Play often depends on the design of an architecture of play. In this essay, we discussed design decisions that appear to have had the most importance in our own work: choice of location, scale and physicality of

interface, timing and localization of media response to participant's actions, and automaticity embedded in the system.

Firstly, the way in which an architecture of play is situated within public space has a great effect on connecting the playful experiences with everyday life. When players act within the boundaries of the dream world, such as an amusement park or a casino, they have an opportunity to access completely new experiences. But when participants act within an everyday public setting, they are empowered to self-criticize and challenge their own established behaviors (e.g., *Recycled Soundscapes*). The awareness of the existing behavioral patterns, and the opportunity to alter them through play, allows for the questioning and transformation of players habits. In this sense, a temporary architecture of play situated in an everyday context can have a greater effect on players' behavior than a permanent one.

Secondly, the scale and physicality of an interface may affect participation and comfort of players (e.g., *Hinge Dimension*). Habitually, our interaction with the world is on a smaller scale: How many times do we push a button every day? How many times do we install a new window in our flat or rearrange the furniture of our office? Moving to a different home, erecting a new wall or taking it down: tangible changes of our surroundings are associated with the reorganization of our lives. They are often considered stressful, but can also be empowering. Therefore, we must consider the effect that the scale of physical interface may have on its user, and be aware of "architectural politeness" behaviors.

Thirdly, players must be able to differentiate between feedback caused by their voluntary and involuntary interactions. Physicality of interaction can help raise awareness and responsibility for one's actions within an architecture of play, especially in dense media environments. To willingly engage with physical objects is to decide to reach into the world and act upon it. The responsibility increases with tangibility: throwing a physical glass has a very different effect on our surroundings than does throwing a digital image of a glass. Physicality is linked to causality and visibility of one's actions. In an urban setting, our actions are exposed to the public eye and others are affected by our performance (e.g., when recording the voices of others through *Beludire*). On the one hand, this exposure creates an opportunity to play with public behaviors, but on the other, it makes it harder for passers-by to get involved because they may feel observed and judged.

Finally, the transparent relationship between action and media response allows us to consciously act within an interactive environment. Both the *automaticity* of interaction (e.g., *Fun Palace* and *Untitled 6*) and the *complexity* of the system may lead to one's unawareness of one's actions (e.g., *txOom* and *Hinge Dimension*). If the interactive system is based on a question–answer or action-reaction model, the process will result in a problem-solving game. Once the logic of the system is discovered, the players feel as if they have answered the question that is posed and the exploration is over. A non-transparent evolving environment requires an openness and willingness to interact and take risk. An ever-changing surrounding is frightening—its cycles are unknown and its seasons can affect our moods. In complex evolution-based systems and automatic ones, the attention of the participants tends to divert toward observing or ignoring the system respectively rather than engaging with each other.

In conclusion, in order to engage in critical exploration of everyday life, players must have a clear understanding of the effect of their behavior on that of the environment. By raising the awareness of participants' actions, the responsibility shifts from the automatic system to the participants. The interface serves as an instrument of co-construction of the world, rather than a boundary for the exchange of data. In this context, instead of serving the purpose of the social control machines, technology and architecture may become the enablers of social and personal transformation.

References

Banham R, Barker P, Price C (1969) Non-plan: an experiment in freedom. New Soc 12(338):435–441

Barba E (1986) Beyond the floating islands. PAJ Publications, New York

Boxer S (2002) txOom: quiet an experience, Great Yarmouth, available at: http://www.futurephysical.org/pages/content/wearable/wearme/article_txoom_sb.htm. Accessed 1 Aug 2010

FoAM (ed) (2003) *[tk's:um]*. Kibla, Maribor. Also: http://www.fo.am. Accessed 1 Aug 2010

Franinovic K (2005) Behavioural spaces, designing for the social and sensorial ecologies in public spaces. n: theatre, dans, etcetera. (96) pp 22–30

Franinovic K, Visell Y (2004) Recycled soundscapes. In: Proceedings of the 5th conference on designing interactive systems: processes, practices, methods, and techniques (Cambridge, MA, USA, August 01–04, 2004). DIS '04. ACM, New York, NY, 317

Franinovic K, Visell Y (2007) New musical interfaces in context: sonic interaction design in the urban setting. In: Proceedings of the 7th international conference on new interfaces for musical expression (New York, NY, June 06–10, 2007). NIME '07. ACM, New York, NY, 191–196

Franinovic K, Wilson A (2007) Hinge dimension: an exploration of enaction in architecture. In: Proceedings of the 4th international conference on enactive interfaces, pp 101–105

Goffman E (1959) The presentation of self in everyday life. Doubleday, New York

Hinge dimension comment book, in archives of essex dance (2007) Cambridge, UK. Available at http://zero-th.org/HingeDimension.html. Accessed 1 Aug 2010

Huizinga J (1986) Homo ludens: a study of the play-element in culture. Beacon Press, New York

Kuzmanovic M, Gaffney N (2005) Human-scale systems in responsive environments. IEEE Multimed 12(1):8–13
Littlewood J (1964) Fun palace: promotional brochure. Canadian Centre for Architecture. Available at http://svrdam.cca.qc.ca/ZooMI/Default.aspx?obj=DR1995:0188:001:016. Accessed 24 Aug 2010
Littlewood J, Price C (1968) The fun palace. Drama Rev 12(3):127–134
Mathews S (2007) From agit-prop to free space: the architecture of cedric price. Black Dog Publishing, London
Mauss M (1934) The technology of the body. In: Kwinter S , Crary J (eds.) (1992) Incorporations, Zone, New York, pp 455–477
Muller N (2002) Report: txOom public experiment, available at: http://libarynth.org/project_txoom_user_research. Accessed 1 Aug 2010
Pask G (1969) The architectural relevance of cybernetics. AD: architectural design (494–496)
Price C (2003) Re: CP. Birkhäuser, Basel
Schechner R (1993) The future of the ritual: writings on culture and performance. Routledge, New York
Sha XW (2002) Resistance is fertile: gesture and agency in the field of responsive media. Configurations 10(3):439–472
Sha XW (2005) The Tgarden performance research project. Mod Drama 48(3):585–608
Sterne J (2006) Urban media and the politics of sound space. In: OPEN sound: the importance of the auditory in art and the public domain, (9) (Fall 2005) pp 6–15
Turner V (1983) Brain, body and culture. Zygon 18(3):221–245
Utterbach C (2007) Artist website available at: http://www.camilleutterback.com. Accessed 1 Aug 2010

AI & Soc (2011) 26:137–142
DOI 10.1007/s00146-010-0293-3

ORIGINAL ARTICLE

Machinic articulations: experiments in non-verbal explanation

Harry Smoak

Received: 18 April 2008 / Accepted: 13 August 2010 / Published online: 22 October 2010

Abstract The essay presents a novel theory of meaning-as-response inspired by the pragmatist cultural historian Morse Peckham in the mid-twentieth century. This approach is useful here in consideration of how artistic behavior can make a difference in technical culture and in relation to innovative technical practices. Continuing from Félix Guattari's notion of the machine as a partial object, this essay examines the essentialist idea of computational machines as creative collaborators which haunts the model of interaction prevailing today. Following this negative critique, the essay advances a positive approach emphasizing partiality in experimental design practices as a step toward a renewed art of living.

Keywords Machinic articulations · Creative machines · Design practices · Cultural practitioners · Performance · Communication models

1 Activities of explanation and experimentation

Questions today regarding meaning, value, intentionality, and change seem to me importantly coupled with questions of how to live sensibly with others and the world. To put it another way, how are we—individually and collectively—to be responsive and responsible? A wide range of new and familiar voices is found joining in an ongoing conversation around these and related questions concerning practice and knowledge production, and their entanglement, as further evidenced by the more frequent appearance of words like relational, enacted, dynamic, situated, responsive, and interactive. The corresponding turn away from representation, and toward a process-oriented notion of performativity, seems to be gaining momentum in many arenas as alternative modes of conceiving knowledge production are sought, and attempts are made to understand them. With work, and some luck, it may now be possible to attract responses from a richer diversity of participants, both inside and outside institutions, than perhaps previously considered permissible. In important ways, this renewed forum offers opportunities to profitably reengage with questions of value vis-à-vis matters of common concern. The significance of this cannot be overstated, as perhaps there has never been more pressing need to create openings for new vehicles for the articulation of sustainable, non-perspectival meaning-making activities that at the same time acknowledge a finite and contingent world. In a world where no possible (theoretical) fixed positions remain from which to take action, the activities of everyday life, situated in practice, show us that the choice of no action is equally impossible. For me, the very impossibility of an unproblematic Archimedean point in a world in constant flux, which at the limit may resist conceptualization and categorization, is enough to strike both wonder and necessity into the heart of [the] matter.[1] The mundane—and remarkable—fact of "keeping on keeping on" as it is manifested in practical matters yet may contain an indication of the processes that allow for meaningful individual

H. Smoak (✉)
Topological Media Lab (TML), Concordia University,
SGW EV 7–725, 1455 de Maisonneuve Blvd. West,
Montreal, QC H3G 1M8, Canada
e-mail: harrycs@harrysmoak.com

[1] Thinking with Deleuze and Guattari (1995), Bruno Latour (1993) and Prigogine and Stengers(1984), it may be that an anarchic generative force literally goes further down, that at the limit the universe resists conceptualization and categorization in a plane of pure immanence. This is an interesting and daring philosophical proposition, one I don't seek to affirm or deny here.

and collective change, change that is not wholly predetermined or dependent upon chance alone. Conceived within a matrix of care, the potential for life and for living is (theoretically) infinite.

As a student of artistic behavior, I have long been interested in the social, political, economic, and artistic transformations associated with the emergence of computational media and related technologies in the practices of cultural production. Some time ago, I adopted a view, one to which I remain committed, of artistic behavior and its attendant meaning-making behavior as taken from the American cultural historian Morse Peckham. Beginning with his assertion that the meaning of any sign (aesthetic, or otherwise) is its response, Peckham later refined his original formulation "the meaning of a sign is its response" to be "the meaning of a sign is the determination of the appropriate response," for which there can be many since, thinking with Peckham, meaning cannot be immanent to a sign's configuration alone (or sense data, to use another terminology).[2]

While I am not aware of any instances in Peckham's writings on the relationship of the arts or efforts to control human behavior where he explicitly considers something like a technical object, he might have subsumed questions regarding the nature of our relationship to these under his broader view of the imperative function of signs. In regard to response behavior and interactions with computational machines, he would have likely considered what was significant for his project for understanding what was significant for artistic behavior, and for human behavior in general, had not changed a whole lot. Peckham wittingly offers no method for analysis that can be applied here. What remains useful is his insistence on response behavior as the proper locus for understanding the making and the un-making of meaning, his understanding of the power of our verbal and non-verbal explanations to control behavior and regulate desire, and his framing of experimentation as an artistic mode of behavior in relation to explanation. Taken as heuristics, these usefully inform my own investigations and practice involving experimental computational media systems for interactive media performance and installation events.

In following Peckham's situation of experimentation and explanation, I do not wish to create an impression in the reader that somehow this apparent delineation between activities is intended to suggest a bifurcated experience of an underlying world. The association with the usual separation of theory and practices, mind and body, thought and feelings—even representations and performances—misses the point. Which is to say only that, as I have come to believe, explanation and experimentation are different (even incompatible) modes of response activity, both of which are useful at different times, but for different purposes and across a wide application of activities that we can and do engage in.

Peckham usefully describes two kinds of activities creative artists, writers, filmmakers, scientists, philosophers, and other cultural practitioners are engaged in, suggesting what these activities can do for us. The first sort of cultural activity and the more prevalent, let's call activities of explanation. To say more in outline fashion, our competent cultural practitioners provide us with (1) *examples*} (that is, they engage in verbal and non-verbal response behavior yielding verbal and non-verbal configurations), (2) *instances*} (the verbal and non-verbal products and processes of the techno-sciences, which point to non-verbal response behavior aimed at generating correspondence—making the real actual), and (3) *concepts*} (the verbal articulations of our philosophers laboring to produce conceptual configurations and to elaborate categories). Similarly, the students of culture—teachers and critics—provide us with (4) *directions*, tracing the connections between examples, instances, and concepts through scholarship and the ongoing activity of canon formation. Activities of explanation are essential ordering activities; its practitioners are engaged in determining the limits or boundaries of the possible. Their primary function is the reduction of entropy or the fulfillment of type. To put it another way, cultural practitioners provide us with *instructions for performance* (Peckham 1979).

Let us call the second sort of activity (Peckham 1965) cultural practitioners are engaged in activities of experimentation. Here, practitioners are doing similar sorts of things as other cultural practitioners engaged in activities of explanation. Taken together, activities of explanation and experimentation are not necessarily formally distinct in their organization, nor are they institutionally differently situated from one another. The main difference exhibited in the case of activities of experimentation is that its practitioners and others observing them judge their sign-making behavior innovative from the dominant ideologies currently having the greatest influence. This poetic activity—in the sense of "making things new"[3]—can be verbal, as in metaphorical re-description and the ongoing transformation of language as it is used. And it can be non-verbal, in the sense of deploying new

[2] Peckham (1977) wrote "Grace Andrus de Laguna said many years ago that the language coordinates behavior, I would go further to say that language controls behavior, and I would extend this to all configurations to which there is a response, that is to nonverbal signs as well."

[3] For an extended and provocative explanation of the "poetic" and literary function of the philosopher in relation to the ongoing narrative of ideas in Western philosophy since Plato and Kant, see Richard Rorty's work, in particular *Contingency, irony, and solidarity* (1989).

material, aesthetic, or perceptual configurations. At the highest level of cultural activities, where change and innovation are valued most, our innovative creators trace the invisible paths between (im)possibilities of wide application. For my purposes now, it is enough to say that rather than view something called Art as a separate and unique or institutionally bound cultural activity, I find it much more useful to think of *artistic behavior* as another important mode of human behavior in general, one that is particularly well suited to meeting the demands of a changing world.

In providing instructions for performance, our cultural practitioners provide clues to those who are trained to read and follow them for what is considered appropriate response behavior, even if that response is no response at all, or a clue that artistic behavior is expected. In my view, activities of both sorts are unique to the production-oriented practices of the media, performing, literary, or fine arts, and are to be found equally at play in the technosciences (at least in so far as they are practiced) and innovative institutional leadership. Further, is my belief they can be found in some degree throughout all levels of everyday and marked cultural activities including crafts, DIY, food, games—and especially in activities engaged in an amateurish fashion, that is non-professionally. And more, I hold that any act of perception can be an innovating act or a fulfillment of type in response to these instructions for performance.

2 Machinic apparatus

In his essay "Machinic Heterogenesis" from *Chaosmosis*, Félix (Guattari (1995) inverts the classical ontological priority of technology over machines, suggesting that machines are never merely expressions of technology or technique (know-how). Rather, what he calls technical machines are expressions of something processual and axiological which he calls the machinic. For Guattari, the machinic is something very different from what normally comes to mind when we think of something as mechanical. Fully considered its material apparatus as Guattari describes it, the machinic has a self-consistency that spans the physical, the biological, the affective, the symbolic, the social, and the institutional producing specific enunciative effect's that are reproducible but are not themselves representational.

It is apparent that the machinic includes something more than a mere (mechanical) response to a stimulus. One approach I have taken to help understand what Guattari might be talking about is through the making of and thinking of proto-machines involving computational media systems utilized in experimental performance situations toward the creation of events, or proto-events.[4] In the course of this work, I have attempted to proceed with this description of the machinic as an alternative to the conventional communication models of interaction represented by the human–computer or human–machine interfaces typically put forward in the field of human–computer interaction (HCI) and its related disciplines.[5]

3 Creative machines

In order to situate it for future examination, I am interested in expanding a notion of computational media conceived within the context of the machinic apparatus as Guattari described it—as a situated, expressive material in collective association with human response behavior in the relational production of events that take into account the needs of the public (who importantly may be funding the research) as well as the needs of the researchers themselves. To proceed thusly necessarily requires setting aside questions that assume machines to be a class of objects unto themselves with an intrinsic technological nature, or language, which we must first meet and understand in its own terms, or it in ours, before constructively engaging with questions of interactivity. Moreover, this means setting aside quests for a set of properties or characteristics that make up something called a creative machine, or creative software, as a thing unto itself. In its place, I am favoring a stance emphasizing the processual aspects of the machinic for the "making of new things," including new possibilities for alternative subjectivities and sensible inhabitations with the world.

So far, the conflation of meaning and behavior (including here what I am now calling machinic articulation) put forward at the beginning of this essay may seem to some readers oddly positioned, indeed containing a suggestion that I believe nothing can have meaning apart from the cognitive act of an individual human observer. Even worse, it may seem to others that I am implying that all value is radically bound with what only humans can create and construct. The usual argument for and against

[4] Much of this work has been conducted alongside work projects undertaken with the Topological Media Lab and Dr. Sha Xin Wei at Georgia Tech (United States) and Concordia University (Quebec, Canada) since 2003.

[5] For convenience and shorthand I have subsumed under the label HCI those models put forward more recently by human-centered computing (HCC), including computer mediated human–human communication models and its variations The field of HCI itself is currently experiencing something of an taxonomical crisis as it tries to sort through the vastly different applications and multiple perspectives which have emerged in recent years vis-à-vis advances in information and computational technologies, as well as their expanding applications.

this kind of apparent relativism contains two presuppositions; I would like to acknowledge and discuss by way of further consideration of so-called creative, or intelligent, machines. The first is the assumption regarding the locus of value that holds only humans can participate in the creation of meaning. The second assumption stems from a view that the only possible actors are human, a position that I believe too hastily dismisses the productive role of non-human processes in the co-structuration of meaning. I will want revisit this last point later.

In consideration of artistic behavior employing computational machines that I think are interesting, essentialist questions that for the cultural moment inexorably seem to come up in discussions surrounding so-called interactive technologies, questions like:

"Where does creativity lie?"

and another one:

"Are computers creative?"

get in the way of a productive examination of the ways computational processes co-structure events. I think questions like the one proposed in the first instance ("Where does creativity lie?") contain the same kinds of wrong-headed assumptions held by the sort of prevailing cognitive scientist, who looks to the neuronal structures of our brains and related computation models for representations of self or intelligence or creativity. In the second case ("Are computers creative?"), we might fruitfully replace a related question "Can machines create?" with another one: "Are there imaginable computational machines which allow for novel response behaviors in performance situations involving humans as well as nonhuman agencies." Stated in this manner, it may be possible to fertilely interrogate the relationship between humans, machines, and the necessary conditions for innovative response in performance situations and profitably avoid questions like "Can a computer be artistic?" and "Can a computer be a productive collaborator?" as well as another pernicious set of questions represented by "Can a computer perform more efficiently than a human performer?"

In the case of designers who incorporate computational processes and techniques either in the so-called creative process or in the production of an event, questions like the ones put forward above ("Where does creativity lie?" and "Are computers creative collaborators?") also seem to me be a variations of the author question. I only want to say that I remain sympathetic to a view that emphasizes the participatory role (and tremendous responsibility) of the observer in the determination of the final response to a work. This holds for the traditional examples of personal experience such as reading a book, listening to a musical performance, viewing a painting, watching a play—or any other act of making sense in the world. In no case are there passive, in the psychological sense, responders—we are all collaborators to our meaning making.[6] Passivity in this case is the limit condition for action. There are only varying intensities of experience, and more or less redundant response behaviors.[7] The determination of an appropriate response, therein the meaning (and the experience) of the work, is innovative only in so far as there is a transfer of forces resulting in a change in behavior or attitude, otherwise it is only an partial repetition without difference—partial in the sense that no gesture of life once made can be made the same way twice.[8]

At the limit, this would seem to imply the designer's intention itself is of no important consequence and in any case cannot be fully recovered though an act of responding—either interpretive or by way of some more direct means. However, I maintain a view that holds the designer's intention is a (weak) force that shapes the form of the work and thus constrains in a real way the realm of possible responses from an otherwise virtual infinitude. In this, the designer has access to a (theoretically) infinite virtual} space of possibilities (and impossibilities) from which to select from and direct the form, and she maintains a hand in selecting the shape of its actualization, while acknowledging a dependency on the social, historical, and material conditions that constrain the determination of an appropriate response. Surely in this, the designer's actual intent is influenced by her own history of responses to a neighborhood of other works (including her own), themselves situated within a cultural and material sphere—the always already network of contingent geographies and histories that form the stage where upon the work emerges, is performed, and intention is enacted.

4 Partial design practices

The designers, directors, artists, and experimental architects with whom I prefer to work share a sense of the vital

[6] In his essay on Artaud—"The Theatre of Cruelty and the Closure of Repetition"—Derrida (1978) is careful to distinguish between the double Artaud (1958) wrote of and the kind of doubling, or repetition that takes place through "a frightful transfer of forces/from body/to body", including the interiorization of a presentational act by way of its movement of thought. For Derrida this movement is "irrepressible." The unrepeatable difference "is the enigma of that which has no meaning, no presence, no legibility"—no witness. Derrida seems to say in conclusion that representation—as the infinite repetition of difference—is a necessity without there can be no possibility of life.

[7] For further discussion of the senses of intensity, see Brian Massumi's "Introduction, Concrete Is as Concrete Doesn't" (2002).

[8] For Derrida's Artaud, the theater is the only place where a gesture with the force of life can be made, and like gesture of life can be made only once (Derrida 1978).

importance of experiencing the work materially, before rushing a design decision too quickly based on their own or another's idea of it. Ideas too attractively presented, or requirements over-specified from the beginning of a project, can lead to premature design choices, suggesting the importance of partial approaches that allow for indeterminacy in at least two directions, that of the designer and the client. The English stage director Peter Brook in his well-known collection of essays on the theater, *The Empty Space*, writes, "The actor who is asked his views about a costume design before rehearsals start is in a similar position to the director who is asked for a decision before he is ready. He has not yet had a physical experience of his role—so his views are theoretical. If the designer sketches with panache—and if the costume is beautiful in its own right—the actor will often accept it with enthusiasm, only to discover weeks later that it is out of tune with all that he is trying to express." (Brook 1968) This phenomenon is well known to designers working with clients who are themselves not designers. The strategies for working around these problems of translation can be quite ingenious, depending as much on what is colloquially called "soft skills" as technical virtuosity. Experienced designers discern this through reflection on their own material experiences of thinking and making, knowing which decisions are important to delay as long as possible lest their articulations become merely theoretical and therein un-inhabitable. It is my conviction that architects and designers, along with the makers and builders, of the built environment would benefit greatly from a heuristic that involves thinking and feeling their designs as Peter Brook once characterized design for the stage, that is conceived as being all the time "in motion in relation to activity as it unfolds."

I remain committed to a view of research with claims to matters of common concern that stresses the importance of an engaged and lively public in all manners related to the experimentation itself. I believe it is a designer's responsibility to ensure the instructions for performance are adequate for meaningful participation from a wide and diverse array of forces. For my part, I am not interested in monastic practices and other pursuits of the holy that necessarily require an intensification and turning inward in order to directly approach their object. For in doing so, I fear they estrange their practitioners from the affairs of the world (including the practical affairs of conducting the research.). In the end, I think work undertaken in this manner produces work that is, for a large part, irrelevant.

One way of pointing, by way of words, is through fiction or storytelling. However, for these, the instructions for performance require less obligation on the part of the listener or reader to evaluate its success on the basis of a correspondence to a reality *out there* or to an intrinsic self *in here*. At the present time in our cultural history, this charity toward certain kind words, either spoken or read, is more likely to be granted to the novelist or the ethnographer than to the philosopher or the scientist. This same charity is similarly extended to practitioners on artistic and theatrical stages, including not only architecture as well as the black and white boxes of the visual and performing arts, but also domestic interiors, fashion, and other domains of the applied and design arts.

In general, however, less "weight" is attributed to the applied and design arts, especially in terms of the kind of importance accorded to the high arts, and more recently science, by the usual cultural and political elite. By applied and design arts, I intend not only the traditional categories of hand crafts and decorative or ornamental arts, but as well the professionally recognized fields of industrial design, graphic design, fashion design, and media arts—among others. I also include the emerging computation arts (including here the digital or "new" media arts) and, increasingly, architecture as it separates from building and construction. In terms of cultural cachet (if not monetary reward, with the exception of certain stars), there remains a clearly recognized hierarchy of high and low in the arts. In terms of cultural significance, it could probably be said a similar view is maintained toward engineering and the applied sciences. Though, overall, a higher economic value is usually given to the latter due to the way our present society puts stock in instrumental efficacy.

On further consideration of the developments in the engineering and applied techno-sciences, the absence of a certain kind of seriousness—and sense of responsibility—may well be revealed by 20th century cultural historians as having been industries' greatest asset and liability. The result has been so much innovation, the wellspring of an indefatigable optimism (over and above higher capitalization!). The rush of invention, from the late 20th century to the present day, has not necessarily manifested itself in terms of the products we consume. However, it is easily evidenced upon consideration of the modes of production and distribution that have developed, as suggested by (i) the increasing adoption of computer assisted design and fabrication techniques across a host of industries; (ii) advances at multiple scales of material and biological engineering and science; (iii) advances in global logistics and distribution operations coupled with nearly ubiquitous telecommunications networks; and, more intimately, (iv) the reorganization of labor and development of sophisticated technologies for the mobilization and coordination of affect. All of this made possible in large part through the wholesale valorization of a wide array of (publicly funded) techno-scientific inventions, and there seems to be no end in sight. In the wake of this sheer productive force, it is difficult to remain merely skeptical of the practical efficacy

and influence of the professionalized disciplines. One look at the monstrous menageries presently on display on any given day in the product marketplace would seem enough to suggest at least one form of Artaud's crowned anarchy is already with us, given to us by continuous revolutions of the techno-sciences as they are practiced.

The enigmatic Paul Klee, referring to his teaching at the Bauhaus wrote, "As the ideal experimental station we would not be training new inventors that really were no such thing but only masks of inventors […] rather, we would be able to transfer the results of our inventiveness to the body of the people. This new art could then permeate into the applied arts and produce an enormous flowering." (Wick 2000) I do not want to comment either way on "art as vehicle" for metaphysical revelation or redemptive purposes or discuss it for that matter. However, experimental research in design and computation arts conducted in the mode of art, with a corresponding emphasis on the creation and invention of new configurations which allow for innovative response behavior is far more compelling to me than to see it continue forward on its path as handmaiden to existing consumption-oriented industries. I would like to see an experimental "lightness" retained in the applied and design arts kept together with an outward face of concern for both the human and the non-human.

5 Making new things

I would like to spend a few sentences disentangling for future consideration and interest a particular constellation of makers who are engaged in the larger context of critical and emancipatory efforts. More specifically, I am referring to those who are principally engaged in material (as opposed to figurative or literary) interrogations and transformation of our world and selves. To be sure, among these engaged in projects seeking conditions for meaningful individual and collective change, there can be found voices calling for a gradual, adaptive response situated principally within the realm of human affairs and rooted in consensus. But there are other voices, too, insisting on more radically empirical courses within an expanded constitution. It is not within the scope of this essay to examine the traditions of politico-theoretical interests at play here—and not everyone is necessarily engaged in explicitly political projects, at least not what is usually connoted by the phrase "politics as usual." For now, I just want to say that the work I value and aspire to seeks maximal accommodation for artistic behavior as I have described it here, as "making things new" and "making new things," toward an art of living actively engaged with matters of concern, in any mode of articulation that *adds* to the world rather than subtracts from it.

It is my belief that work that seeks to be inventive and creative, and at the same time seeks to involve the public or claims to have the needs of the public in mind, is necessarily obligated to put forward examples that take as much care in the crafting of instructions for performance as attending to a felt need to engage in experimental activities. For work that seeks to avoid domination over and control of the participants involved—work that wants to add something to the world and not just re-mix what is already there—I believe this means, in part, opening up the process of making and conceiving of work as widely and as early as circumstances allow. Otherwise the work risks failure on one or more of the following counts: (i) it is too obscure or random to be shared, lending a mystical or accidental qualification to the work; (ii) it is overwhelmed by one or more competing or improperly addressed conditions, either an expectation of the audience, a condition of the context in which it is presented, or more general problems with production that undermine its effectiveness; or (iii) the work is appropriately understood, but itself grossly misunderstanding or unconcerned with the audience or the site where it is situated. What is at stake for the public is often diverse and nuanced, especially when what is involved is the reconciliation of the requirements of interdependency and a simultaneous need for autonomy. It is my belief that research claiming public interest must be outwardly focused in a manner that embraces this diversity of needs in a similarly nuanced way that also takes into account the diversity of needs of the researchers themselves.

References

Artaud A (1958) The theater and its double. Grove Press, New York
Brook P (1968) The empty space. Atheneum, New York
Derrida J (1978) Writing and difference. University of Chicago Press, Chicago
Guattari F (1995) Chaosmosis: an ethico-aesthetic paradigm. Indiana University Press, Bloomington
Latour B (1993) We have never been modern. Harvard University Press, Cambridge
Massumi B (2002) Parables for the virtual: movement, affect, sensation. Duke University Press, Durham
Peckham M (1965) Man's rage for chaos: biology, behavior, and the arts. Chilton Books, Philadelphia
Peckham M (1977) The infinitude of pluralism. Critical Inquiry 3(4):803–816
Peckham M (1979) Explanation and power: the control of human behavior. Seabury Press, New York
Prigogine I, Stengers I (1984) Order out of chaos: man's new dialogue with nature. New Science Library, Distributed by Random House, Boulder
Rorty R (1989) Contingency, irony, and solidarity. Cambridge University Press, Cambridge
Wick R (2000) Teaching at the Bauhaus. Hatje Cantz, Ostfildern-Ruit, Great Britain

AI & Soc (2011) 26:143–152
DOI 10.1007/s00146-010-0294-2

ORIGINAL ARTICLE

Nice-looking obstacles: parkour as urban practice of deterritorialization

Christoph Brunner

Received: 1 January 2008 / Accepted: 13 August 2010 / Published online: 22 September 2010

Abstract Most academic publications refer to Parkour as a subversive and embodied tactic that challenges hegemonic discourses of discipline and control. Architecture becomes the playful ground where new ways to move take form. These approaches rarely address the material and embodied relations that occur in these practices and remain on the discursive plane of cultural signifiers. A theory of movement between bodies as the founding aspect of Parkour unfolds alternative concepts of body, space, time and movement beyond the discursive. Movement becomes the leitmotif for a re-conceptualization of the relations between subjects and objects and abandons their division. With the example of Parkour, I will challenge anthropocentric approaches toward embodiment and instead foreground open-ended shifting configurations of places and their relation to movement. Parkour re-shapes rigid concepts of places and their human encounter through movement. Through its encounter with obstacles Parkour activates the silent potential for movement located in the relation between bodies and thus reaches beyond material boundaries (e.g., a wall). As a deterritorializing practice, I will use Parkour to re-consider the relations between different bodies such as architectural configurations, subjects and their urban ecologies to develop a relational model for movement to shape our everyday encounters with matter.

Keywords Parkour · Embodiment · Place · Movement · Urban ecologies · Affect

C. Brunner (✉)
Department in Arts and Media,
Zurich University of the Arts, Zurich, Switzerland
e-mail: christoph.brunner@zhdk.ch
URL: http://www.molecularbecoming.com

1 Introduction

Parkour as urban practice recently received significant recognition throughout Western media cultures as a spectacular and highly marketable activity or sport in urban environments.[1] *Traceurs* are the practitioners of this urban activity. The central idea is to find new ways of movement in dialogue with urban configurations. Routes and "runs" constitute the preliminary extension and testing of a constructed ground. In other words, Parkour is a highly training-related physical practice based on a philosophy of "pure movement," the endless oscillation between motion and rest. In that sense, as Spinoza points out, "bodies are distinguished from one another in respect of motion and rest, quickness and slowness" (1992). What appears to be an acrobatic sport with a high degree of precision, induced by a good deal of courage, presents itself as the art of moving in urban settings. Obstacles, built structures and often abandoned or useless architectural configurations become sites for movement to activate the endless potential of these places.

As pointed out in various publications on Parkour, the term itself derives from the military practice of an obstacle course, known as the *parcours du combatant* (Feireiss 2007). The first generation of articles focused on precise descriptions of Parkour and its history as well as potential reconsiderations about engagement with the city and

[1] For the community of practitioners, the differentiation between Parkour and *free running* seems to be of crucial importance. Whereas Parkour focuses on the most efficient way to move across different obstacles, *free running* includes acrobatics and moves beyond efficiency. *Free running* is usually associated with Sébastien Foucan, and Parkour is associated with David Belle. Both are the founding members of Parkour and its first group, Yamakasi, in the Parisian suburbs (Mister Parkour 2009).

Fig. 1 Parkour practice Montréal. *Image credits:* Julie Gauthier, Parkour practice, Montréal

architecture from different socio-political angles. The underlying approach here refers to these historic and descriptive foundations but essentially aims at a new concept of relational movement rather than another historical overview of the practice itself (Fig. 1).

Parkour has been only sparsely addressed as a research topic in academic discourses so far (besides a significant number of medical treatises on fractures caused through the practice of Parkour). Two exemplary publications deal with Parkour and the potential of fear as motor for a playful re-appropriation of how fear can enhance creativity (Saville 2008) and the rupture of organized corporate space through Parkour (Daskalaki et al. 2008). Both Saville and Daskalaki et al. treat Parkour as an embodied practice that provides alternate ways to deal with architecture, space and power. Deriving from their roots in the Parisian suburbs, Parkour practices are now present in most metropolitan areas worldwide.[2] In light of this global phenomenon, the emphasis on the novelty of Parkour as a strategy of resistance and empowerment for generally disempowered citizens seems inappropriate. To subordinate Parkour to a mere enunciation of resistance would certainly disregard late-capitalist modes of immediate inclusion and appropriation. In a distancing gesture from a simplifying subject–object divide, Parkour emphasizes the continuous relationship between bodies of same substances under differentiated states of motion and rest. Parkour as the art of moving and the art of movement itself—the potential for alternative movements and routes through a close dialogue with the architectural ground—enables a practice of becoming bodies that manifest in a flash as bodies of different registers of motion and rest.[3] Parkour is neither a novel practice of embodied encounter that "makes the world" in a phenomenological sense nor a mere game with obstacles or emotions. On the contrary, Parkour addresses what a body can do in its most extreme diversity as distributed across its urban ecology that offers (or withholds) itself for a potential dialogue (Fig. 2).

2 Parkour as conceptual springboard

Academic discourse gradually recognizes Parkour as interesting formation for an interdisciplinary field of research, interlacing theories of architecture, embodiment and power. Hence, current discourse is mainly descriptive, with little consideration of Parkour's potential beyond the discursive formations of subversion and resistance. Apart from publications on the ludic elements of Parkour as altered form of engagement with the city and as a subversive practice (Fuggle 2008; Baviton 2007), I want to focus on two particular articles and their analysis of Parkour in relation to architecture (Saville 2008; Daskalaki et al. 2008). Both Saville and Daskalaki et al. address often-simplified references to subversion, leisure or embodiment in relation to Parkour. These examples will serve as a general overview of the slowly growing number of publications on Parkour and their generally discourse-related foundation.

Stephen John Saville conceptualizes Parkour as a way to imagine space differently from its intended function and playful encounter with built structures (2008). Even though his experiential and anthropological approach is generally open to different forms of becoming through relations between humans and non-humans, it also reinforces the subject–object divide that anthropomorphizes every further step of analysis. The legacy of interpretation and representation implies a certain openness for new movement to take place but also conceals the potential of a material ground to build relations with other bodies in motion. Material ground, in reference to Deleuze (1994) and Simondon (1980), is the potential of matter to function as actively shaping part for movement to happen. Their

[2] See Fuggle 2008; Baviton 2007; Feireiss 2007; Saville 2008 and Daskalaki et al. 2008. After the commercial success of a movie dedicated to Parkour by Luc Besson, David Belle left Yamakasi to continue with a group called "Les Traceurs" in the Parisian *banlieu* Lisses. Sébastien Foucan moved to England and founded a variation of Parkour known as *free running*. In many cases, large-scale media coverage hardly distinguishes the two practices. According to practitioners, *free running* is regarded as more commercial and less focused on efficiency (private conversation with Samir Mesbah 01/03/09). For further information, see also: http://www.misterparkour.com/category/articles/. Accessed 20 Feb 2008.

[3] *Becoming* refers here to the Deleuzian conceptual nexus of a concretization of potentials into a meta-stable state of actualization. It is a process that, similar to Spinoza's motion and rest of substances, opens up the possibility of a differentiation of the actual state by influxes of a becoming Other or becoming different (see Deleuze 1994, 1–27). See also his elaborations on Gilbert Simondon's concept of individuation (Deleuze 2004a, 116–125 and 2004, 86–89).

Fig. 2 Parkour practice, Montréal. *Image credits*: PK514, Parkour practice, Montréal and Toronto

conceptions of ground (in French, *fond*) transcend the understanding of matter as agent or *actant* (Latour 1987, 1993) and emphasize the ground's *potential* to shape experience. *Potential* in this context is defined as an open process for becoming through movement that offers a non-representational and non-imaginary model for movement to take place and things to take form as tangible. *Becoming*, in one definition used by Deleuze and Guattari, is a process of emergence, transition and change (Deleuze 1988). The particularity of *becoming* lies in its characteristic of being of the register of the interval or the in-between where things shift, move about and transduce. In other words, *becoming* is a concentration of different forces that push toward an event taking form and thus being graspable. This approach does not necessarily locate the becoming of an event in the cognitive capacity to *imagine* a difference (which nevertheless is an important compartment of the event) but rather focuses on the relations between different bodies and the experience of an event as the very relations that bring it forth. From such an angle, the relations are what constitute the experience of an event and not the experience that precedes the relations.[4] Parkour exposes the creation of new relations through movement. These relations are experienced, but they are always the result of relations between bodies (e.g., material ground and human body) and their liaisons through the Traceur's movements.

[4] For a very thorough concept of relations as the *milieu* (fr. for environment and middle) for an event to emerge, see Brian Massumi's elaborations on the "logic of the in-between" (Massumi 2002).

By foregrounding the material presence of bodies, the longing for meaning and the primary production of knowledge that emerges through the instrument of interpretation cease to be the dominant conceptual force. As Saville points out, a certain immanence of affect arises that "motivates and depends upon the mobility that reorganizes connections between elements of the world" (Saville 2008). Hence, the force of a reorganizing mobility or movement in Saville's analysis feeds back into a generally cognition-based processing that is generated only through the human encounter and the institution of the mind as interpreter. He states that Parkour is "essentially a practice intent upon re-imagining place" (2008). What if the becoming of an environment through movement as relational intensity reaches far beyond the imaginary in an interpretative manner and therefore becomes *affective*? The affective relational intensity here defines a *sentience* of affective qualities in the embodied practice of moving. *Affect,* or *affective,* describes a quality or forces that precede the effects of an event being experienced. *Affects* are always at the cusp of an event taking form and being perceived, they give *volume* to the experience (Deleuze 1988). Thus, it is not merely the perception and imaginary capacity of the human that enables different routes to be taken across built configurations in the case of Parkour, but the affective potential of the entire ecology (human-body-organism-environment) that creates intensities. Intensity is the "strength or duration … of the [movement's] effects" (Massumi 2002). Intensity is the tangible compartment of affective force in the event—that which makes an event perceivable.

The imaginary for Saville seems to remain on a solely interpretative level that tries to inscribe an embodied practice of movement back into dominant models on thought, memory, the text and the discourse. If Parkour is the art of movement, one has to take embodiment seriously as another register of imagination beyond cognitive interpretation. On a physical level movement foregrounds what a body can do, what its desires for movement are, and how it shapes intensity.

Affects underline every potential movement. The Traceur creates a route through a continuous negotiation with the material ground that enables action to take form in movement. The Traceur employs a sensing-thinking-feeling nexus to activate the potential of a route to be taken. Saville definitively considers different registers of materialities that move with and beyond the event of a Traceur's action. He emphasizes that "Parkour always involves the mobility of other materialities, be they living, inanimate, or intangible ideas or knowledge of techniques" (Saville 2008). In this sense, for potential movement to take place, the ground itself feeds back into a complex relaying process between different states of motion and rest and their

oscillation between bodies. A Traceur does not plan a route or run across obstacles, but the action mobilizes bodies and their different registers of movement, enabling action to take form. This first step toward a different encounter with architectural configurations through movement also implies a different concept of what a body is and how it moves in relation to its environment (i.e., space and place).

Saville thoughtfully points out the potential of *place* as active and "evocative by virtue of its ability to stretch, jump and scratch temporal lineage" (2008). Crucial to such an open understanding of place's potential is a rigorous conception of *space* and *place*. One of the most famous differentiations between space and place derives from Leibniz's correspondence with Clarke. Leibniz regards every event in *spacetime* as the result of relations under dynamic principles, or the principles of force (Leibniz's second paper, Alexander 1956). One can therefore experience space and place only in their relational state through *situations* that one experiences (Leibniz's fifth paper, Alexander 1956). Place is that which is common to all the relations of bodies' co-existence in their agreement of their relations. Space is the general potential for places to cluster relations that build experience through their co-existence and movement. Place then becomes a minute intensive coming-into-presence of forces. Place in this manner would enable us to regard architecture and the relations it might engender as intrinsically dependent on its relations, co-existents and movement.[5]

Architecture in light of urban practices such as Parkour collapses as a rigid concept and opens itself toward a rhythmical differentiation through movement. Capitalist implements of architectural planning, and the corporate money that widely enables architectural projects to take form, fall short in light of Parkour's potential for different ways of encountering and moving with and through supposedly rigid structures. If one regards this potentiality set free through movement as endless forces toward different palpable configurations, the binary of empowered versus disempowered sets of individuals seems inappropriate. Here, the attempted dialogue with different discursive mechanics of power and control becomes a monologue in a self-reflective loop based on concepts of interpretation and the urge for meaning. Without rejecting the importance of the discursive itself, one can re-conceptualize the relations between humans, the subject and their environment on an embodied yet material level.

If Parkour, as Daskalaki et al. claim, has the potential to "weave into architecture to become a living whole," then architecture and its material ground weave themselves into the Traceurs and enable movement to happen (Daskalaki et al. 2008). Therefore, it is necessary to draw a precise line between human-centered approaches of embodiment and encounter and open-ended shifting configurations of places and their relations through movement. For Daskalaki et al., "Parkour and its philosophy offer a revealing medium for exploring the relationship between the environment and the human body in everyday situations, between architecture and movement, organizational structures and possibility, freedom and control" (2008). On the one hand, Daskalaki et al. yield a certain reformulation of existing terms and structures, but on the other, they reinforce these terms without considering the potential of relations as the medium from which new events might emerge. In other words, in contrast to de Certeau's tactics of *everyday life* (de Certeau 1984) and the Situationist strategies of *derive* and *détournement*, the subject–object binary gives way to bodies that move and build relations through the sensing-thinking-feeling nexus that is not reducible to the human (body) but accounts for all bodies that are in movement. What is lacking from such ideas about everyday life is a thorough relational model between different bodies instead of a dyade of the human and its environment. In his praise for practices and interventions on an urban scale, de Certeau analyzes why practices such as Parkour play with the two meanings of power in the sphere of the city. In his Foucauldian reading of the city as place to produce totalizing powers and a sphere with the intrinsic potential to reach beyond the panoptic power, de Certeau annotates the two meanings of power in the Spinozist differentiation between *potestas* and *potentia*. *Potestas*, as the discursive power that orders, disciplines and punishes, plays the role of the corporation, the built structure to separate and defend, and the mechanisms of control through technologies of surveillance, tracing of bodies and expressions of identity through code as information (in this case, mostly binary code). *Potentia* addresses the potential of such practices to shape and shift these controlling mechanisms through alternative movements. Parkour emerges not necessarily as a direct response to the disempowering mechanisms of corporate forces of control (Daskalaki et al. 2008), but reaches a deeper level of activation of the forces at stake once movement has taken place. In other words, the relations of bodies and movement to architecture remain on a merely external level and are intrinsically conceptually curbed as long as we regard experience without the relations that enable such configurations to come into presence. In that sense, Parkour and its practice

[5] In his work "The Practice of Everyday Life," Michael de Certeau provides a very thorough analysis of his interpretation of space and place (de Certeau 1984). His treatment is similar to Leibniz's distinction. Hence, for de Certeau, "space is practiced place," whereas for Leibniz's, relational model space would be rather the overall configuration of different place configurations relating to each other in continuous movement (Leibniz's fifth paper, Alexander 1956). Practice here would be the relation that always becomes something other than what it is and therefore space is less accessible for action than a mere potential for place and action.

of engaging with material formations to move differently through apparently rigid *spaces* (whether they be abandoned, corporate or public) foregrounds the potential for the continuous presencing of relations as "embodied" experiences. These relations usually pass unnoticed in the course of our experiences and come to the fore once boundaries are challenged and transgressed. Parkour certainly addresses and challenges the discursive formations at stake, but at the same time one has to go further to regard movement and its oscillation between motion and rest as potential for relations between all sorts of bodies.

Treatments of Parkour as an alternative practice to foreground the potential for new relations to emerge through the actively shaping parts of humans and non-humans often fall back into prescribed categories of resistance, embodiment and space. The detection of a potential embedded in Parkour as practice persists, but the employment of concepts referring to the "discursive" never really challenges overall assumptions about architecture, objects or space. Even though these approaches proclaim a certain critical momentum in Parkour, they mostly remain on the level of cultural signifiers and discursive formations. The general anti-hegemonic note such critiques emphasize barely considers the problematic reinforcement of the targeted apparatus through unchallenged conceptions of space, architecture and the body. If Parkour really introduces novelty in terms of urban practices of critique and provides new ways of thought, then one has to further develop the concepts of body, space, time, and movement. Without an alternative account of these concepts, one cannot discuss subversive strategies without remaining on the surface of signification and a play with ideas inside the hegemonic discourse.

3 Architectural body—the concept of landing sites

Through the practices of movement, Parkour yields an architecture that is "compositionally quite distinct from the ordered hierarchies of architecture-as-object, architecture-as-drawing, or architecture as idea… it is a rhythmical procedure, continually repeated yet forever new" (Borden 2001).

Architecture as an exercised mode of production continuously deals with the question of how to build and make new forms and structures to achieve particular responses within the environment of which this structure is a part. In most architectural discourses the question of how to build dominates the question of how it moves, which rhythms it has and what are its polyrhythmic structures in relation to other bodies. As a practice that builds, architecture continuously deals with boundaries and structures that in some way relate to other structures. Hence, movement in architecture is often regarded as an exteriority (except statics and other mathematically imbued techniques to keep structures in *form*). Bodies move along, through and across built structures, but they do not move *with* them. In the case of Parkour, one could argue that the Traceur moves across built configurations in ways that have not been primarily anticipated by their initial idea and that even transgress their function. This would reduce the practice of Parkour to a subversive practice that regards architecture as given structures to move across it in a way that might be challenging to the defined enforcements of boundaries and control through these structures and their conception.

One of the major fascinations about Parkour lies in its use of movement to get from one place to another in the most *efficient* way. This practice surfaces as the spectacular jumps from rooftops in London (refer to BBC 4 advertisement with David Belle) to extensive writings on proper training and use of movement on numerous websites dedicated to the practice of Parkour. The "means of correct training" that resonate with endless blog entries on Parkour web forums about *efficiency* and training play an important role in the institutionalizing tendencies of a practice that received massive media attention and therefore became part of the dominant discourse. Apart from Parkour's problematic and discursive analysis, the relations between different bodies are an integral part of its self-definition and practices. In its practices but also in its writing, Parkour develops a particular poetics of movement beyond the signifier and directly plugs into a continuous flow of relations between bodies: "This world we live in consists of resources that ease the pain of minor inconveniences. Impatience yields rush, rush yields shortcuts and shortcuts yield intricate movement…. Never will the body stop moving."[6]

In their seminal work "Architectural Body," architects and artists Madeline Gins and Arakawa propose an architecture that "ought to be designed for actions it invites" (2002). Their architecture aims at a relational concept of bodies, an architectural body—a body as an "organism-person-environment" (2002). In their reasoning, they posit a rather human-centered conception of encounter with architecture. Nonetheless, Gins and Arakawa remain productively ambiguous in their concepts and allow a playful openness to work with their ideas creatively. What they regard as an organism is a biomass that enables a process "to person" (ibid.). *Personing* is the forming of a compact, subjective "nexus" out of actions relative to the built environment in which they take place. Gins and Arakawa therefore understand a person as always being an organism, as a set of conditions born out of action. The organism that

[6] VA-Parkour Timeless. http://ca.youtube.com/watch?v=XWWb4vQH4KU (accessed 20/02/09).

persons always coincides with its environment: it becomes a nexus, an organism-person-environment. The potential of a personing organism depends on how it positions its body (ibid.). Without being specific, Gins and Arakawa leave the potential for body positionings open for any kind of body that positions and influences other postionings in relation to it: "Surroundings invite, provoke, and entice persons to perform actions, and the enacting motions of these actions not only serve upon alternate vantage points but also inevitably shift sense organs about" (ibid.). While remaining in the reference frame of the human body and its perceptual cues, they shift from a psychological model toward the movement that happens between percepts and affects in their relaying through relations, or what they call "the air passage through which the body draws in atmospheric wherewithal" (2002).

The close relation between movement, the body and the environment foreground what Parkour develops through its engagement with obstacles and presumably fixed structures. Both Parkour and Gins and Arakawa emphasize the flows (the air passage) between organism-body-environment to propose an alternative technique to understand relations between different bodies. As Gins and Arakawa point out, "a taking shape of surrounds and bodies and organisms and persons occurs intermixedly. Logic would want to get in there with a knife and cut them apart" (2002). What Parkour does then is emphasize the intermixed character of its practices that interweaves in its action different bodies (surroundings, organisms, persons) and therefore deterritorializes the former "territorialized" complex of built structure and discursive formations. The concepts of territorialization and deterritorialization derive from Deleuze and Guattari's concepts about the relations between actual composites and their virtual potential (Deleuze and Guattari 2004). To summarize their argument, territorializing forces anchor percepts and affects in an actual experience that becomes palpable. Deterritorializations are the forces that yield beyond the territory, and in their very yielding provide the potential for re-territorialization (2004). One could regard the practice of Parkour as a foregrounding of the deterritorializing potential through its different modes of moving across territories (territories in Deleuze and Guattari are never only physical entities but can also be territories of thought). Thus, Parkour enables a deterritorialization and re-territorialization consisting of difference through movement. If we regard these continuous shifting relations between territories as processes of deterritorialization and re-territorialization, we can further develop concepts that highlight the relations between different territorial parts and their assemblages through the movement-experience-nexus. Parkour's encounter with obstacles has a very different quality for the Traceur than for the normal pedestrian. Traceurs do not regard obstacles as something merely to surpass but seek the obstacles' potential for different movements to take place. An obstacle in its material presence inhabits a double position; on the one hand, it is something to be surpassed, and on the other hand, it is something that unfolds the potential of a different movement to take place.[7] The obstacle functions as a fragile "landing site," which relates to other bodies in various ways to enable movement to occur and to deterritorialize territories (Fig. 3).

Gins and Arakawa use their concept of landing site to address the interaction between processes of perception and imagination as part of the body and their relations to the organism-person-environment (2002). They commence with the notion of something "being apportioned out" to enable a world to be formed (2002). The concept of landing sites enhances a further understanding of how bodies relate to each other and what a body can do. The real strength of their concepts reveals itself in the notion of *site* and the process of being sited. "Organism-person-environment consists of sites and would-be sites. An organism-person, a sited body, lives as one site that is composed of many sites" (ibid.). Gins and Arakawa delve into the emergence of a "person architectonics" through the shifting processes of landing of sites. The body is always in a certain way territorial, as it keeps a certain form, but at the same time it is the product of continuously intersecting and dissolving landing sites. A landing site is part and parcel of an actual percept in relation to its environment and at the same time the force of deterritorialization, which opens toward affects and their virtual potential. In other words, if one defines Parkour as a process of landing of different sites to compose larger sites, such as the body, one has to regard the affective force that hides in the material ground (i.e., an obstacle) out of which Parkour develops movement. Movement is not so much a choreographic result of conscious decisions but rather a plugging into different rhythmicalities and the production of new rhythms in relation with the built environment.

For Gins and Arakawa, an organism-person-environment "fields" its surroundings as a sequence of sitings (2002). The relational bonds between different landing sites give birth to the fielding process and allow it to take place. They base their theory on three categories of landing sites: perceptual landing sites, imaging landing sites and dimensionalizing landing sites: "Through landing-site configurations, organism-person-environment takes hold and holds forth" (2002). In the eyes of Gins and Arakawa, landing sites, their fielding and their singling-out "bring the

[7] As Samir Mesbah, a Montréal-based Traceur, points out, on the one hand you try to "beat the obstacle" and on the other hand, it is the obstacle that catches your attention and shifts your perception of architecture and urban fabric entirely (private conversation 01/03/2009).

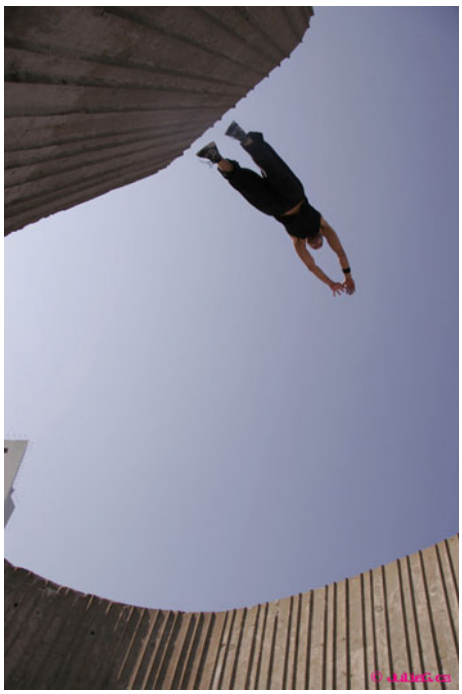

Fig. 3 Parkour practice Montréal. *Image credits:* Julie Gauthier, Parkour practice, Montréal

world into existence in all its features" (2002). The organism-body-environment takes *notice* of landing sites in a perceptual and imaging manner. In other words, Gins and Arakawa do not describe perception as mere bodily practice but acknowledge the circumstance of something being noticed: "All points or areas of focus, that is, all designated areas of specified activity, count as perceptual landing sites (visual, aural, tactile, olfactory, proprioceptively, kinesthetic somaesthetic [pain])" (2002). These perceptual landing sites are never entirely reducible to a particular shape; instead, different perceptual landing sites overlap and transform into each other. A smaller perceptual landing site, such as the armrest of my chair, defines a perceptual landing site on its own but is at the same time part of the larger landing site, the chair. For Gins and Arakawa, the existence of perceptual landing sites suffices as a first hold on things in the environment; they enable a "fielding" but are not entirely fixed. Fielding is the process of a set of relations from the organism-person-environment to come into being. Imaging landing sites can be described as the amorphous compartment of noticing, a fielding that always depends on perceptual and imaging landing sites. They are "amorphous accordings of more information than is directly supplied" (2002). While locating the imaging landing site in their concept of a person that underlies cognitive processing, including memory and recognition, imaging landing sites do not serve exclusively as a representation of actual perceptual landing sites. Rather, they transgress the general state of registration of the fielding of a perceptual landing site and enable processes of imaging that reach beyond perception. Fielding becomes possible through the relations and interaction between perceptual and imaging landing sites.

In their relational interchanges, perceptual and imaging landing sites bring forth dimensionalizing landing sites: "A dimensionalizing landing site registers location and position relative to the body" (2002). With their theory, Gins and Arakawa establish an "on-the-spot data management system" that provides through landing sites "a neutral zone of emphasis … [which] simply bypasses subject-object distinctions" (2002). In an attempt to consider Parkour as a practice of different movements between bodies, Gins and Arakawa's approach might appear deeply human centered. Hence, their open concept of landing sites regards the body as a potential person but includes the varying forces that move with that body becoming a person (i.e., the movement of other bodies). The body itself defines the platform for different forces to intersect and bring the organism-person-environment to the fore. One arrives at a concept of the body that notices and moves, but always in relation to other bodies and their movement. Awareness of landing sites is not just a matter of human sense perception but a relaying process between different landing sites and their configurations intersecting in a tangible percept. Imaging landing sites add the affective force that always reaches beyond the perceptual and injects forces of movement that seek deterritorialization where territories have been formed before (Fig. 4).

Parkour works on the level of an embodied encounter as a person with obstacles, but at the same time its practice would not introduce novelty without its deterritorializing concepts of the obstacle. The architectural configuration as obstacle embodies the transformative potential of deterritorialization through movement. The body is not a human-centered concept but matter that moves between motion and rest, always in relation and always changing its assemblages. These are assemblages of different landing sites, of different forces that produce territorializations (percepts) and deterritorializations (affects). Thus it is understandable that Deleuze and Guattari ask, "How Do You Make Yourself a Body Without Organs?" because the body already reaches beyond what a body is defined as and moves toward what a body can do (2004). In Parkour, training (the other 90% of the activity, which is not available on YouTube) deals with the potential of the body and what it can do. Extending the body beyond its capacity is one of the major goals and attractions of Parkour. Under the longing for pure extension, landing sites open up and need to be continuously addressed through the movements from one obstacle to another. The body in Parkour never exists apart from its fielding and the landing sites, which

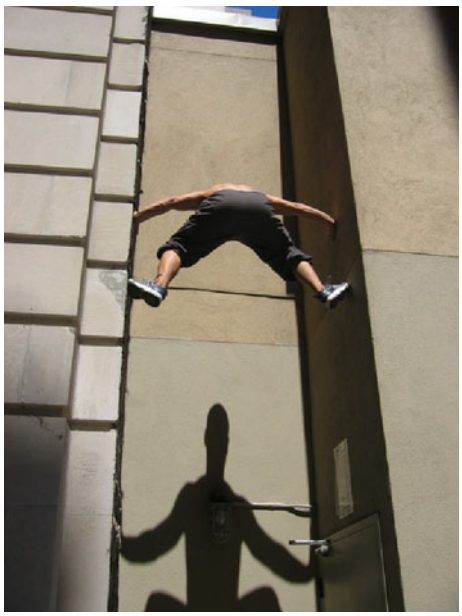

Fig. 4 Parkour practice, Toronto. *Image credits*: PK514, Parkour practice, Montréal and Toronto

make movement possible. The obstacle becomes the bearer of the potential movement-nexus between bodies and their relations. According to Bergson, the relations between movement and space are inextricably tied into his concept of duration as the major difference between entities or, in his words, composites (Bergson 1910). Duration in relation to the shifting formations of space and place becomes the necessary compartment that moves with the re-territorializing forces of a body's action. For Bergson, differences in kind (as the only proper form of difference) are based on duration and not on degree. If we define the differences in kind between bodies according to their duration instead of their degrees, the passing of movement becomes the force to shift these durations and therefore to introduce difference and novelty (Deleuze 1988). Parkour as pure movement becomes a rhythmical force of deterritorialization that creates relations to form bodies and sites along their durations. The concept of duration and bodies that are always in excess of themselves radically transgresses fixed conceptions of space and matter as inert and passive. Processes of siting, fielding and landing could not happen without a collective becoming between different bodies, their substances and their durations.

4 Movement, materiality and architecture

Zoe Laughlin addresses Parkour practices from a material point of view (Laughlin 2008). She states, "Parkour's process of actualization emerges according to the dialectic between the material nature of the urban environment on the one hand, and on the other hand through the Traceur's materiality and the materials he uses" (Laughlin 2008).[8] She further underlines the traces such a material encounter leaves on the body, such as callosity on the hands (ibid.). In reference to Bergson, Brian Massumi points out that we "can only make use of something because it has *already* been in contact with our action" (Massumi 2001). In both cases, the perception of something as an exteriority to a body as a person refers to the material ground and its tactile and physical encounter with it. The body's relation to the material ground built into perception as "pre-continuation of itself" evokes an "action of things on us, as of our bodies on things" (2001). For Massumi, perception is a synaesthetic process whose completion is "amodal" because "it happens between the sense modes, in their relating (through movement)" (2001). From a durational approach, an amodal completion of perception through the relating of sense modes defines the correlation between perceptual and imagining landing site, the emergence of composites. The Traceur's fielding connects the ongoing actual and virtual action of material bodies on us (person) and, at the same time, our action on material bodies. Hence, the fielding is not an interior process revealed as a black box but is itself involved in a constant movement between sense modes and their relations to other bodies and *textures*. Encounters with obstacles in Parkour as encounters with different textures, their marking qualities as landing sites and the relational forces of deterritorialization build a complex relational model that rests between states and therefore does not apply to a clearly definable mechanism. As Massumi emphasizes in his account of architecture's content as movement, one has to address "bodies at the level of their potential movement, that is, below the level of object recognition, familiar function and cultural decoding" (Massumi 2004). In other words, if we want to develop an architectural response to the findings of Parkour as practice of movement between bodies, one has to consider the body's potential for movement at the level of *force*: "The force would have to be at once deforming (able to separate bodies from the habitual form of their experience), transformative (converting actual movement into potential movement) and transitive (capable of being abstracted into the architecture). In a word (Simondon's), the force would have to be transductive" (2004).

Parkour, as a practice of movement that has transductive qualities, entails a durational model of movement and architecture. In a durational model, the transductive forces reveal their real potential for relations in the movement of bodies. Differences in duration foreground the assemblages between bodies and their potential to form larger landing

[8] Author's translation.

sites and carve out percepts from an affective and transductive force field (the *virtual* in Deleuze and Guattari). If the deterritorialization of Parkour practices gains its force from the potential of bodies to act upon a person and vice versa, boundaries between subject and object dissolve. In a prolongation of this line of thought it is necessary to reconsider objects and things, i.e., their material ground, in different ways. Simondon describes the relation between transductive forces of objects and their relation to their exterior as their *associated milieu* (Simondon 1980). It is the associated milieu of (technical) objects that conditions and at the same time is conditioned by the object itself. The practice of Parkour constantly moves and shapes the associated milieu of the technical object that can be regarded as architecture on a large scale. Architecture shapes as much as it is shaped. The material ground, the objects and their durational aspects re-territorialize the milieu, introduce new landing sites and discharge others. These processes are the relational movements of bodies in motion and rest. An organism-person-environment plugs into the processes underway through movement and therefore creates the necessary links for percepts to surface and for affects to unleash their force.

Such a relational approach requires another concept of the object and materiality beyond the mere human force of organization. If we regard the relational and shaping potential of material forces on the process of movement, we realize the object becomes something different from a plain thing to be present at hand for encounter. The object is rather an actively shaping part of any movement process taking place. Without the relational bonds between different bodies, one could not reach a sufficient state for presence and thus for perception and encounter. Parkour develops techniques to move differently with the obstacle's (object's) potential to be sited and therefore to acknowledge its own duration and difference in kind. The potential embedded in the object yields the virtual potential for objects' actions on perceiving bodies and the associated milieu. Architectural configurations not only offer potential for different movements but generally refer to bodies and their movements. Parkour unleashes transductive forces through movement on manifold levels. Through training, it unrolls the potential of what a body can do. Through movement it builds a perception-movement-environment nexus that works on a rhythmical basis between different durations. On a material level, it creates relations between different bodies and their associated milieu to allow a grasping of potential through perception. On an embodied level, it abandons the boundary between inside and outside, the body and architecture, to give birth to an *architectural body* that always moves on the level of relation between bodies, not in their separated states.

5 Conclusion

Parkour provides the potential for a reconsideration of the transductive forces embedded in the movement between bodies to create possible configurations and develop ever-changing landing sites. The relations between different durations and their movement define architecture as intrinsically fluid and malleable. It is therefore crucial to address the forces of transduction that foreground architecture's potential to move with other bodies and to create different rhythms rather than to enable or restrict the movement of other bodies as exterior to it. These insights might activate larger shifts away from dominant discourses and find resonance through new modes of building and therefore move with places and their potential. Similar to Gins and Arakawa's claim to build in a way that one might surpass the human determination of death, Massumi demands "work with *emergence*" (Gins and Arakawa 1997; Massumi 2001). Deterritorialization as an inclusive part of Parkour becomes the necessary point of departure for a theory and architecture that builds on relations and dwells on emergence rather than the acceptance of predefined terms, categories and structures. Architecture in its role of construction as "spacing of embodied movement" has to incorporate the relational bonds between bodies to achieve a plane of emergence for potentialities to become palpable (Massumi 2004).

Acknowledgments I would like to thank Sha Xin Wei for his encouragement and support for my work. I would also like to thank Erin Manning and Brian Massumi for their generosity and support. Without the generosity of Samir Mesbah, I would not have been able to find the images in the text and gain first hand information about Parkour.

References

Baviton N (2007) From obstacle to opportunity: Parkour, leisure, and the reinterpretation of constraints. Ann Leis Res 10(3/4):391–412

Bergson H (1910) Time and free will: an essay on the immediate data of consciousness. Humanities Press, New York

Borden I (2001) Skateboarding, space and the city: architecture and the body. Berg, Oxford

Daskalaki M, Stara A, Imas M (2008) The 'Parkour Organisation': inhabitation of corporate spaces. Culture Organ 14(1):49–64

De Certeau M (1984) The practice of everyday life. University of California Press, Berkeley/Los Angeles

Deleuze G (1988) Bergsonism. Zone Books, Cambridge/Mass

Deleuze G (1994) Difference and repetition. Columbia University Press, New York

Deleuze G (2004) Desert Island and other texts, 1963–1974. Semiotext(e), New York

Deleuze G (2004b) The logic of sense. Continuum, New York/London

Deleuze G, Guattari F (2004) A thousand plateaus: capitalism and schizophrenia. Continuum, London/New York

Feireiss L (2007) Urban free flow: the individual as an active performer. In: Borries vF, Walz SP, Böttiger M (eds) Space time play: computer games, architecture and urbanism: the next level. Birkhäuser, Basel, pp 280–281

Fuggle S (2008) Discourses of subversion: the ethics and aesthetics of capoeira and parkour. Dance Res 26(2):204–222

Gins M, Arakawa (1997) Reversible destiny. Guggenheim Museum Publications, New York

Gins M, Arakawa (2002) Architectural body. The University of Alabama Press, Tuscaloosa/London

Latour B (1987) Science in action. Harvard University Press, Cambridge, Mass

Latour B (1993) We have never been modern. Harvard University Press, Cambridge, Mass

Laughlin Z (2008) La Matérialité du Parkour. In: Catalogue for the exhibition actions: comment S'approprier la Ville. SUN, Amsterdam, pp 42–46

Leibniz GW (1956) Leibniz-Clarke Correspondence. In: Alexander (ed) Manchester University Press, Manchester

Massumi B (2001) Not determinately nothing. ANC Archit Culture (Seoul) 244:84–87

Massumi B (2002) Parables for the virtual: movement, affect, sensation. Duke University Press, Durham/London

Massumi B (2004) Building experience: the architecture of perception. In: Spuybroeck L (ed) NOX: machining architecture. Thames and Hudson, London, pp 322–331

Mister Parkour (2009) Archive. http://www.misterparkour.com/category/articles/. Accessed 20 Feb 2009

Saville SJ (2008) Playing with fear: parkour and the mobility of emotion. Soc Cult Geogr 9(8):891–914

Simondon G (1980) On the mode of existence of technical objects. Hart J (trans.) University of Western Ontario

Spinoza B (1992) The ethics. Hackett Pub, Indianapolis

AI & Soc (2011) 26:153–161
DOI 10.1007/s00146-010-0295-1

ORIGINAL ARTICLE

Patterns of growth and perception: the site, the city and the wild

Flower Marie Lunn

Received: 6 June 2008 / Accepted: 13 August 2010 / Published online: 30 December 2010

Abstract The natural or biological world often provides models of the simplicity, elegance and complex interactivity that we seek to impart to our technologies, buildings and artworks. Within discussions of form, materials or functionality, we look to the world of insects, animals, plants and even our own bodies for solutions and innovation. Though we may work with the organisms themselves, the first step usually involves a rupture of context, a mutation of interdependent being into a discrete object, a model for the extraction of desired characteristics. The reality of embedded wild growth, with its complexity and interrelation, has often been described in terms of infestation or of 'nature taking over,' a challenge to our dominance of the world. However, a closer study of this interpenetration of uncontrolled nature within spaces around us reveals our immediate surroundings to be both wilder and more alive than we often presume them to be.

Keywords Landscape sublime · Aesthetics · Dereliction · Marginal geographies · Art activities

1 Main discussion

1.1 Wild patterns of growth

The patterns of plant growth have been a presence in the Topological Media Lab in the form of a living wall of vines that have grown into a thick and tangled mass of structural complexity. Time-lapse video allows us to see the seething, questing, twirling vines and flowers that unfurl and fade by day's end. By rendering visible the plants' movements, we are confronted with the facts of both their incessant activity, and immanent aliveness. Here we see the essence of Deleuze's Baroque that twists and turns its folds, pushing them into infinity, fold over fold, one upon the other (Deleuze 1992) (Fig. 1).

In an ongoing project as plant-directed process, it is the vines themselves that grow and flourish, photosynthesizing, taking nutrients from the soil and water, and respond to changing conditions: the humidity, the passage of sun and shadow, the tending and watering by people. What is termed conditions, however, can be considered in some depth. As well as a lack of pollinators and soil-enrichers, the building in which the plants live is hostile to biological organisms: for example, in order to keep the windows from fogging, the humidity is constantly sucked out of the air, desiccating people and plants alike. However, the social and creative praxis of the laboratory, as well as the direction of my studio practice, has made it possible to grow and care for the plants in the first place. So while the particular site cannot be called wild by any means, conditions that contribute to it can be subtler and more extensive than what is initially evident. The Baroque fold, Deleuze tells us, "unfurls all the way to infinity" (Ibid).

This question of milieu, or the location of the site, lead to my inserting small areas of wild growth into the city, like pondweed under leaking pipes in the metro, for example. These activities precipitated a shift of attention to the pockets of wild growth that had already taken hold, in these spaces, and the ecologies that arise when urban space is left untended. Readings on landscape aesthetics, urban dereliction and ecology continue to inform my creative practice and are here touched upon in a meandering examination of the notions of site, landscape, the wild and the role that overgrown spaces play within the city.

F. M. Lunn (✉)
6016 Jeanne-Mance, Montreal, QC H2V 4K8, Canada
e-mail: floramarialuna@gmail.com

Fig. 1 The wall of vines that grew in the Topological Media Lab

1.2 Site versus landscape

In our relentless building and becoming, there is a tendency to think on a rather limited timescale: the construction, its opening, the moving-in. Over and over again we set up house, in all manner of speaking. Even art practice is about the setting up—the presentation, the documentation: there. And then we turn away, on to the next. The taking down is disregarded and thus conceptually invisible, as is the place upon which all this occurs: the site.

The site is where we locate our projects; what we build upon. It is also where we locate ourselves, the context(s) we operate out of, and the place we meet others. It is what we inhabit, and where we live. In the language of architects, developers and urban planners, the physical site is abstracted and devoid of presence, though it may possess key features and distinguishing characteristics. Yet those associations are neutral enough to provide a clean slate upon which to build. Dylan Trigg describes this abstraction as the 'spatial identity of capitalism', in which "impermanency and standardization come to represent the evasion of temporal contingency" (Trigg 2006). This evasion becomes a habit of perception, an escape from present place into absent space.

1.3 The historical sublime

Landscape is the antithesis of site. Historically, landscape has been the site of our survival or extinction. In early Europe, landscape was the wild beyond the city walls, home to madman and wild beast. The wilderness was where one suffered exile and confronted one's vulnerability beyond the protection of the town.

The historical sublime emerged as a philosophical and aesthetic response to the threat of annihilation that the wild presented, the sensation of awe and terror one felt upon glimpsing the scale and infinite complexity of the untamed landscape. Kant formulated the reaction of a finite identity lost in the vastness or force of the turbulent natural world. In the Kantian sublime, there are sets of opposites that seek resolution—human/nature, finite/infinite, Being/Non-Being—that are eventually subsumed by the triumph of measurement and reason. In what was ultimately a transcendent strategy, he described the feeling of satisfaction that accompanies the sublime as its domestication or rationalization by the human intellect.

Schopenhauer describes a more psychological experience of the immersion in a sublime landscape and the resultant dissolution of the subject. He writes that in the sublime "happiness and unhappiness have vanished: we are no longer the individual; that is forgotten; we are only pure subjects of knowing" (Schopenhauer in Trigg 2006). Landscape's power evokes a poetic response, as such its psychological charge, lay in our absence. Rather than a position of dominance, Schopenhauer's sublime is closer to a sense of merging with the wild, an act of aesthetic contemplation that, "in effect, annihilates the perceiving subject" (Sontag 1967). Yet how can the self gain knowledge from an experience of the sublime if its own presence is absent? Schopenhauer replies that it involves a going beyond our own individuality, as a "violent tearing away" from the agendas and attachments to personal will (Schopenhauer in Trigg 2006). From this broader perspective, the "intellect then freely soars aloft and no longer belongs to a will… thus it has the permanent, unchangeable forms independent of temporal existence" (Schopenhauer in Trigg 2006). Thus, the landscape sublime offered or represented an opportunity to transcend ourselves; the insistence of our subjective will and desires.

However, the contemporary landscape is rarely the place where we experience Kant's sublime or Schopenhauer's 'violent tearing away' from what we know and expect. Not only are our cordoned recreation areas over-attended and devoid of risk or discomfort, but there are very few genuinely wild places that remain untouched. I refer in particular to the "Canadian Wilderness," as the wild is somewhat of a trope in our culture. Its 'taming' has been a partly romantic response to European pastoral landscape ideals being overwhelmed by the vastness of the new world. The Canadian wild has now become the untamed proving ground of the contemporary explorer and romantic urbanite. Yet few venture north, and as our resources are

plundered for monetary gain, this view becomes kitsch, as the taming of the land becomes—and perhaps has always been—the survey and exploitation of it.

Heidegger refers to notion of the world as 'standing reserve,' as a fundamental detriment to our ability to maintain any significant connection to the world as it exists. The storage of fuel for later use, which is the basis for modern technological prowess, has become a core abstraction that enables us to see all of nature not as complex and interdependent processes of being, but rather as inventories of resources to be used when required.

In "Martin Heidegger and Environmental Ethics," Ted Beckman writes that for Heidegger the conceptualization of the world as standing reserve precipitated a shift from *techne*, a "bringing-forth" in harmony with nature to *technology*, a "challenging-forth," a setting-upon the world. The historical windmill, as an example of *techne*, did not amass energy, but was a direct engagement with the on-site presence of wind. Now with technology, wind-generated energy is stored for future disposal, and thus the direct and present relation with the world is lost. In becoming an abstracted inventory of resources, or sources of energy, the world loses its "natural objective identity" (Beckman 2008). A river becomes merely a passageway or is dammed to become kilowatts. Thus, Heidegger describes technology as "the whole process within which human life is developing," which "challenges-us-forth to this mode of… ordering nature into a standing reserve" (Beckman, Ibid). As our engagement with technology reaches higher orders of organization, we are more and more preoccupied with this view. Thus, our view of the natural world is profoundly affected, inhibiting our ability to see both the world and site as it is, with its human and non-human inhabitants.

1.4 Contemporary wilderness: the post-industrial sublime

In a response to the scale of the 19th century industrial revolution, Edmund Burke described the areas transformed by mining and industrial activities as "vast, rugged, negligent, gloomy and great." Burke's sublime is an aesthetic that "operates in a manner analogous to terror" (Burke in Trigg 2006). Now 100 years later, the post-industrial landscape is transforming our notion of wilderness. The vast industrial landscapes of the eighteenth century are now created on a scale that is hitherto unknown, a result not only of the prioritization of economic resource extraction, but of technology's current capability to terraform hectares at a time and produce mountains of waste**.** Yet these areas remain off the wilderness map, where there are monsters indeed: vast swaths of slag heaps from abandoned mining activities, hectares of forest and lakes disturbed from acid rain, large-scale agriculture and farming activities, inadequately tended and managed nuclear waste storage facilities and industrial waste sites. These are areas of geographical mismanagement where whole landscapes have been irrevocably disturbed.

The new and post-industrial sublime threatens to defeat Kant's apprehension of it by Reason, as it is now coupled with an inability to rationalize it in a way that puts discomfort to rest. Ruined landscapes that stand in mute testament to profit-driven irresponsibility, they highlight the conceptual blindness towards the site. Current technological proficiency and economic value systems are implicated but apparently irreversible. At a scale beyond the capability of the human intellect to rationalize, what philosophical stance we may attempt to adopt instead becomes an ironic one. Lyotard characterized the ironic sensibility as the hallmark of postmodernism, which "searches for new representations, not in order to enjoy them, but in order to impart a stronger sense of the unrepresentable" (Lyotard in Pillow 2000). On a vast enough scale, they become a representation of the death drive, an urge for collective annihilation in an orgy of failure. Lyotard writes that the death drive is "marked by surges of tension… dissonances positively exaggerated, ugly silences" (Lyotard 1984). This is a psychological reaction to the attempts of the subject to find ground in an inhospitable environment. In this case, it is the recognition in the ruined landscape of the denied presence of the site and the localizable impact of late capitalism. Here are the nickel tailings of Sudbury, the hectares of bitumen waste of Fort McMurray. Thus, the post-industrial sublime is an aesthetic that does not herald, as Trigg writes, "the halo of ascent, but the flickering resonance of descent and gravity" (Trigg 2006).

Thus, the illusion of the untouched wilderness functions less like Heidegger's standing reserve and more like the notion of a federal reserve: though the imagined economic stability of a nation, it has long been sold off to market interests, while still managing to attract speculative investment. The fragmentation of our surroundings, as Laura Sewell writes, "reflects our forgetful blindness, [of] our ears tuned to the human conversation, our eyes tending toward the human creation" (Sewell 1999). What we come to is the end of the tabula rasa, the clear and neutral site upon which to build. It has only ever been "a trick", as Virilio writes, "whose purpose is to deny particular absences any active value" (Virilio 1991). The clean slate, or ground zero, has become a political tool, for neoconservative economic forces to create opportunities to rewrite entire landscapes as they see fit.

Once "productive of the strongest emotion which the mind is capable of feeling," the experience of the post-industrial sublime is often characterized by despair and cynicism (Trigg 2006).

While the Romantic Sublime of Burke's day was a somewhat theatrical response to the early industrial revolution, it is credited by deep ecologist Theodore Rozak as "the first significant anti-toxin generated within the body of our society to meet the infectious spread of single vision" (Rozak 1973). Now what romanticism remains towards the geographical site is overwhelmed by the enormity of environmental cleanup tasks, and underwhelmed by comparison to marketed 'destination places'. Wilderness thus has become a faded abstraction, one that remains in the back of our minds, part threat, part escape, as landscape becomes the stand of trees remaining beside a highway, or the ravaged forests beyond the city.

However, in getting to know the underwhelming stand of trees, and weeds growing up from cracks in the pavement, we are presented with an opportunity to know nature as it has become. To see the world as it is, with its complex layers of interaction between the built environment, the derelict and the wild, it is crucial to start from where we are. For the majority of us now, that means the cities in which we live, overgrown areas, the invisible theatre of inter-relations.

1.5 The (western) city

> "The city had no specific locale, and its internal geography was mainly fluid. Its inhabitants nonetheless knew at any given instant, whether they were in the city or in America." The city was largely invisible to America. If America was about "home and "work" the city was about neither, and that made the city difficult for America to see" (Delaney in Gibson 1996).

The spatial experience of a city is composed of multiple grids and cordoned areas, each with its abstracted boundaries. Striated space extraordinaire, a city is layers upon layers of structures and meaning—epistemological bureaucracies in concrete, if you will. Existing despite them are the ambiances and softening areas the Situationists sought out: "the play of presence and absence, of light and sound, of human activity, even of time and the association of ideas" (Sadler 1998). The buildings and streets served to "gently articulate the softness in between" (Ibid). These aesthetic qualities form a significant part of the character of a city. They entwine the buildings and meander through the streets, shaping the structural syntaxes of the city and give substance to the experience of the particular site.

In a discussion of space and place, Joseph Koener describes the relation of the experienced world and of the experiencer as being spatial in structure and has "as one of its climaxes, as sense that *this* is a place, just like *this* is an experience," and that moment makes both meaningful (Koener in Dean and Millar 2005). However, that moment is rare in the modern city.

If urban growth once responded to the geographies at hand, it has come to measure itself by the means of technological proficiency. Whether in the name of security or attracting investment, it is this hyper-mediation, as Virilio writes, "exiles us all from the terrestrial horizon" (Virilio 1997). For the sake of measurement and representation, a modern city presents a deterritorrialized experience, in which the physical reality of the city becomes obscured by encoded patterns of perception. With the manner in which we are confronted with 'views from the street,' that privilege technological mediation over direct experience, the spectacle, or "reality effect, replaces immediate reality" (Virilio 1997). This 'deterritorialization' of the capitalist city means situatedness is discarded in favour of universality. Instead of a place, Trigg writes, that "affords the possibility of lived experience, and thus the creation of memory, in the city-site, we confront a faceless and placeless space, which stifles experience" (Trigg 2006).

1.6 Faster and faster

As inhabitants, we must also increasingly work to keep up in the race of technological and social innovation, and adapt our relationships and bodies to a tempo that has "no relation to any calendar of events nor any collective memory." Our devices of communication and dissemination bring about a breathless immediacy that Virilio calls 'pure computer time.' Its effect is to "construct a permanent present, an unbounded timeless intensity that is destroying the tempo of a progressively degraded society" (Virilio 1997). As a result of the technological acceleration of time, the 'time allotted to decision-making is insufficient' (Virilio in Armstrong 2008). Contemplation and the social reformulation of ethics takes time: to absorb information, to consider its significance, and to respond with depth and foresight, both on a collective and social level (Fig. 2).

History then, even recent memory of place, becomes less easily accessed, overwhelmed by the spectacle of present and near-future information. It is then the overlooked and unused spaces of a city that offer clues to what existed before that often made up the character of a place. While not reserved to abandoned places, the Situationists' psychogeography was a strategy to re-value place, and one of their 'campaigns' was to save the rue Sauvage in Paris, a derelict street on the Seine, as "an increasingly rare example of Paris without the spectacle"(Sadler 1998).

There are, however, areas without spectacle to be found in nearly all cities, as the ambiguous places in the urban landscape. In the way the crowded and dark mediaeval town gave way to the space and light of the gothic

Fig. 2 Native and invasive species alike growing out of the margins of the Mile End trainyards in Montreal

cathedral, our frenetic and highly mediated urban lives gives way to the open space of the unused places around us. Whether vacant lots, abandoned factories or overgrown train yards, these are left behind and marginal areas that lie off habitual routes to home, work and other usual destinations. They have become pure site, lacking value in economic terms, they are void places, evidence of the negative growth rate or outright failure of many of the western world's cities. What they offer, however, is a wider and deeper experience of place through the characteristics of a particular site. Grid-based habits of preoccupied movement break down in open and overgrown space that requires more creative trajectories. The vertiginous focus on the present and near future quiets and dilates into wider timescales. In this contemplative zone is a chance to see and connect with the site as it was, is, and is slowly becoming, and discovers its interpenetration by the wild.

1.7 The wild in the city

In contrast to planted parks or controlled recreation areas, Urban Wilderness includes areas of the urban landscape that have fallen into neglect and overgrowth, becoming arid areas of biological intensity. The wild now becomes a term to describe the patterns of reclamation that appear when nature takes over marginal areas of the city. For the most part polluted with litter, old buildings' materials or industrial wastes, these are areas of paradoxes, where there is open greenspace, but unsanctioned and often dangerous.

In some cities, dereliction is on such a scale that it becomes landscape, and the sublime is once again invoked to describe it. Detroit, to cite a popular example, was left behind by the industry that gave rise to it, and its miles of derelict residential and abandoned industrial lots have become so overtaken by nature that it has been declared an urban prairie, complete with ring-necked pheasants and deer. Though the image may be captivating, and appeals to a melancholic nature (required, according to Kant for a true experience of the sublime), that does not mean one has understood it. To limit our apprehension to the aesthetic, is to once again seek out an abstraction, a framework of re-presentation. For a site, though abandoned, is never unused. To see the site as it is, is to see the patterns of human and non-human use and adaptation.

The term "intrinsic value," from deep ecology, means that the value of an ecosystem is not dependent on the human recognition of it. Both an ethical term and a manner of perception, intrinsic value is part of a worldview that posits human-centred attention as inherently reductionist and exploitative. As long as we see an ecosystem as and idealized, fixed presence of animals and plants existing somewhere outside our milieu, limited to sanctioned spaces, we cannot see the extent of the wild as it exists amidst us, and miss its range and interpenetration of the urban landscape. Though it is often a dismissive act, perception is actually an interaction with our surroundings, a "reaching out to the world" (Yi-Fu Tuan in Sewell 1999). Noticing the presence of the non-human other, whether plant, animal, fungus or mould, is a chance to see the relations we have with it, and how it responds to us. This relational way of seeing "places us fully within the field of our many relations, sensitive once more to the volume, the width, and depth of being within an animated landscape" (Sewell 1999). Though displaced, disturbed and fragmented, the wild continues in and through the margins of urban space, and is no less animate (Fig. 3).

In areas where growth is not controlled or managed (other than periodic spraying or mowing by the city), organisms and species adapt and reestablish ecological niches. In these places, plants reclaim a building or lot, reaching out and creating footholds for micro-ecologies to establish themselves amidst patterns of runoff, contamination and erosion. Animals hide and make their homes in the undergrowth, though the balance of ecology—nutrient gathering, reproduction, the raising of young—may be profoundly off-kilter. The folding, frenetic movement of vines once again makes itself known in these sites, from the patterns of material decay to the nesting of niches, to microbes and mutations we cannot even see.

Fig. 3 A hidden meadow is revealed between fallow railcars

Fig. 4 Between the ties of an unused track, a mossy rock garden grows in minature

Given the irrevocable circumstance, however, resilience in an ecological sense is here no longer about returning to an ideal set of conditions, but simply 'staying in the game' and adapting to a continually changing set of survival challenges. In the abandoned areas around Chernobyl, to cite a most extreme example, the DNA of the incredibly verdant undergrowth is much more prone to rupture, but also much quicker to mend—albeit still highly radioactive—and the young trees exhibit a startling variety of forms (Mycio 2005). That the range of contaminants as well as insects, animals and plants spread beyond the zoned boundaries of a site, highlights a need for a re-examination of how we compartmentalize the spaces around us.

1.8 Diffuse sites: permeable boundaries

In sustainable design paradigms, a more fluid view of boundaries helps in our ability to see both the non-human inhabitants of a site, and the site itself: "boundaries should not be treated as real biophysical phenomena, but be…re-visioned across multiple landscape scales" (Hill 2005). It is in the crumbling infrastructure of the abandoned that wildlife may begin to shape the architectural environment itself, as their use of it replaces that of the human.

A corresponding idea of infestation has been one that has guided my work; thinking about microbes, insects, animals, and plants that inhabit various conditions favourable to them. Their presences trace the elements they require, and ignore our delineation of space. The installations I create in public or unused building spaces recreate a notion of invasion: moss into corners of a building invites an experience of the structure's future decay, or saltwater seeping out from a wall below a video projection of the sea, its eventual submersion. These are moments when the boundaries of our architectures function instead as thresholds and indicate that conceptions of fixed boundaries—inside and outside—are ever contingent.

Scientific redefinitions of boundaries as 'limiting surfaces' indicate that closed boundaries never really existed in the first place. Porous membranes, surfaces are the areas of molecular osmotic exchange when differing environments meet. For Virilio, the "limitation of space has become commutation… the activity of incessant exchanges" (Virilio 1997). This permeation most definitely includes that of the human, ranging from the dispossessed to the curious, that warrants attention in a discussion of site (Fig. 4).

1.9 Transgression

As a human counterpart to the molecular osmotic exchange, a most useful tool of the Situationists is the dérive, a receptive mode of moving through the city, with attention to the qualities of the city itself. A wandering exploration, the dérive is an interpenetration of zones that serves to dilate the attention as much as gain intimate knowledge of a city's sites. Urban exploration is a reinterpretation of the dérive, with its activities specific to the

derelict and abandoned buildings, lots, yard, tunnels, storm drains and bridges of the crumbling city. The experience of abandoned spaces opens doors on several levels. Through penetration of boundaries and discovery, explorers "do seem to develop a stronger bond with their surroundings"(Chapman in Trigg 2006).

The term trespassing becomes somewhat diffuse in meaning when owners have abandoned the property; the word transgression, as in a crossing or violation of norms, is perhaps more fitting. In legal terminology, transgression is a crime created by a social or economic boundary, and a social transgression is an act that violates the norm. In the words of Bataille, transgression "opens the door to what lies beyond the limits usually observed, but maintains these limits just the same" (Bataille in Trigg 2006). Urban exploration simultaneously breaks and enforces the boundaries of a space. Not only does one encounter fear of the unknown, but one goes against ingrained social conditioning designed to discourage such independence of thought and willingness to explore ambiguous places.

In addition to experiences of wider timescales and permeable spaces, abandoned areas have an effect upon our subjectivity, our sense of self. What is most powerful for me is the sensation of not being under surveillance, whether electronic or social. The ingrained panopticon has been so successful that without it, there is a palpable sensation of being unobserved. Though it may be unsafe or toxic, and in many areas this proves to be the case, the freedom from social monitoring contributes strongly to the peacefulness I find in the tracks and abandoned yards in my neighbourhood, when exhausted by the pressures of having to be somebody.

In her essay "Time, Dereliction and Beauty," Dr Helen Armstrong writes about the abandoned urban spaces as rare places where we can 'linger and reflect,' where we can escape the "chattering cafe culture," but that it is not the "tranquillity of nature." These are places that "both ground and disturb us" (Armstrong 2008). The fact is that these are areas that have been disturbed. In urban interpenetration, both the wild and the tame are disturbed, and have to adjust to each other. In this way, our dismissive habits of classification and rationalizing may be interrupted by more contemplative perspectives, allowing observation of the cycles of growth and seasons, and the slow changing of a site through time. This is Bachelard's poetic syntax of the house, after the cellar has filled and the attic fallen in; this is a different kind of daydreaming, a melancholy mix of memory, speculation and attention to what is underfoot and continuing in our absence (Bachelard 1997). Alan Weismann's bestseller *The World Without Us* documents how fragile our constructions are and how quickly our cities would crumble, were we to disappear entirely (Weismann 2007). It is not this possible post-apocalyptic future that I see, however, but the present, constant cycles of decay, growth and slow transformation that happen in the midst of our everyday, urban life.

1.10 Reclaiming the site

> "But for those who remained, something else, gradually happened: the membrane eroded, America and the city seeping into one another, until today there is no America and there is no city, only something born from their intermingling" (Gibson, Ibid).

In many cities in the developed world, the people that inhabit abandoned buildings or derelict areas have no other place to go. In many places, drug economies and prostitution have moved in—these are areas of the dispossessed. But there are also committed community gardening movements, and grass-roots civic renewal programs to rejuvenate housing and education. Abandoned transportation corridors become sanctioned greenspace. Vacant lots become gardens that—contaminated they may be—serve as community meeting spaces. Given the scale of dereliction in Detroit, this positive wild growth (rather than destructive wild patterns of behaviour) takes place within a new model of the western city, "impermanent, ad hoc arrangements of temporary utility and steadily decreasing density" (Waldheim in Oswald et al. 2004).

Though this new model is indeed already underway in many urban areas, those who are working for their community are the ones that are reshaping their cities from what is there, and how spaces are already inhabited. What is and has been happening in the squatted buildings of Europe and derelict urban areas of North America are grass-roots and responsive patterns of self-organization. While Nieuwenhuys defined his New Babylon project around play, his ideas are being manifested along the lines of necessity and survival: "… we know that the future constructions we envisage will need to be extremely supple in order to respond to a dynamic conception of life, which means creating our own surroundings in direct relation to incessantly changing ways of behaviour" (Nieuwenhuys 1959). A direct reflection of wild patterns of growth on a social level, the psychogeographies of a given site is formed by the people that live in them. These are what determine how a site evolves, and its and our potential.

The wild areas of the city become an opportunity to explore the re-establishment of connected, or 'grounded' social ecologies, as "the increasing dissatisfaction that dominates the whole of humanity will arrive at a point at which we will all be forced to execute projects whose means we possess, and which will contribute to the realization of a richer and more fulfilled life." (Ibid).

Creative practice is, for me, a perceptual one; a means of both relating to my world and making wider forays into the

Fig. 5 An interactive art piece, *passage paysage* at Kunsthaus Tacheles, Berlin, 2008

seen and unseen dimensions of it. Some of my most personally affecting creative acts have been the spontaneous and undocumented response to a sudden feeling of connection to the alive world around me. At that time, I feel the basic tool-making human within, and the enriching possibility of creative action in the propagation of the wild in the world. Often when walking through the tall grasses and rusted girders of my surroundings, I see traces of sculptures and impromptu installations by those who have gone before, slowly being engulfed by the overgrowth. Disintegrating signs like these, like writing for Derrida, "is the incessant play of differences in an entirely democratic playground where everything is at the outset equal in status to everything else" (Merrell in Trigg 2006). The detritus of meaning left by others leaves one to ponder the responses of those who have passed through, in a way that is more ambiguous and inconclusive than the hierarchies of understandings ascribed to art situated in a gallery. (Fig. 5).

These may be, however, gentle gestures that rely on time and care to grow or take up residence in the space. In Tacheles, an art space in an abandoned building in Germany, I presented a small model-like landscape of figures in a wall, as if exposed by a hole in it. Over a period of months, passers-by slowly chipped away at it, taking figures and reconfiguring the installation, until what was left was barely discernible from the detritus surrounding it. That collective chipping away, as well as the documentation of it by the agents of its destruction, was actually the core of the piece for me. The posting of photographs on sites like flicker both enabled me to track it, and provided an alternate documentation, in a disseminating process much like that of seed dispersal. From an intimate knowledge of site, affect moves out in widening circles of exchange.

2 Conclusions

In time, Sontag writes, "the invisible theatre becomes visible… The history of art is a sequence of successful transgressions" (Sontag, III). However, writing about the wild and derelict areas is not to be confused with ecological, social or political action, and is no substitute for experientially connecting with it, the contemplative site. The Italian dérive and exploration group *Stalker* recommends doing nothing as the most effective solution for derelict areas. Letting them be, to be reclaimed by the wild, and those who have nowhere else to go means that these sites are fully in use.

Like the growing and twisting vines in the laboratory, like the weeds growing through concrete, the wild is immanent to controlled urban environments, and habitual human identities. The speed of the plant's growth and the tenacious range of their activity reminds us that likewise we humans are not discrete subjects, but, as Robert Pepperell writes in the Posthuman Condition, "a constellation of interdependent processes," in continual exchange with our living, growing world.

References

Bachelard G (1997) "The poetics of space". In: Leach N (ed) Rethinking architecture: a reader in cultural theory. Routledge, London

Dean T, Millar J (2005) Art works: place. Thames and Hudson Inc., New York

Deleuze G (1992) The fold: Liebniz and the Baroque. Tom Conley, trans. University of Minnesota Press, Minneapolis

Deleuze G, Guattari F (1997) "City/state". In: Leach N (ed) Rethinking architecture: a reader in cultural theory. Routledge, London

Gibson W (1996) "The Recombinant City" foreword to Delaney, Samuel's Dhalgren. Vintage Books, New York

Hill K (2005) "Shifting sites". In: Burns CJ, Kahn A (eds) Site matters. Routledge, New York

Lyotard J-F (1984) "Several Silences," Driftworks. Semiotext(e), New York

Mycio M (2005) Wormwood forest: a natural history of chernobyl. Joseph Henry Press, Washington

Pepperell R (2003) The Posthuman condition: consciousness beyond the brain. Intellect Books, Portland

Pillow K (2000) Sublime understanding: aesthetic reflection in Kant and Hegel. MIT Press, Cambridge

Rozak T (1973) Where the wasteland ends: politics and Transcendance in Postindustrial society. Anchor Books, New York

Sadler S (1998) The Situationist city. MIT Press, Cambridge

Sewell L (1999) Sight and sensibility: the Ecopsychology of Perception. Putnam Press, New York
Trigg D (2006) The aesthetics of decay: nothing, nostalgia and the absence of reason. Peter Lang Publishing, Inc., New York
Virilio P (1991) The aesthetics of disappearance. Philip Beitchman, trans. Semiotext(e), New York
Virilio P (1997) "The overexposed city". In: Leach N (ed) Rethinking architecture: a reader in cultural theory. Routledge, London
Weismann A (2007) The world without Us. Harper Perennial, Toronto

Online references

Armstrong H (2008) Time, dereliction and beauty: an argument for landscapes of contempt. Available via UWS. http://future.uws.edu.au/data/assets/pdf_file/0017/6920/Armstrong_Final.pdf Accessed 4 Apr 2008
Beckman T, Heidegger M, Environmental Ethics (2008) Available via HMC. http://www2.hmc.edu/~tbeckman/personal/HEIDART.HTML Accessed 10 June 2008
Nieuwenhuys C (1959) Another city for another life. Internationale Situationiste #3 (Dec 1959) Paul Hammond, trans., Available via CDDC. http://www.cddc.vt.edu/sionline/si/another.html. Accessed 10 Mar 2008
Oswald P et al (2004) Shrinking cities project. Available via uberuns. http://www.shrinkingcities.com/ueberuns.0.html Accessed 19 Feb 2008
Sontag S (1967) "The Aesthetics of Silence" in *Aspen,* No. 5&6. Available via ubuweb. http://www.ubu.com/aspen/aspen5and6/threeEssays.html#sontag Accessed 5 Mar 2008

AI & Soc (2011) 26:163–170
DOI 10.1007/s00146-010-0298-y

ORIGINAL ARTICLE

Adaptive Actions

Jean-François Prost

Received: 1 December 2008 / Accepted: 13 August 2010 / Published online: 16 November 2010

Abstract Adaptive Actions initiated in London in 2007 by Jean-François Prost explores alterations in the workplace, the home, and public spaces in general. Identifying the variety of these personal and found alterations in the city as different forms of adaptation creates a vocabulary for the expression of the collective imagination, through the existing urban structures therein. These 'actions' modify and activate the intended use of architecture and enhance the character of urban environments. They create positive tensions that test the limits of tolerated appropriation. Can these simple actions, images, and ideas, such as the hybridization of conventional and unusual urban realities, infiltrate our collective imagination to promote feelings of identity and a sense of cultural belonging? Adaptive Actions points to how urban phenomena impact on residents' perception of the environment and their relation to it. By offering a space to share experiences, ideas, forms of actions, and specific accomplishments, Adaptive Actions creates an inventory of alterations rarely visible to the public. Printed documents and organized events are being planned to increase visibility of the selected actions to the public eye and build affiliations and communal thinking.

Keywords Adaptive Actions · Adaptive architecture · Urban tactics · Micro-uses · Self-initiated · Self-help construction · Post-architecture · Spatial and alternative urban practices · Negotiated territories · Citizen appropriations

J.-F. Prost (✉)
Dare-Dare Mobile Art Centre, Montréal, and SYN-atelier d'exploration Urbaine, 729AV Bloomfield, Montréal, Québec H2V 3S4, Canada
e-mail: jfprost@gmail.com
URL: http://www.adaptiveactions.net

1 Main discussion

Architects often prefer to photograph/show buildings at the height of their glory when the presence of time is imperceptible and traces of users are absent. Some architectural agencies even control representation, only allowing the circulation and posting of approved images. "Now" is the *modus operandi*—priority goes to the image of the building in the present, and very little concern is given to its progression or the future. Much emphasis is given to what must be photographed, honoured, recorded, and published in magazines rather than to users' adaptation of space and appropriation in various forms. Very little importance is given to post-production or to a building's post-construction lifecycle, structure, or landscape.

Adaptive Actions operates on a shift in focus from representation and aesthetics to programming and built environments' possible uses. By observing, revealing, and sharing citizen adaptive actions, this project is aiming at encouraging others to act and to engage with their environment, as well as to inform designers of possible programme extensions.

Can perceptions be altered and change pioneered through simple actions, images, and ideas? Can the identification and representation of realities, which have to date been perceived as improbable or absurd, lead to new urban concepts and construction processes? The ongoing Adaptive Actions (initiated in 2007 in London[1]) throws light on these questions. It explores alterations in the workplace, the home, and public spaces in general. The project lends creative voice to marginal causes and alternative urban lifestyles whose upgrowth is otherwise precarious.

[1] Part of the Canada Council for the Arts International Residency program, hosted by SPACE in Hackney, London East End.

Imagination and personal creativity's potential for impact on daily life is emphasized, particularly within public spaces.

It thus indexes and reports existing actions in the city and encourages renewed activity, such as adaptation of architecture, landscape, and objects unfolding in several stages.

2 Singularities

In order to document and create an inventory of existing urban alterations, an ongoing survey and an open call for collaboration are conducted through the Web and printed documents. It should be noted, however, that these undertakings occur on a small scale and are often only known to a limited number of locals. The request for postings accelerates the process. Collaborators register and log in as actors on the website and submit actions directly and instantly online, adding images, text, and comments if desired. By offering a space in which to share experiences, ideas, types of actions, and specific accomplishments, Adaptive Actions creates an inventory of alterations rarely available to the general public (Figs. 1, 2).

The website's objective is to collate a variety of actions of a popular, theoretical, or scientific nature expressing a series of possibilities—from conflict to cooperation, opposition to composition. The presentation of projects will create a vocabulary through which the collective imagination may express itself through the use of existing structures and encourage the growth of similar actions (Fig. 3).

Fig. 1 *Snow Shoveling*, submitted by AA, created by Hannah Jickling and Valerie Salez, Viger Square, Montréal: http://adaptiveactions.net/action/112/

Fig. 2 *Temporary Shelter*, submitted by François, Miami Beach: http://adaptiveactions.net/action/38/

Fig. 3 *Little Fisherman Fountain*, submitted and created by Martin Dufrasne, Saint Félicien, Lac Saint-Jean, Quebec: http://adaptiveactions.net/action/131/ AA: Through this action, a fountain sculpture popular with the village becomes a soft monument: living and mobile, participatory, an element of desire, sociability, and negotiation

3 Assemblage and cooperation

A programme of events, workshops, and round tables in various localities on specific topics creates links and associations between actors and actions. The aim, as Maurizio Lazzarato would say, is not to neutralize differences but, conversely, to enrich the concept of commonality through these differences.[2] As he argues, the

[2] Citton (2005) and Lazzarato (2002), also published at Les empêcheurs de penser en rond, 2002.

Fig. 4 *Dots versus Demolition D*, submitted by FNJFP, created by Tyree Guyton, Detroit: http://adaptiveactions.net/action/65/

Fig. 5 *Dots versus Demolition D*, submitted by FNJFP, created by Tyree Guyton, Detroit: http://adaptiveactions.net/action/65/

challenge is to find ways to retain this multiplicity, to embrace heterogeneity while maintaining disparity.

Some proposed actions are conceptualized and carried out collectively. Our shared knowledge and expertise is applied towards accomplishing a creative project whose aim is to modify the intended use of architectural and urban elements.[3] This communal project could, for instance, emphasize one existing and documented action to give it more resonance, a stronger impact. Some actors might wish to pursue, reinterpret, extend, or carry out variations to existing adaptive actions[4] (Figs. 4, 5).

[3] A series of 'open houses' and workshops were organized at SPACE (London) to discuss several proposed actions or context of intervention—see Olympic walks and suppers following the All Aboard action (http://www.adaptiveactions.net/action/46/).

[4] Such as Gewuerfel's action *Building the Future?* which reused the All Aboard action paint to erase pictures taken by this urban photographer of the past and lost Lower Lea Valley in London (http://www.adaptiveactions.net/action/59/).

4 Relational shift

Adaptive Actions initiates a relational shift. Resident collaboration is an essential part of the process, involving the hybridization of conventional and unusual urban realities, disseminating such novel notions as de-ghettoization, as well as the use and assertion of public spaces through site-specific interventions. This relationship with residents, in itself constituting the first element of this action-research project, is critical to its success. While the instigator still intervenes in public spaces, he or she rather acts as a catalyst. Relationally, the focus is on the concepts brought forth by the instigator rather than strictly on end results. It is no longer a question of infiltrating public space, but of penetrating the collective imagination. Consequently, the actors themselves become encompassed within the infiltration and act as its agents. For the relational shift to occur, it must be an expression of the people as an integral part of the context (Fig. 6).

The role of the instigator in this particular situation is to encourage a different attitude, initiate a new practice, exchange ideas, and share knowledge and skills. This project explores, promotes, and encourages daily actions to stimulate active and committed participation. It challenges organized space and imposed movement patterns by creating positive tensions, measuring and testing the limits of tolerated appropriation. A multiplicity of actions—such as displacing and leaving a chair in an unforeseen place[5]—can have an impact on our urban lives.

5 Interstitial experiments

In Liverpool, one is struck by the quantity of urban plots zoned as "public land" but designed to remain in disuse that are fenced off. A project with benches undertaken there entitled *Public Loitering Area,*[6] aimed at adding an additional element to the fenced-off property, is a good example of a one-off, sporadic, space-activating micro-action. The project offered local residents the opportunity to participate by placing a bench on-site or by proposing an alternate location. After launching this urban action with several benches, others joined in and installed many other benches on yet more sites, an initiative that continued for several months.[7]

[5] Also such as the All Aboard action (http://www.adaptiveactions.net/action/41/).

[6] Adaptive Actions is the continuation of prior research initiated at the Liverpool Biennial 2006—Public Loitering Area: http://www.adaptiveactions.net/action/21/.

[7] A new phase of this project is being initiated as we speak by a Liverpool resident on new proposed sites—for news and further detail, visit the Adaptive Actions website.

Fig. 6 *PLA: Public Loitering Area*, submitted by Acronymia, Liverpool: http://adaptiveactions.net/action/131/

This project and other adaptive actions are most commonly micro-actions, constituting one form of resident participation complementary to either conventional or non-conventional ways of building or various-scale interventions. Micro-, interstitial actions complete and activate large structures incapable of, and not conceived for, adaptation to constantly changing local and global realities. They give flexibility to large structures subject to increasingly complicated regulations, legal obligations, and other factors.

Fig. 7 *Residual Spaces*, submitted by Surplus: http://www.adaptiveactions.net/action/86/

6 Places and non-places

In Montréal, Canada, in the late eighties, the Portuguese Plaza was designed to commemorate and mirror the character of a local neighbourhood. Today, virtually all Portuguese residents have relocated, leaving this very specific cultural space as a strange relic that in no way answers the contextual uses of current residents (Fig. 7).

Contrary to the movement and circulation of the people characterizing these inner-city neighbourhoods where identity and specificity are in continual change, the architecture of the Portuguese Plaza in Montréal is permanent. In the eighties, this postmodern return to context was welcomed and brought a much-needed debate following decades of *tabula rasa*, although resident, user, and context specificities were expressed in traditional ways and through permanent architectural elements by conventional means. The Portuguese Plaza introduces the following questions: should good architecture or city design of today still express local cultural specificity? Could it not be explored through other forms of actions, additions, and events, even temporary?

In this case and many others, citizen appropriation or actions represent interesting alternatives to adapting buildings to the flow of changes, enabling activation and meaning to many different public spaces. Increased mobility and population movements, as well as acceleration phenomena, displace people in places with no personal memories or connections to desires. Current and frequent displacements entail the need for personal appropriation in order to bring character and singularity to spaces which

Fig. 8 *Dirt Biking*, submitted by AA, on the periphery of the London 2012 Olympic Site: http://adaptiveactions.net/action/143/

may be too generic or, conversely, too specific to foster a sense of belonging.

Why do some people love vacant lots or abandoned buildings so much? Perhaps because their undetermined and uncontrolled nature offers a sense of freedom; these spaces are less restrictive when it comes to expressing different feelings of anger, ecstasy, or despair. Undefined places offer real or imaginary space for adaptive forms of uses and personal expression. Specificity is constructed, negotiated and brought forth by users and uses (Fig. 8).

In fact, some people might feel less at ease on the streets of beautiful and historical Florence than at a generic shopping mall. Paradoxically, we could say that today overly protected and site-specific places are in fact non-places[8] and that hyper-functional non-places, always undergoing repairs or constantly mutating, are actual places. Photograph documents, artist work, and testimonies show that, contrary to general belief, generic non-places such as airports or malls create relational and historical constructions.[9] In North America, seniors object to the demolition of local malls—perhaps their most important, or even only, public gathering space.[10] These unplanned, temporary group or individual uses and singular forms of appropriations are often invisible, but they leave signs and traces revealed through what Frank Nobert calls "narrative breaks".[11] Pascal Nicolas-LeStrat explains it more thoroughly in his recent text for the Adaptive Actions publication.

Fig. 9 *Use Traces*, walking as affirmation and spatial inflexions, submitted by FNJFP, created by an unknown Detroit resident: http://adaptiveactions.net/action/142/

> Unlike buildings or spaces, use often eludes the work of mapping; so it becomes vital to chronicle, to tell the tale of these uses—to construct a story from them, with them, without these stories becoming bound up within a single interpretative frame. Use takes form imperfectly; it cannot be reduced to a single way of being used. The "constitution" of a use is inseparable from the multiplicity of accounts that it gives room to (of sociologists, photographers, fictions, conversations), it is indivisible from this insistent murmuring that bears witness to the presence of *use*[12] (Fig. 9).

7 Open process and architectural appropriations integrated into future buildings

The submitted action *Atwater*[13]—bird feeders installed on the balcony of a large repetitive concrete tower—reveals an interesting addition, a (possibly) missing element in the conception of this important twenty-five-floor, 150-metre-long residential project. Environmental studies have proven that similar towers in urban centres have a negative impact

[8] For more information on the concept, see Marc Augé (1994).

[9] See the article by Jean-François Prost on project Inflexions in the Generic City recently translated into English at: http://www.adaptiveactions.net/information/.

[10] For accounts and testimonies, see website: http://www.deadmalls.com.

[11] Nobert, Frank, Narrative Breaks. In Adaptive Actions (UK Edition). Adaptive Actions and SPACE, London, pp. 70–71.

[12] Nicolas-Le Strat, Pascal (2009) Micropolitics of Uses. In: Adaptive Actions (UK Edition). Adaptive Actions & SPACE, London, pp 57–62.

[13] For further details: http://www.adaptiveactions.net/action/71/.

Fig. 10 *Atwater*, submitted by Maxpro, Montréal: http://adaptiveactions.net/action/65/

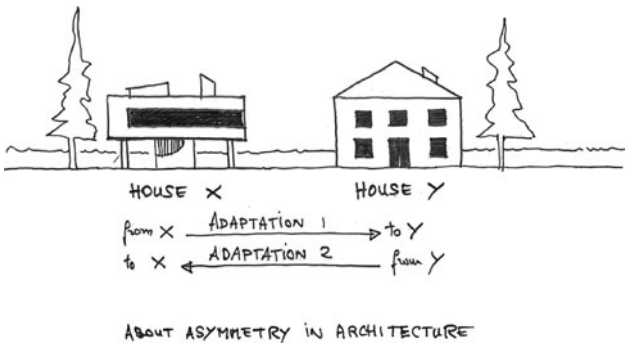

Fig. 11 *Pessac, France* (Le Corbusier), drawing submitted by Bobby: http://adaptiveactions.net/action/75/

on bird life, creating barriers, disrupting flight patterns, and reducing sources of food. This revealed action, the initiator of which is unknown, could serve as an indicator, a sign of an unfulfilled need, and be integrated into a new architectural project and programme.

Through similar documented actions, Adaptive Actions explores and gives value to non-linear, continuous construction processes with phases (conception, production, post-production, and management) where distinctions are attenuated and transitions less brutal or even non-existent. Stephew Wright states about art in a broad sense, it is about thinking "in terms of its specific means (its tools) rather than its specific ends (artwork)"[14] (Figs 10, 11).

This new scenario generates non-existent transversal links, accelerated cycles, and changed attitudes and roles. Buildings, like cities, are living entities; they change constantly in unpredictable ways and need to be constantly rethought through all these cycles, rather than simply built and demolished.[15] All buildings are initially biased and adhere to a programme. Buildings would thus be constantly observed, monitored, rethought, and reworked. Through intuition and observation, residents may suggest actions that, with more means and further discussion, could progressively materialize (Fig. 12).

8 Transformable and automated architecture

To facilitate appropriations and allow adaptations, many flexible and mobile attributes are presently being explored and integrated into structures. The conceptualization of such devices raises many issues and challenges. To what extent should or can objects or devices be contextualized to changing situations, users, and new parameters? Moreover, to what extent can they answer the distinctive needs of users, a programme, or a specific event?

To that effect, various strategies for context adaptation of devices can be introduced: positioning and setting modes, designs with component modification or collapsible functions, or dimensional variations. However, many transformable devices or construction elements have never been tested or instigated by users, while many mutative possibilities are vastly deemed symbolic. Many difficulties arise in using units conceived with transformable and adjustable devices. Changing elements are often not instigated for various reasons: they are overly complicated or non-functional, too time-consuming or unnecessary, or simply do not correspond to the real need for change. Most mutative attributes are utopian and offer little individual innovation coefficient.

There are effective risks related to transformation-based aesthetics and device concepts with no real potential for use; for instance, pillar-shaped billboards (Morris) are unusable due to the impossibility of modification, inoperable mobility, and their great complexity, rendering permanent that which was supposed to be temporary.

In the research project *Adaptive House*[16], adaptation is, conversely, effortless. Hundreds of sensors survey movement and behaviour, while a central computer hub analyses and stores the data and then creates patterns of uses. Programming is done and adjusted by computers. Temperatures are adapted to body activity: higher temperatures if inactive and lower if very active. To counter current building inefficiencies, architects are presently inventing and exploring a new self-referential and self-mutating digitally automated architecture that could maintain constant dialogue with its environment and the human body; it would necessitate little human participation, input, or activation. These buildings are pre-programmed for

[14] For further detail: http://www.adaptiveactions.net/action/71/.

[15] Corboz, André (2001) Le territoire comme palimpseste et autres essais. Éditions L'imprimeur, Paris.

[16] For further details: Adaptive House at http://www.adaptiveactions.net/action/67/.

Fig. 12 *Resilient City*, submitted by FNJFP, Detroit: http://adaptiveactions.net/action/83/

change, constantly surveying and analysing users and context (in relation to the body, rather than the intellect), then reporting and implementing adjustments accordingly. But how will this new environment be implemented, and to what degree will it be ethical and respect privacy rights or, most importantly, forecast desired changes? (Fig. 13).

9 Conclusion: no end in sight

Not all future transformations can or should be anticipated and integrated into building production and design. Rather than being planned, they should be given a space, a structure to grow, expand, and take shape. By leaving undetermined and un-programmed spaces in buildings, architects could contribute to their development. Funds could be allocated to future programming of events and possible transformations that could be coordinated by a group of citizens. However, the possibility of buildings changing progressively, more organically, and without resorting to traditional grand schemes and gestures necessitates an ideological shift. As long as representational space continues to dominate innovation and exploration, little change can occur. The predominant emphasis on aesthetics, forms, and signs over experience, ideas, or uses is certainly one of the biggest obstacles to creating a new and alternative architecture. This architecture is less oriented on the final product and more on the "use value,"[17] and what Anne Querrien calls the building's "enunciation."[18] The interest and desire are there, but academic, professional, and media pressures limit and control explorations, stifling inspiration and creative possibilities. How can we get beyond mere curiosity and amusement and actually begin to implement these changes? Adaptive actions are often seen as individualistic, personal, fragmentary, and spontaneous. Since these actions are unplanned and rarely thought through globally—i.e., in relation to the building as a whole and the city—they are often considered undesirable, of little value, and unconstructive.

Uncoordinated resident adaptive actions can negatively alter the overall visual force of a building's expression by creating unplanned additions. However, many user adaptations are positive, a normal evolution to construction as a nuance or critique of a building, and should therefore in many cases be encouraged and reviewed before they are removed.[19] Of course, input from a mediator or coordinator can balance the needs and requirements of all parties, recognizing the value of aesthetics, materials, urban and building design, as well as taking into account a crucial element of all such aspects: usage, which is undoubtedly more efficient upon consideration of the users' perspective. Very little thought and time are given, and budgets rarely allocated, to post-production, in order to pursue, improve, implement, and adapt constructions for various changing users. Resident adaptive actions prolong the life of buildings by progressively adapting their environments in a number of small, sustainable stages, thus avoiding

[17] idem, Wright, Stephen, p. 123.

[18] Querrien, Anne, Fabriquer des seuils à une troisième nature, Multitudes no.20, Spring 2005.

[19] Such as the housing project by Le Corbusier in Pessac, France, transformed by residents and currently being restored to its original state. Series of modifications described and addressed in Philippe Boudon's book: Pessac de Le Corbusier. Dunod, Paris (1967 and 1983).

Fig. 13 *Sea Oats versus Humans*, submitted by François, Miami Beach: http://www.adaptiveactions.net/action/70/

accelerated or premature dilapidation as well as the need to resort to large-scale urban renewal projects.

References

Augé M (1994) Pour une anthropologie des mondes contemporains. Flammarion, coll, Champs, New York

Boudon P (1967 and 1983) Pessac de Le Corbusier. Dunod, Paris

Citton Y (2005) Puissance de la variation; Maurizio Lazzarato, vol 20. Multitudes, Paris, pp 187–200

Corboz A (2001) Le territoire comme palimpseste et autres essais. Éditions L'imprimeur, Paris

Lazzarato M (2002) Puissances de l'invention La psychologie économique de Gabriel Tarde contre économie politique. Les empêcheurs de penser en rond, Paris

Nicolas-Le Strat P (2007) Intersticial multiplicity. Urban Act. aaa—PEPRAV, Paris

Nicolas-Le Strat P (2009) Micropolitics of uses. Adaptive actions (UK edition). Adaptive Actions and SPACE, London

Querrien A (2005) Fabriquer des seuils à une troisième nature, vol 20. Multitudes, Paris, pp 13–22

Wright S (2005) The future of the reciprocal readymade: an essay on use value and art related practice. Parachute 117, Montreal, pp 118–138

AI & Soc (2011) 26:171–178
DOI 10.1007/s00146-010-0299-x

ORIGINAL ARTICLE

Felt presence: the uncanny encounters with the numinous Other

Elizaveta Solomonova · Elena Frantova · Tore Nielsen

Received: 1 January 2008 / Accepted: 13 August 2010 / Published online: 15 October 2010

Abstract Felt presence, a sensation that "someone is there", is an integral part of our everyday experience. It can manifest itself in a variety of forms ranging from most subtle fleeting impressions to intense hallucinations of demonic assault or visions of the divine. Felt presence phenomenon outside of the context of neurological disorders is largely neglected and not well understood by contemporary science. This paper focuses on the experiential and expressive qualities of the phenomenon and attempts to bring forth the complexity and the richness of possibilities for inter- and intrasubjective awareness represented by these experiences. Are these simply misperceptions and hallucinations heightened and enforced by the mystical or superstitious mind? Or are these entities projections of our own "selves", elements of self-estrangement? How are such experiences shaping our understanding of ourselves and of others? And finally, what is the interplay between intersubjective, private experiences and private or public spaces of dwelling?

E. Solomonova (✉)
Dream and Nightmare Laboratory, Psychology Department, University of Montreal, Sleep Research Center, Hôpital du Sacré-Coeur de Montréal, 5400 boul. Gouin West, Montreal, QC H4J 1C5, Canada
e-mail: liza.solomonova@gmail.com

E. Frantova
Topological Media Lab, Department of Computer Science, Concordia University, Montreal, QC, Canada

T. Nielsen
Dream and Nightmare Laboratory, Psychiatry Department, University of Montreal, Sleep Research Center, Hôpital du Sacré-Coeur de Montréal, 5400 boul. Gouin West, Montreal, QC H4J 1C5, Canada

Keywords Felt presence · Sleep paralysis · The other · Intersubjectivity · Dwelling · Religious experiences · Self-estrangement

1 Introduction

Felt presence—the vivid sensation that someone or something animate is present in the vicinity of a person—is a common phenomenon that has received relatively little research attention. Felt presence can manifest itself in a variety of ways ranging from the most intense and realistic hallucinations, e.g., during sleep paralysis attacks or sensory deprivation, to the most subtle and fleeting sensations that "someone is there". In most situations, felt presence seems to have negative overtones, especially when the sensation is deceivingly realistic and is a part of sleep paralysis attack. Possible "visitors" frequently include demonic malevolent entities, aliens, ghosts, witches, stalkers, intruders in the home and more. However, felt presence can also manifest itself in positive ways, comforting and reassuring, such as in visions of a divine entity or a deceased relative.

Presences seem to be extremely important during childhood: toys are experienced as sentient, monsters are expected to hide in the closet or under the bed, imaginary friends follow, comfort and guide the child during moments of loneliness, distress or uncertainty. In adulthood, however, these entities normally disappear and are replaced by rational explanations of the world guided by conventional logic. Should the imaginary friends persist, should the monsters under the bed remain there, it is seen as pathological and delusional, and more negative and threatening than before.

There is no consistent body of literature, or even definition, of felt presence experiences. The phenomena seem

extremely elusive and hard to classify. Even susceptible individuals often have great difficulty in finding a correct vocabulary to adequately address the experiences in all their richness and complexity. Since felt presence is often experienced in apparent absence of identifiable stimuli in other modalities, such as visual, auditory or tactile, it can be extremely difficult to describe them linguistically without projecting extra qualities on their sensory phenomenology. Felt presence belongs to the domain of the subtle, of the emotional, of the imaginary rather than to that of the empirical and classifiable.

2 Main discussion

In the contemporary tradition of scientific reasoning, felt presence experiences are consistently referred to as hallucinations, and in some cases even as delusions (Cheyne and Girard 2007), and are studied only insofar as they are associated with particular neurological or psychiatric conditions, e.g., sleep paralysis or epileptic auras, and only if they cause individuals a significant level of distress. Consequently, only negative and intense experiences are typically assessed and are seen to be non-desirable, dysfunctional by-products of brain malfunction. Other felt presence manifestations are largely ignored, seen as belonging to popular or folk culture and viewed predominantly as atavistic remnants of superstitious and primitive worldview.

One controversial line of felt presence research is concerned with the vectorial hemisphericity hypothesis wherein the human brain is seen as "split" into two separate yet interconnected "selves". One resides in the left hemisphere and is related to the conscious sense of Self that is linguistically determined, rational, and logical. The other "self" is presumably located in the right hemisphere and is normally dormant and subordinated to the left hemisphere "self". The right hemisphere self is unconscious although active during conscious processes but falls outside of the domain of linguistic inner-dialog awareness. According to Todd Murphy, felt presence is experienced when "the right hemispheric sense of self falls out of phase with the left hemispheric self" (Murphy 1999). Michael Persinger's experiments suggest that it is possible to evoke felt presence through transcranial stimulation using weak magnetic fields applied to the temporal lobe of the right hemisphere (Persinger and Healey 2002). However, another team (Granqvist et al. 2005) failed to replicate his findings and argue that felt presence experiences that they observed were better predicted by suggestibility. In another experiment, however, stimulation of the left temporoparietal junction produced clear sensations of a felt presence which shadowed the person's body position and movements (Arzy et al. 2006).

Recently, there has been some movement toward conceptualizing felt presence as a basic phenomenon related to everyday social imagery experiences and which can become distorted and distressing in certain susceptible individuals (Nielsen 2007; Nielsen and Lara-Carrasco 2007; Solomonova et al. 2008). Some individuals demonstrate a particular vulnerability or capacity for experiencing felt presence not only in extreme circumstances but also in everyday life. For example, they may feel that there is an intruder in their home, may see faces in ambiguous objects, may feel that someone is watching or following them when it is not the case. A recent study has shown that in postpartum women, felt presence experiences often arise in dreams associated with nocturnal behaviors; such women frequently dream that their infants are in peril and start searching for them in the bed covers, or even wake up with an intense sensation that the infant is in the bed near her (Nielsen and Paquette 2007).

2.1 Numinous as a cornerstone of religious mysticism

In religious contexts, felt presence plays a crucial part in experiential understanding of the divine. In many religions, the divine presence is symbolically enacted/produced (for example during the sacrament of the Eucharist in the Christian tradition), and accounts of first-hand spontaneous encounters with the divine are numerous. These encounters are well documented in the writings of the mystics. There are also many records by believers dealing with intense feelings of presence, for example, the vivid presence of Jesus. To illustrate, in Quaker churches, the main premise of the service is the *literal*, meta-*physical* presence of God in the parishioners' immediate surroundings. In religious art, from the more symbolic representations of Byzantine icons to the more realistic trompe-l'oeil works of the early modern era, presence of the divine is evoked and embodied within the sacred spaces of devotional institutions. In Catholic Christianity, relics of the martyrs—which literally represent their *physical* presence—are of great importance; pilgrims come long distances to be in the presence of these sacred objects. Similarly, in many traditions of Hinduism, the deity *is present* in devotional images and objects; these are not representations of idols, but rather the divine is thought to actually inhabit the object. In some cases, the deities also manifest themselves through the believer; both oral tradition and contemporary anthropological research document cases of divine possession in Hinduist societies.

One could argue that religious experience could not exist without the felt presence. The divine may represent a quintessential felt presence phenomenon, a conception or a longing for the presence experience in the absence of an actual autobiographical incident. Whether one has actually felt the presence of the divine—or hopes to feel it—there

seems to exist this vital need, curiosity or desire to experience the divine in this primal fashion.

Rudolf Otto in his influential work *The Idea of the Holy* (1926) regarded felt presence of the divine as being at the root of all religious experience. He coined the term *numinous* to articulate this feeling as "objective and outside of self" (Otto 1926, 11). The numinous is an experience of the holy that is dependent more on the feeling and the inarticulate, non-verbalizable and non-rational sensation which is, nonetheless, quite apparent and recognizable in the context of religious experiences. Otto's *mysterium tremendum*—that which is mystical and awe-inspiring—exists as something which is "wholly other", "that which is quite beyond the sphere of the usual, the intelligible, and the familiar, which therefore falls quite outside the limits of the 'canny" (Otto 1926, 26). In this framework, religious experiences evoke the "Other", which is quite close to Freud's notion of the uncanny (Freud 1919): that which returns and imposes the gaze that which is simultaneously frightening, new and yet seems to be somehow familiar but long forgotten. Otto's numinous is devoid of rational and ethical qualities—it can be either positive or negative, divine or demonic, but the essential qualities of the numinous are that it has the elements of "daunting 'awefulness' and 'majesty'" and that it is always experienced as "something uniquely attractive and fascinating" (Otto 1926, 31).

In the *Varieties of Religious Experience* (1902), William James argues that religious conceptions are able to "touch… reality-feeling", to expand and provide grounds for the felt presence in one's everyday experience. "It is as if there were in the human consciousness *a sense of reality*, *a feeling of objective presence*, a *perception* of what we may call 'something there', more deep and more general than any of the special and particular 'senses' by which the current psychology supposes existent realities to be originally revealed" (James 1902, 66–67). After considering and describing numerous instances of felt presence phenomena, James concludes that "such cases (…) seem sufficiently to prove the existence in our mental reality of a sense of present reality more diffused and general than that which our special senses yield" (James 1902, 72). Although in his *Varieties* James disagrees with "medical materialism" and states that even if there are certain neurological underlying pathologies, (i.e., today conceptualized as known or suspected history of schizophrenia, epilepsy and so on), these still do not provide sufficient grounds for disregarding the value of mystical and religious experiences or revelations. Still, the felt presence experiences that he describes are considered as hallucinations, that is, perceptions, often erroneous, which have little or no basis in real life. However, even though he leaves the question of agency and source of such phenomena open, it is clear that James regards them as indispensable and important qualities of the human psyche, which play an important role in both development of cultural institutions and individual spiritual evolution. Religious experiences, of which felt presence is an integral part, are a natural expression of human existence: "Such is the human ontological imagination, and such is the convincingness of what it brings to birth" (James 1902, 83).

2.2 The other and psychoanalysis

Freud discusses this feeling as the *uncanny* that represents the 'double', an individual's projections of his/her own qualities (real, desired or feared) onto other people, fictional characters and even objects. For Freud, the uncanny stems from one's earliest childhood experiences. Its function evolves throughout life and represents the "unfulfilled but possible futures to which we still like to cling in *phantasy*, all the strivings of the ego which adverse external circumstances have crushed, and all our suppressed acts of volition which nourish in us the illusion of Free Will" (Freud 1919).

Both Freud and his disciple Otto Rank view this 'double' as an expression of one's desire for immortality wherein the idea of the eternal soul becomes the most prominent 'double' in the history of civilization. Rank's "immortal double", a "magic self" (Rank 1941, 102), is the basis for human creativity, a driving force to build, to create art, to ensure one's symbolic presence after physical death. Moreover, for Rank it is the supernatural, and not the rational and logical, that lies at the base of all human civilization and culture. That which lies outside of the limits of our immediate understanding, that which defies easy explanation creates culture that is "made up of things non-existent in nature" (Rank 1941, 63). The 'double' can take on many forms, referring not only to spontaneous and extrapersonal felt presences, but also to instances of depersonalization and multiple personality as in the case of *Dr. Jekyll and Mr. Hide*. The latter type of felt presence phenomenon is quite different from the former, spontaneous and ambiguous type that is the object of the present project, although it can be argued that depersonalization and multiple personality are more extreme and pathological instances of the same essential 'Other'. For the aims of the present paper, we will not discuss the dramatic out-of-body experiences or fully embodied 'doubles' that are endowed with particular qualities of a subject and are complementary to the subject's perceived self, similar to the *Portrait of Dorian Grey*. Here we will limit our discussion to the more subtle, ambiguous and basic felt presences that are so difficult to articulate.

In Jacques Lacan's psychodynamic theory, heavily influenced by Saussure's semiotics, the concept of the 'double' is expanded and represented as the Other (or the big Other) that organizes the symbolic order of the psyche

and provides a semiotic framework for understanding the self and others in a relational way. Lacan argues that the unconscious is organized as language, consisting of an infinite chain of signifiers in the absence of fixed signified; and essentially, the "unconscious us the discourse about the Other" (Lacan 1966, 814, p. 689). Homer writes that the Lacanian big Other "…is that absolute otherness that we cannot assimilate into our subjectivity […] it is also the discourse and desires of those around us, through which we internalize and inflect our own desire" (Homer 2005, 70). Thus, the Other becomes an organizing element of one's subjectivity and at the same time, paradoxically, of both intrapersonal and extrapersonal awareness and experience. The Other is a vehicle for both self-identification and self-estrangement, and also for one's desire: "as the Other's desire that man's desire takes shape, though at first only retaining subjective opacity in order to represent need in it" (Lacan 1966, 813, p. 689). Perhaps felt presence experiences represent the Other in a most literal, temporarily embodied, way. Perhaps they represent an essential quality of human intersubjectivity and capacity for empathy. How much of one's individuality is shaped by relations with others and how much does one borrow from others in order to construct one's own uniqueness? In Lacanian view: "The psychoanalytic subject—the subject of the unconscious—can only come into being through others and in relation to the Other" (Homer 2005, 71).

2.3 Sleep paralysis as a most salient and independent manifestation of felt presence

Sleep paralysis is a common benign phenomenon occurring during transitions between sleep and waking, i.e., during sleep onset or at sleep offset. It is characterized by a temporary inability to move and is often accompanied by vivid, fearful hallucinations. These hallucinations may be of any sensory modality: experients may hear demonic voices or electrical buzzing; they may see shadows and creatures in their room; they may feel a touch or pressure on their body that is sometimes so intense that it is interpreted as assault and even rape. Neurologically, sleep paralysis seems to be related to the state dissociation phenomenon, where elements of rapid eye movement (REM) sleep (or paradoxical sleep), associated with intense and emotional dreaming, intrude into wakefulness producing a particular and paradoxical reality. During these episodes, experients are usually aware of the surroundings, often can hear people or televisions on in the next room, yet cannot move and may have extremely intense hallucinations. The latter may become amplified by the fact that individuals are convinced that they are wide awake when they occur.

Felt presence is often experienced during sleep paralysis attacks and is arguably the most distressing and fearful element of the event. While in most cases the felt presence is just a fleeting sensation and lasts only a few seconds, sometimes they are extremely elaborate, panic provoking, even traumatizing. To illustrate, McNally and Clancy (2005) suggest that some cases of alleged recovered memories of sexual abuse or alien abduction may be readily explained as due to intense sleep paralysis episodes.

In the recent years, there has been considerable research on sleep paralysis hallucinations and their cultural interpretations. Sleep paralysis is consistently described by subjects as a spiritual experience and is at the root of some folk traditions. For instance, in Newfoundland, sleep paralysis is well known as the "Old Hag" phenomenon during which an individual is "hagged" or under a hag's curse. The phenomenon is so widespread and well known that an oral tradition exists concerning cures from and methods of prevention against "being hagged" (Hufford 1982). In Japan, the same phenomenon is known as *kanashibari*, a demonic entity, in Cambodia as *Khmaoch sângkât* or "the ghost that pushes you down" (Hinton et al. 2005); in African communities, as "being ridden by the witch" (Hall 1993); in Canadian Inuits, as *uqumangirniq* or *aqtuqsinniq* when the dreamer becomes vulnerable to the attacks of shamans or malevolent spirits (Law and Kirmayer 2005); in Ethiopia, as a *Zar* ghost that sits on the victim's chest (de Jong 2005); in the Carribean, as *kokma*; in the Philippines, as *hart nagarat* (de Jong 2005); and in China, as "ghost oppression" (Wing et al. 1994). Although cultural explanations of the nocturnal visitors are fairly different and detailed, the basic experience they all refer to seems highly similar.

Although the lifetime prevalence of sleep paralysis has been estimated to be approximately 40%, mainstream science and medicine pay surprisingly little attention to the phenomenon. This tendency persists despite the fact that more extreme and distressing episodes, such as being attacked by a demon or an alien, may lead to erroneous diagnoses of schizophrenia (Stores 1998).

2.4 Felt presence represented

The Other, that imperceptible elusive entity belonging to the world of the night and of strange environments populated with mythological beings, is possibly not only at the root of the religious mysticism and creativity but at the root of all expressions of human culture. The Freudian *uncanny* is an essential mechanism at work in artistic creation and in the contemplation of works of art and literature, enabling the spectator to partake in the act of creation and to establish a two-way interaction with the aesthetic object. Through the *uncanny*, an aesthetic object actively returns and imposes its gaze, changing the spectator's response and shaping his/her perception. The 'otherness' in a general

sense can be attributed to any writer or artist by definition, but there are numerous examples of depictions of more concrete and concentrated, explicit felt presence experiences.

Luis-Carlos Alvaro (2005) related several short stories by Maupassant about the latter's long-standing history of neurological problems. *Le Horla*, in particular, was related to nightmares and intense sleep paralysis episodes involving the spectrum of negative and threatening hallucinations including felt presence and tactile sensations of pressure, and which he interpreted as an assault. One description of the unwelcome nocturnal visitor goes as follows:

"I sleep—a long time—2 or 3 h perhaps—then a dream—no—a nightmare lays hold on me. I feel that I am in bed and asleep—I feel it and I know it—and I feel also that somebody is coming close to me, is looking at me, touching me, is getting on to my bed, is kneeling on my chest, is taking my neck between his hands and squeezing it—squeezing with all his might in order to strangle me.

I struggle, bound by that terrible powerlessness which paralyzes us in our dreams; I try to cry out—but I cannot; I want to move—I cannot; I try, with the most violent efforts and out of breath, to turn over and throw off this being which is crushing and suffocating me—I cannot!" (Maupassant, pp. 108–109).

This description of a nocturnal supernatural assault is familiar to someone who experiences recurrent and intense sleep paralysis episodes. The inability to move, feelings of being strangled, shallow breathing and especially the feeling of presence all convince the dreamer that a malevolent creature is nearby.

Among the most famous descriptions of sleep paralysis are Henri Fuseli's *Nightmare* paintings. The most well known of the series (1781) depicts a helpless sleeping woman with a demon sitting on her chest. Sensation of pressure on the chest and of being strangled or suffocated is among the most prevalent characteristics of sleep paralysis episodes (Cheyne et al. 1999). According to Harris (2004), *The Nightmare* was among the prints decorating the walls of Freud's apartment in Austria, and Ernest Jones, the famous Welsh psychoanalyst and neurologist, chose one of its versions to be on the cover of his book *On the Nightmare*. Originally, according to one account, the term nightmare in the English folk tradition referred to a nocturnal demon that assaulted its victims and caused bad dreams. A more intense and graphic depiction of the Incubus phenomenon, a malevolent nocturnal visitor, is *The Night-Hag Visiting Lapland Witches* (1796; Feingold 1982, 49).

A less intense but still quite obvious example of an everyday felt presence is found in Giorgio de Chirico's *Mystery and Melancholy of the Street* (1914). De Chirico's interest in the oneiric and the unconscious is well documented; his early work is consistently referred to as "dreamlike", and the artist himself explicitly stated his interest in dreams. In 1929, he published a dream-novel *Hebdomeros*. His early works are characterized by a predominance of empty streets, twilight illumination, "random" objects, and obscure characters. One could argue that de Chirico's empty cityscapes with ambiguous objects and strange lighting create ideal circumstances for the emergence of felt presence. *The Mystery and Melancholy of the Street* seems to evoke the uncanny, the basic presence phenomenon that fills one with anxiety, anticipation, and uncertainty. A silhouette of a running girl is contrasted with the static emptiness of the street while the shadow of a statue is almost menacing, evoking deep anxiety and suggesting a presence of someone in the space. It has been suggested that de Chirico suffered from temporal lobe epilepsy which is characterized, among other symptoms, by frequent "dreamy" states with a strong hallucinatory component (Blanke and Landis 2003).

In Velasquez' famous *Las Meninas*, a whole other type of 'otherness' that is even more subtle and elusive is depicted. Only after the beholder focuses and gets immersed in the pictorial space does the presence emerge. It is concealed within the mirror on the wall such that if one contemplates the painting from just the right angle—where the vantage point of the space is seamlessly integrated within one's view—does it become clear that the two reflected figures belong to the 'real' space outside of the frame, replacing or standing right beside the beholder.

2.5 General qualities and circumstances conductive for felt presence experiences

As Nielsen writes in a review of the felt presence phenomenon (Nielsen 2007), despite all dramatic differences in context and narrative qualities, there are some fundamental properties of the felt presence experience that are shared among its manifestations.

First, felt presences are always *apparent*, that is, the sensation is always recognizable and independent of whether other cues are available. Often other ambiguous visual, auditory or tactile hallucinations or subtle sensations are interpreted in relation and in subordination to the presence. Thus, people may hear subtle, ambiguous sounds, often just above the threshold of detection, or they may see strange shadows or obscure shapes. But only in association with the feeling of presence do these stimuli take shape and become more meaningful than they are in reality; in combination they create a more coherent whole. In case of the more intense experiences, where presences are embodied and experienced as almost real, the other cues are probably completely overpowered and are not even perceived. Second, the presences are *localized* in space in relation to the experient. More often than not, the felt

presence is experienced on the periphery of awareness, at the place where mental and physical effort is required to direct one's attention. Third, the presences have some sort of *intentionality*, they exist in a particular relation to the subject—be it in a positive and comforting way as in the cases of divine apparitions, or in a threatening and menacing way as in intense sleep paralysis experiences. Most presence experiences are negative in their emotional intention. The most immediate reaction, which can fall just below the awareness threshold, is almost invariably fear or startle. We can add to this another important quality of felt presence experiences: that they are *spontaneous*, that is, their appearance is non-volitional and sudden. As Leube describes some of his early experiments to evoke felt presence in *Psychology of Religious Mysticism*: "if the presence appeared at all, it came unexpectedly, after [our subjects] had ceased to visualize or otherwise to realize it" (Leube, 285). It should nonetheless be kept in mind that there are individuals who are more prone to these experiences than others and there are conditions under which felt presence episodes are more likely to happen than others. If felt presence experiences belong to some "other reality" or to some sort of altered state of consciousness, the first link that comes to mind is sleep: they never appear when one is concentrated on forcing an occurrence, but rather happen when one's mind is elsewhere and surrendering to the present moment.

There seem to be at least two types of environments that facilitate the appearance of the felt presence. These environments are, however, inseparable from particular mental states with which they are associated. The first type is the extreme environment in which an individual is under some unusual stress, for example, high altitude mountain climbing, sensory deprivation, or solitary sailing. The subjective stress may be a direct product of how an individual copes with the environmental pressure, or might be generated from within, e.g., as a result of a neurological condition. Suedfeld and Mocellin (1987) describe some of the extreme circumstances that evoke intense felt presence experiences. They also discuss felt presence experiences in light of Julian Jaynes' bicamerality hypothesis and propose that these phenomena constitute an important adaptive mechanism of the human mind. They claim that felt presence experiences should be de-mystified and removed from the domains of religion and psychopathology in order to be accepted as a normal way of coping. The second type of presence-inducing environment is conductive to more subtle, everyday felt presence experiences, the type that often goes unnoticed. Dark alleys, dimly lit rooms, objects of ambiguous shape or simply being alone at home are often sufficient to produce fleeting but startling sensations that "someone is there", that an intruder is in the house, or that someone is watching or following the individual. As is in case of sleep paralysis experiences or intense religious, visions related to a neurological condition, moments of transition, the liminal, "fringe" states of consciousness seem to play an important role in enhancing an individual's awareness of the Other, or of "another" reality.

2.6 Dwelling and presence

Some environments seem to be more conductive and more linked to felt presence experiences than others. Sacred spaces, or places where the divine are thought to dwell, are endowed with this capability, in both theological, culturally dependent and in tacit, almost imperceptible ways. Both religious and non-religious individuals are attracted to built sacred places of worship, places linked to religious traditions, places where divine messengers were thought to have preached, places where revelations were experienced, or places where influential individuals were born or died. Places of birth and death of important others are seen as particularly potent. Cemeteries, for instance, seem to hold an uncanny fascination in addition to uncanny felt presence. Religious and folk traditions are formed around such places of transition between the physical life and the afterlife. They revolve around religious conceptions of hope and peace and the supernatural.

Presence of the divine is intrinsically linked to the notion of *dwelling*, of inhabiting in spatial terms and also in being *within*. This notion implies some enclosed area, some finiteness of the space which acts as a vessel for and is enabling *dwelling*. A sacred built space can be seen as a dwelling space for the divine. The Hebrew word *shechinah* denotes dwelling or settling but also translates as *presence of God*. It is of particular importance in describing the idea of God's presence in the Temple of Jerusalem. However, even in the absence of the Temple, the presence does not disappear, it stays with the believers, it denotes a creative and inspirational force. Architectural and aesthetic decisions related to building sacred spaces are interlinked to and dependent on theological and mystical traditions. Not only do decorative elements evoke religious symbols, but the whole of the building is related to the perception of the divine. It is oriented toward creating and stimulating experiences of presence in those it shelters.

Another, more immediate type of space that calls up experiences of felt presence consists of places where people dwell, i.e., where they live everyday. An experience of entering someone's house containing objects arranged in ways their owner intended can lead to a distributed but clear sense that the person is actually there without actually being there. Used furniture and personal objects have a tangible capacity for producing the uncanny feeling that someone has been there, has left a gestural imprint on them.

In *Building, Dwelling, Thinking* (1971) Heidegger relates the Old English and High German words *building* and *bauen* to *dwelling*, though this original meaning of the terms has been largely lost to current Western world generations. To build is to dwell, to dwell is the only way that humanity can experience living. To dwell, according to Heidegger, is to exist in harmony with the fourfold of the divine, and it is through dwelling that "mortals… preserve the fourfold in its essential being, its *presencing*". For Bachelard, the house represents the universe of subjectivity. Homes are built for sheltering, protecting and especially for preserving and enacting one's personal and collective identity through dreaming and daydreaming. Any place that becomes a place of dwelling becomes home in its essence. There is a reciprocal relation and co-creation of meaning between the dweller and the home: "the sheltered being gives perceptible limits to its shelter. He experiences the house in its reality and in its virtuality, by means of thoughts and dreams" (Bachelard 1958, p. 5). Even though in its essence, home is made for dreaming, it "protects the dreamer", it "allows one to dream in peace" (Bachelard 1958, p. 6). Sometimes the safe space can become a battlefield, where nightmares and sleep paralysis attacks come to the surface and transform it. When one is alone at home, the slightest noise can provoke an impression that there is an intruder. Do we lose our guard when we are at home? Does the impression of being sheltered and protected from outside dangers provoke inner demons to resurface?

3 Conclusions

We argue that felt presence constitutes a basic phenomenon which is at the center of the interplay between intersubjective and intrasubjective self-expression. Felt presence can be seen as a cornerstone of religious and spiritual experiences, of creativity and of one's self-identity in relation to others. There are a multitude of possible presence phenomena, subtle and extreme, menacing and comforting, but perhaps at the core of all of them there is a basic sensibility or vulnerability to such experiences. Is it possible to create a right combination of elements to facilitate its appearance? What is a function of space in creating such conditions? Is it possible that felt presences animate space, make it more liturgical and, perhaps, sacred? Or do these phenomena bring the mystical into the mundane and animate our everyday existence?

In the accompanying paper by Elena Frantova, we present a description of an experiment in which we attempt to integrate our interest and curiosity about the felt presence phenomena with the richness of the possibilities provided by the media technology. We describe how we blended an aesthetic immersive installation with a well-controlled experimental space for the empirical study of the felt presence. We further discuss the uses and implications of felt presence phenomena in the domains of performance, theater and emergent new media technologies. Using the narratives collected from various felt presence descriptions, especially sleep paralysis episodes, we created a space for an individual experience which would be open for interpretation and conductive for spontaneous felt presence emergence.

Acknowledgments the authors wish to thank Sha Xin Wei, Timoth Sutton, and Philippe Stenstrom for their invaluable help.

References

Alvaro LC (2005) Hallucinations and pathological visual perceptions in Maupassant's fantastical short stories—a neurological approach. J Hist Neurosci 14:100–115

Arzy S, Seeck M, Ortique S, Spinelli L, Blanke O (2006) Induction of an illusory shadowy person. Nature 443:287

Bachelard G (1958) The poetics of space. Beacon Press, Boston, (1994)

Blanke O, Landis T (2003) The metaphysical art of Giorgio de Chirico, Migraine or Epilepsy? Eur Neurol 50:191–194

Cheyne JA, Girard TA (2007) Paranoid delusions and threatening hallucinations: a prospective study of sleep paralysis experiences. Consciousness and Cognition, doi:10.1016/j.concog.2007.01.002

Cheyne JA, Rueffer SD, Newby-Clark IR (1999) Hypnagogic and hypnopompic hallucinations during sleep paralysis: neurological and cultural construction of the night-mare. Conscious Cong 8:319–337

de Jong VT (2005) Cultural variation in the clinical presentation of sleep paralysis. Transcult Psychiatry 42:78–92

Feingold L (1982) Fuseli. Another nightmare: the night-hag visiting Lapland witches. Metrop Mus J 17:49–61

Freud S (1919) The uncanny. Penguin Classics, 2003

Granqvist P, Fredrikson M, Unge P, Hagenfeldt A, Valind S, Larhammar D et al (2005) Sensed presence and mystical experiences are predicted by suggestibility, not by the application of transcranial weak complex magnetic fields. Neurosci Lett 379:1–6

Hall FL (1993) Unique panic disorder presentation: 'ridden by the witch'. Clin Psychiatry News, p 13

Harris J (2004) The nightmare. Arch Gen Psychiatry 61:439–440

Heidegger M (1971) Building, dwelling, thinking http://pratt.edu/~arch543p/readings/Heidegger.html. Retrieved on 3 June 2009

Hinton DE, Pich V, Chhean D, Pollack MH, McNally RJ (2005) Sleep paralysis among Cambodian refugees: association with PTSD diagnosis and severity. Depress Anxiety 22:47–51

Homer S (2005) Jacques lacan. Routledge, London

Hufford DJ (1982) The terror that comes in the night: an experience-centered study of supernatural assault traditions. University of Pennsylvania Press, Philadelphia

James W (1902) The varieties of religious experience: a study in human nature. The Modern Library, New York (1994)

Lacan J (1966) Écrits. W.W. Norton and Company, New York (2006)

Law S, Kirmayer LJ (2005) Inuit interpretations of sleep paralysis. Transcult Psychiatry 42:93–112

McNally RJ, Clancy SA (2005) Sleep paralysis, sexual abuse and space alien abduction. Transcult Psychiatry 42:113–122

Murphy T (1999) The sensed presence and vectorial hemisphericity. http://www.shaktitechnology.com/sp.htm Retrieved on June 3, 2009

Nielsen TA (2007) Felt presence: paranoid delusion or hallucinatory social imagery? Conscious Cogn (in press)

Nielsen TA, Lara-Carrasco J (2007) Nightmares, dreaming and emotion regulation: a review. In: Barrett D, McNamara P (eds) The new science of dreams. Praeger Greenwood, Westport

Nielsen T, Paquette T (2007) Dream-associated behaviours affecting pregnant and postpartum women. Sleep 30:1162–1169

Otto R (1926) The idea of the holy: an inquiry into the non rational factor in the idea of the divine. Kessinger Publishing, Whitefish, 2004

Persinger MA, Healey F (2002) Experimental facilitation of the sensed presence: possible intercalation between the hemispheres induced by complex magnetic fields. J Nerv Ment Dis 190:533–541

Rank O (1941) Beyond psychology. Courier Dover Publications (1958)

Solomonova E, Nielsen T, Stenstrom P, Simard V, Frantova E, Donderi D (2008) Sensed presence as a correlate of sleep paralysis distress, social anxiety and waking state social imagery. Conscious Cogn 17:49–63

Stores G (1998) Sleep paralysis and hallucinosis. Behav Neurol 11:109–112

Suedfeld P, Mocellin J (1987) The "sensed presence" in unusual environments. Environ Behav 19:33–52

Wing YK, Lee ST, Chen CN (1994) Sleep paralysis in Chinese: ghost oppression phenomenon in Hong Kong. Sleep 17:609–613

AI & Soc (2011) 26:179–186
DOI 10.1007/s00146-010-0300-8

ORIGINAL ARTICLE

Extra-personal awareness through the media-rich environment

Elena Frantova · Elizaveta Solomonova · Timothy Sutton

Received: 1 January 2008 / Accepted: 13 August 2010 / Published online: 8 October 2010

Abstract The richness and subtlety of the felt presence phenomenon introduced by "Felt Presence: the uncanny encounters with the numinous Other" (Solomonova et al., this issue) offers a challenge to the emerging field of new media. How to create a computer-mediated environment which can engender a spontaneous, creative, and individualized experience such as felt presence? The Other experiment described in this paper explores the possibility of unfolding phenomenological and poetic aura of felt presence experience in a media-rich environment with liminal stimulation, dosed carefully, and open to interpretation.

Keywords Felt presence · Immersion · Soft architecture

1 Introduction

The article "Felt Presence: the uncanny encounters with the numinous Other" (Solomonova et al., this issue) suggests that in order to explore the felt presence phenomenon in all its richness and subtlety, it is necessary to develop a method which is as flexible and nuanced as the experiences themselves. Felt presence is spontaneous, elusive, fleeting, at the edge of one's consciousness. One of the ways felt presence can be evoked experimentally is by subliminal preparation to perceiving it. On occasions when felt presence was observed in laboratory conditions, the experience of felt presence has nearly always been preceded by some experience altering the state of mind, such as meditation, sensory-deprivation or drug intake. Some kind of shift from ordinary perception to perception beyond the ordinary, an awareness of an other reality, appears to be a prerequisite for felt presence to arise.

One can argue that it is not possible to experience other reality without a feeling of being present elsewhere or immersed. In the context of a felt presence experience, unlike theatrical performance, immersion does not imply imagining a different fictional space but rather being spatially aware to the extent that other, normally, unreal aspects of the space begin to manifest themselves. Immersion leading to felt presence involves crossing the border between normal and extra-acute individual awareness of the space and the self; possible in transitional situations, under bizarre or unusual circumstances when the environmental cues are subtle and call for multiple interpretations.

A pre-Christian precursor of the modern Halloween, the ancient Celtic festival of Samhain, makes use of such circumstances in a metaphorical way. "Standing between the two halves of the Celtic year, Samhain seemed suspended in time, when the borders between the natural and the supernatural dissolve and the spirits from the Otherworld might move freely into the realm of mortals" (MacKillop 1998, "Samhain"). In the realm of Otherworld, the music never ceases, but normally it cannot be heard by the mortals. Only on the day of Samhain, if the place is right, supernatural music from the Otherworld can to be heard

E. Frantova (✉)
Department of Computer Science, Topological Media Lab,
Concordia University, Montreal, QC, Canada
e-mail: elena.frantova@gmail.com

E. Solomonova
Psychology Department, Dream and Nightmare Laboratory,
University of Montreal, Montreal, QC, Canada
e-mail: liza.solomonova@gmail.com

T. Sutton
Topological Media Lab, Concordia University,
Montreal, QC, Canada
e-mail: timsutton@fastmail.com

by anyone. In this way, liminal temporal and spacial circumstances allow one to transcend the boundary of the Otherworld (Ralls-MacLeod 2000, 142). Experience of felt presence allures one into the world beyond the surface of ordinary perception, often sensed non-visually in one's surroundings.

2 Immersion through enchantment, intensity, suggestivity, and uncertainty

Any performance can then be seen as a transient event, a mini-Samhain festival, where the borders between the objective reality of the spectator and the world of make-believe performance become blurred. It is significant that the Otherworld is perceived as music: in various world traditions, music is often believed to reveal the unseen, for being neither seen nor touched it has a great power of enchantment (Godwin 1988). This revelatory power is often attributed to both the music and the performer as its vessel.

It is through both the symbolic contact with the performer and physical coexistence with him in the same space, that the spectator is allured into the imaginary world of the piece. The greater the performer's magnetism, the more unique and engaging the performance. Performers in theater, music, and dance are remembered for centuries for their extraordinary talent to enchant. The performance as it is understood by Peter Brook has even a closer relation to the Samhain festival. Holy theater presented in The Empty Space is a theater where the invisible is made visible. Such theater has not only a dramaturgical goal of telling a story to a spectator but a greater ambition of unveiling "the reality deeper than the fullest form of everyday life" (Brook 1996, 44) and alchemically transforming one's psyche. In the Holy theater, the actor is possessed by the presence of invisible, and through his own physical presence, felt by the spectator, the invisible can be released. The theater becomes a ritual in which an actor is an embodiment of the invisible: a prophet, an oracle or a priest through whom the Otherworld talks, becomes apparent and experienced. When subjected to felt presence, one becomes simultaneously an agent and a subject of his own experience; one can actively participate in its narrative and critically observe it.

One may think that enchantment is a fragile material, difficult to seize, and even more difficult to retain; what if something less volatile creates and sustains immersive experience? In this manner, while some researchers, with Brook, look for the source of the immersive power in the depth of actor's psyche, others place the actors' presence on the same plane as stage design, lighting, music, and visual composition. On one end, there is Grotowski's minimalist "poor theater", which seeks to throw off everything that does not pertain to the essence of theater and concentrates entirely on the actor–audience relationship (Grotowski 1968, 19–21). On the other end, we have Wagnerian idea of total art, Gesumtkunstwerk, which calls for the union of all forms of art, drama, plastic art, dance, and music (Wagner 1993 (1849)). The power of this formula lies in its intensity: simultaneous involvement of the spectator's multiple sensory channels. The technology of virtual reality (VR) relies on this immersion through intensity to create experiences of different realities beyond the context of the theater.

Virtual reality usually refers to the computer-generated virtual world and a set of wearable gadgets (a head-mounted display or stationary monitor, wired gloves, etc.) that provide a user with an interface and enable interaction with a virtual world. Movements of the participant are mapped to those of an avatar in the virtual world. One becomes immersed not only because the sensory data from the actual environment is replaced with artificial computer-generated data but also because one has to actively physically interact with the world and learn how to navigate it. In VR experiments, the experience is scrupulously prescribed, the actions are unambiguously mapped, and senses are overflown with information. In such an environment, the possibility of an individualized, spontaneous experience is hardly possible. There exists a dual relationship between a sense of presence in virtual reality and felt presence. The first is contingent on the diversion of attention from the real stimuli in the individual's immediate surroundings. This way, paradoxically, the more one is absent from the real world, the more one is present in the virtual one. Felt presence, on the other hand, is dependent on the grounded awareness of all sensory data, however, subtle and ambiguous, that exists in the environment.

Immersion in virtual reality environments does not have the ease and organicity of the theatrical or musical immersion through enchantment. If for successful theatrical performance, immersion is a natural by-product, it is an ultimate goal in the context of the virtual reality. It is probably the realization of the lack of naturalness in pure immersion by intensity that leads to the less straightforward experiments in VR, such as CAVE VR (Cruz-Neira et al. 1993). CAVE VR is an early VR experiment based on interplay between the real and the virtual, alluding to Plato's Cave. The interplay is achieved through the use of real environment with projections on the floor, walls, and ceiling, surrounding the participant completely, as opposed to using a head-mounted display, binocular omni-oriented monitor, or some other type of wearable display. This way the participant wears only stereo glasses and can freely move inside the room. Essentially, CAVE is just an alternative VR interface, not a radically changing intensity approach that seeks to override the participants' senses with artificial data.

Paradoxically, some of the most immersive caves in the history of humanity appeared as early as during the Paleolithic era. The primitive paintings of the animals on the coarse rocks in the famous Lascaux caves can be brought to life with the flickering of the fire (Sandars 1985, 55). Although the function of these paintings is largely unknown and is strongly debated, it is clear that the uncanny atmosphere of the cave can shelter experience with potential comparable to that of theatrical performance. It has been noted that acoustic qualities of the caves influenced the types of animals depicted in it: for instance, pictures of bulls, bisons, and deers are more likely to be found in the spaces wherein "acoustics created percussive sounds, similar to the hoofbeats of a stampeding herd" (Blesser and Salter 2006, 74). This way, the paleolithic artists would symbolically invoke the animal presence. Rather than explicitly representing, the mysterious figures showing through the darkness hypnotize and unleash imagination.

A direct extension of the cave experience is shadow theater performance, where stories are animated with the shadows of ornate figures moving against illuminated screens. The mood of the performance is of utmost importance and is created by details, textures, and "density of context" (Sears 1989). Such performances sometimes last for hours, but despite their extremely abstract representations of the story, can immerse the audience for such durations. For instance, Javanese tradition known as ruwanat is not only a popular entertainment but also an act of exorcism. Gods are believed to descend on earth and inhabit the characters and the puppeteer to take part in the performance and effectuate an exorcism (Sears 1989).

In both the Lascaux caves and Javanese shadow theater, no believable physical presence is facilitating the experience, there is no realistic 3D graphics visualization, and yet they capture one's conscious in a firm, yet noninvasive manner. They realize what can be called immersion by suggestion. Such immersion is loose; its strength is in its ability to leave room for imaginative speculations. Brook also acknowledges its power when he says that "invisible cannot be seen automatically" (Brook 1996, 56). He thus admits that highly individual experience cannot be inserted directly in one's mind, however, conditions for such experience can be offered. In case of the experience of felt presence, immersion by suggestion plays a role in the bridge between the real and the imaginary. But, it is only through the moment of uncertainty that this bridge is actually crossed, and the experience is realized.

Javanese ruwanat performance is not only suggestive in how it presents the story but also it incorporates an element of self-awareness. This way, the person being exorcised is simultaneously a spectator and a character in the performance. It seems that self-awareness, self-reference, and uncertainty naturally intensify and fulfill each other. The classical example of immersion based on uncertainty is Samuel Beckett's absurd play Waiting for Godot. The starting point of the play is performers' occupancy of the stage without knowledge of their purpose in being there. As they become progressively bored, the performance act itself starts to evolve as a subject of the play and forms atmosphere of anticipation of action with no action actually taking place. Actors make no effort to beckon the audience into any imaginary world and thus the only thing that keeps the audience, abandoned by the performers, connected to the play are uncertainty and doubts in reflections about the whole purpose of the play and in hopes that the long-expected arrival of Godot will finally happen and the real performance will finally take place (Hayman 1979, 7–8). Being in doubt about the experience is a reliable way of making someone self-conscious. But doubt needs space.

Essentially, an environment conducive to a felt presence experience would intertwine all four ways of immersion that have been discussed. Immersion by enchantment would set up the uncanny atmosphere of the experiment. Immersion by intensity would not assign experience, as in virtual reality, but suggest possible experiences, quietly, ambiguously through the density of the media content. Instead of excessive verbal and visual descriptions, ambiguous triggers would set the mood of an environment and fine-tune the perception of an individual to a modality in which imagination "fills in the blanks", thus realizing its immersion by suggestion. Immersion by uncertainty, the deceptive ambiguity of the environment, would push one to ponder on it and develop a particular awareness. The resulting experimental environment would be a mild form of mind-altering experience, intimate and self-aware.

3 Dwelling and felt presence

> Whenever the human being has found a slightest shelter: we shall see the imagination build "walls" of impalpable shadows, comfort itself with the illusion of protection.
> The Poetics of Space, Gaston Bachelard

To experience felt presence is to allow, consciously or unconsciously, other realities into one's mind. In its mundane everyday form, felt presence experience emerges from simultaneous awareness of the possibility of someone or something animate being present in the vicinity of the person and perhaps a failure to provide a sound explanation. For some, this situation triggers general feelings of fear and anxiety for others, genuine wonder about the sources of such phenomena. Experience of felt presence calls for an active involvement with it and for an active

relationship with it: it is often too empowering to be neutral. Nielsen (2007) brings it out as intentionality, inherent to all felt presence experiences. And since felt presence experiences are usually perceived as belonging to the space from which they originate, shaping of this intentionality is greatly influenced by the space. Solomonova (this issue) mentions that some places are more conducive to felt presence experiences than others. Unsurprisingly, these are often the places of great mystical significance: sites of pilgrimage, biographical places of the divine messengers, cemeteries, etc. Even everyday places, neutral at the first glance, are not devoid of intentionality.

Thoughts and objects unfold within particular space with new colors and meanings; they form contexts for our experiences. In this way, we choose places for inspiration and to avoid unpleasant thoughts, places to socialize or comfort us. We arrange places to make them more comfortable for us to dwell in, we make them "our own". We physically shape our dwellings in the image of our own consciousness. This close interconnection is shown by Rybczynski (1987, 35–36): the word self-esteem enters English language with the emergence of private space in the lives of the people. This relationship is also reflective: for once integrated into the physicality of the space, it starts to reflect back on us. Manifestation of this process can be seen in daydreaming, integrating subjectivity into the dwelling, seen by Bachelard in The Poetics of Space (1969 (1958)) as our main activity within personal spaces. By choosing and shaping places, we define our territory of dwelling. Yet there are territories where others dwell, where we come as guests.

Entering someone's dwelling has an immediate feeling, as if we are intruding into the intimacy of someone's life, and it is a way to learn something very personal about someone without actually interacting with the host. Through the manner in which furniture is arranged and objects are scattered around the house, we find ways to relate to the host personally, what we can call experience of intentionality. This way, "mummified" apartments and houses of the famous people, apartment-museums, offer an opportunity to alternatively encounter their hosts. It seems inevitable that some intangible essence of the host's character will shine through the physical arrangement of the dwelling, make him or her present. Edgar Allan Poe's character in the The Fall of the House of Usher acknowledges the morbid aura of the house, "[B]eyond doubt, there are combinations of very simple natural objects which have the power of thus affecting us, still the analysis of this power lies among considerations beyond our depth" (Poe 2004, 49–50). Above all, these are possibly the daydreams that are revealed through the dwelling.

These daydreams encompass desires, hopes, fears, knowledge, beliefs, and doubts. Daydreaming is enclosed between what Bachelard describes as the verticality of the house image: moving from the dark unconscious cellar, representing the questions that cannot be answered and upwards to the attic light and quick with rationalization. "In the attic, the day's experience can always efface the fears of the night. In the cellar, darkness prevails both day and night, and even when we are carrying a lighted candle, we see shadows dancing on the dark wall" (Bachelard 1969 (1958), 19). Similarly, felt presence also occurs between extremes: uncontrollable fear and rationalization, wakefulness and dream, "objective" reality of one's existence, and potential for synchronicity with an unknown world. It is its inherent quality to wander along the borderlines, suspend in air, leave unresolved.

Dwelling embraces the interplay between self and the other. On one hand, dwelling is a space we inhibit and appropriate, we project ourselves onto it and through it we grow our daydreams. No matter how much we try to adjust dwellings to ourselves, it is never free from "others". Others quietly lurk through the daydreams or intensely invade during the sleep paralysis episodes. On the other hand, we are curious to become present among "others" by exploring dwellings. This uncanny curiosity has a steady hold on human imagination and is well illustrated in folktales and literary works.

A most paradoxical interplay between self and the other, 'my' dwelling and 'others' dwelling, is illustrated in Henry James's phantasmagoric story Jolly Corner (1908), James (1935). The main character of the story comes to the abandoned house of his childhood seeking to encounter his alter ego, his double, which he is convinced, inhibits it. He simultaneously searches for himself and the "other" in his house which at the same time remains his own (from his childhood) and is already belonging to others (abandoned, not inhabited any more). In the classic folktale, little Goldilocks comforts herself in the house of Three Bears, relating to the space through the territory of the little bear host, perfectly matching her size and needs.

However, others' dwelling is a source of mystery, and the desire to explore it is of an absolutely irrational nature. Lewis Carrol's Alice in Wonderland (1865), Carrol (1992) is an exhaustive illustration of an irresistible temptation to explore. Gilbert Keith Chesterton's The house of the peacock (1929), Chesterton (1955) detective Gabriel Gale, talented with unusual intuition for mischief, intrudes into someone's house with no apparent reason and through examining it, discovers the conspiracy. The very same curiosity may be the force that brings us to the theaters and concert halls. And in the case of performance, the darkness separating our world from the world of the stage has an effect of a catalyst for this curiosity. It construes our world according to a given dimensions, while making others unavailable (Mills 2005). Bachelard (1969 (1958)) brings

out the image of the lighthouse in the dark as one of the most powerful poetic images: "We are hypnotized by solitude, hypnotized by the gaze of the solitary house; and the tie that binds us to it is so strong that we begin to dream of nothing but a solitary house in the night" (Bachelard 1969 (1958), 36–37). It is only in the darkness that the lighthouse can have such an effect on us.

4 The Other: through sleep paralysis

The Other was constructed around the metaphor of sleep paralysis (a detailed description of the phenomenon is introduced by Solomonova (this issue)). Sleep paralysis is liminal: it traverses the margin between wakefulness and dream. It is also the most striking and the most "home-belonging" of all felt presence experiences. One is subjected to an intense feeling of someone's presence in his or her vicinity, and hallucinations of various modalities in combination with the transient inability to move. As if, continuing in the Bachelardian line of imagery, creatures herded by our consciousness to the cellar are suddenly released to seek revenge. A sleep paralysis experience is shocking for it is perceived with waking consciousness and appears as something that happens in reality, rather than being dreamt.

"I was awakened at approximately 3:30 a.m. by the sound of my apartment door slamming shut. This could not have happened because, as I said, I always lock and bolt the door before I go to bed. So, this woke me up… My friend, Steve, was asleep at my apartment, on the floor, on the other side of my coffee table. I was lying on my right with my back to him. Though I could not move to look over and see if he was there, I could hear him breathing deeply kind of softly snoring. I was really afraid because of the awful sense of presence that was there. This sense of presence is much more intense than, say, knowing that Steve was there…. I couldn't see "it" partly because I couldn't move my head around and look but I could sense it moving around the room we were in (Hufford 2005)".

The vocabulary of sleep paralysis is consistent with respect to the kinds of auditory, visual and tactile stimuli, and particular spatiality of the felt presence sensations. Sensory stimuli form a bridge from the actual environment to the imaginary dimension of the "other", just as the stimuli originating from the surroundings are indistinguishable from the events of the "dream". In the excerpt above, sleep paralysis emerges at the threshold between reality of the surroundings (friend's breathing) and the nightmarish world of the "other" (door slamming shut), menacing and unexplainable for the conscious mind. Once fully experienced, sleep paralysis becomes part of the dwelling's daydreams.

The Other experimental space symbolizes the dwelling place where virtual hosts are to be indirectly encountered (Fig. 1). In the corner of the laboratory, the two walls were made of semi-translucent fabric (see Fig. 2) which in the darkness gave it a particular glowing quality. When the participant passed through a small corridor in front of the laboratory space (see 'Hallway' on Fig. 1) and alone looked for the "orange armchair in the room" (according to the only instruction given) in the unlit and almost empty

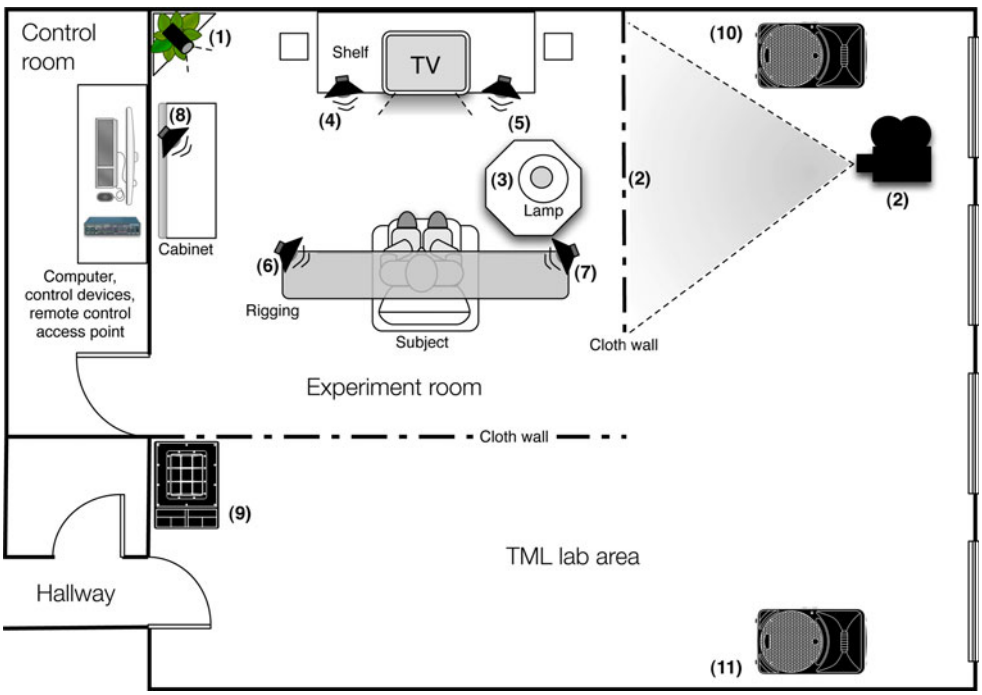

Fig. 1 The Other: experimentation space diagram. Topological Media Lab (TML), building of Engineering/Fine Arts at Concordia University, Montreal, Canada. (*1*) Hidden camera, (*2*) video projector, (*3*) table lamp controlled by light dimmer, (*4*)–(*8*) speakers inside the experimentation space, (*9*)–(*11*) speakers outside the experimentation space

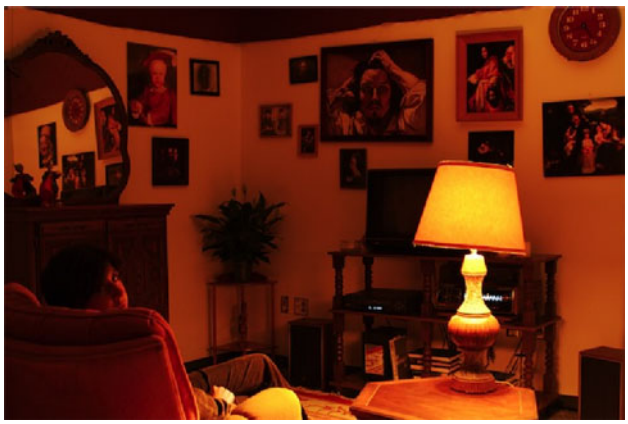

Fig. 2 The Other space during the experimentation

laboratory space, they would perceive the room as the lighthouse and the only possible shelter in the space. Inside, it had an appearance of the living room, carefully domesticated in contrast to the sterile and office-like space of the laboratory and the rest of the building (see Fig. 3). The armchair and softly dimmed light of the wood-covered statuesque table lamp formed the center of the space chosen for participants to sit down for the experiment. The interior of the room seemed ordinary at first glance: a TV set playing a ballet with muted sound, a cabinet, and shelves. Hidden was the allusion to the short spontaneous nap which commonly results in sleep paralysis incidents and sitting in the armchair in front of flashing TV with the sound muted is often what one remembers last before falling asleep.

The decorative abundance of the space was far from ordinary: statuettes, fantastic masks, and above all: several dozen framed portraits. Obsessively suggesting self and other in the Freudian and Lacanian sense (see Solomonova, this issue), the portraits by artists from different epochs and schools, stressed the grotesqueness of the space: its simultaneously horrifying and comic aspect. What first appears as exaggerated and comic may not look the same after a few minutes. The experience of being surrounded by gazes from everywhere, the flickering of the TV, hearing quiet sounds of wind chimes and beads drifting in the air, and not being able to apprehend the space in its wholeness, after a short while can become overwhelming to the extent of being almost paralyzing. In this effect, another hidden reference to sleep paralysis again shows through.

These are some descriptions of the space by participants: "I had a feeling that I was a child at home in front of a TV, alone, and I'm waiting for my parents to come home, and I'm afraid that someone is hiding in the room"; "An old house, maybe a house with ghosts (like a grand-parents' house). But very comfortable."; "Creepy old man's room"; "That was a very creepy experience. As soon as I sat down I wanted to leave. The desire to leave the room grew more and more intense throughout the experience. The 'segments' felt extremely long. I had to do some breathing to remain calm. The painting on the top left of the television was really creepy and I found it hard not to look at it. That painting alone would give me nightmare"; "I felt as if I was in a stranger's living room, in a different era"; "a weird dream".

Daydreams of the dwelling, intensified by the hidden references to sleep paralysis and familiar phenomenological landscapes, outline the subliminal level of the experimentation space. They breathe life into the experimentation space and charge it with potential to evoke thoughts and images. Once the space starts to radiate an uncanny energy, the meaning of every rustle and jet of air starts to revolve around it. This subliminal level creates a framing of the experiment without which enchantment is not possible. However, it needs to be delegated through the objects on the surface level its physical form and media content which have an immediate contact with the participant.

One of the preferred children's games is telling ghost stories. Through telling each other frightening stories, they engage in an uncanny way of anticipating and experiencing

Fig. 3 The Other: work in progress. Inside, before portraits are in place (*on the left*). Outside (*on the right*)

felt presence. The stories transform the intentionality of the space, suggesting a different dimension. "The Other", too, tells ghost stories a-linguistically through the injection of various visual, sonic, and kinetic events. Extracted from the descriptions of sleep paralyses episodes, these events transfer the ambiguity of the sleep paralysis perception onto the experimentation environment. The world of "the other" enters the experimentation environment through hidden speakers, a light dimmer, and a projector (see Fig. 1). However, not to cross the border between ambiguous environment and a "horror room", events are kept subtle, almost below the threshold of conscious awareness, and their interpretation is open to the participant.

The space is puppeteered with two types of events: those already happening in the space and those which have the potential to happen. The density of the interior gives us plenty of possibilities to indistinguishably mingle media events into the existing mediascape of the environment. As in real puppet theater, where inanimate objects begin to talk and tell stories through the actors' play, the experimentation space comes alive with the digitally triggered media events (Fig. 4). The naturally occurring events, observed and recorded inside this space, such as the cracking of the armchair, the sounds of the VCR and TV, ventilation, wind chimes, beads, the elevator in the corridor, the lamp light flickering, are combined with miscellaneous other events : shadows passing by, electrical buzzing, human voices/laughter/steps. Priority is given to the sonic events for their ability to "animate" the physical environment so inconceivably.

Control over the soundscape of the environment not only inside but also outside of the experimentation room (see 'TML Area' on Fig. 1) allows us to produce very subtle perceptual effects. Speculating on the natural expectations of the participants to hear the sounds of the object visually present within their immediate surrounding (wind chimes, squeaking of the armchair, ticking of the clock), we recreate these sounds, giving false information about the environment; distort or misplace them; output them so quietly that they turn in almost a memory of themselves; build up the sounds gradually over time, thus gently increasing the noisiness of the space. These speculations are further combined with other events into 15–20 spatially motivated sequences of events. Having computational control over the environment, we change the frequency and the intensity of the events, varying the level of subtlety of the experience. The resulting environment is intense with a high density of media events, in almost the virtual reality sense of this term, and yet it is uncertain, forcing participants to make their own judgments.

5 Conclusions

They sought it with thimbles, they sought it with care;
They sought it with forks and hopes;
They threatened its life with a railway-share;
They charmed it with smiles and soap.
The Hunting of the Snark, Lewis Carol

The Other condenses our understanding of the shadowy phenomenon of felt presence into an intimate experimentation dwelling space. We recreate a field of otherness populated with metaphors and subliminal phenomenological references in a whimsical, unrestrained way, thus contributing to its uncanny atmosphere: the enchanting aspect of the space. Simultaneously, the images and associations brought up by these metaphors make up its suggestivity. With suggestivity, experiences of a greater complexity can be created: mood can change how things appear, expectations can be enhanced or betrayed. The environment is further obscured by ambiguous subtle media events, which modulate the intensity and perpetuate uncertainty in the space. The goal was not to infer particular and expected reactions from a participant, but rather to activate particular parts of his or her psyche and prepare for a subjective and individual experience in an indirect way. As opposed to overstimulation, carefully dosed ambiguous input creates a bridge between the real and the imaginary.

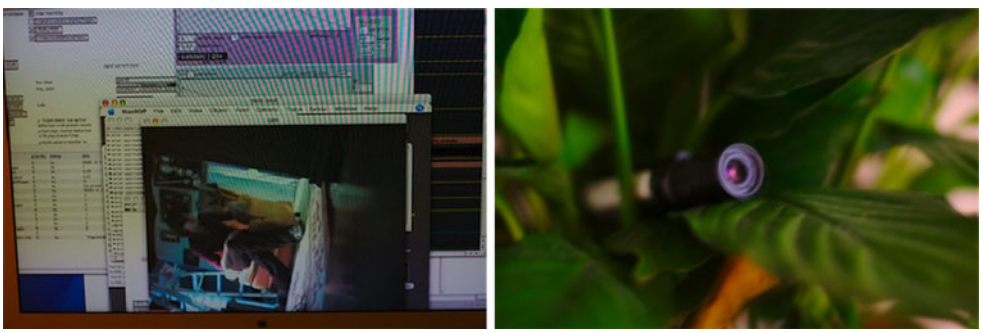

Fig. 4 *On the right* camera hidden in a plant's leaves. *On the left* software controls of the space: MAX MSP/Jitter, Logic Pro, including camera feed

Most of the participants claimed that they felt some type of presence. Here are a few testimonials: "I knew there was nobody, but the sounds made me feel there was, for a few seconds"; "I didn't explicitly feel like there was someone in the room, but did feel like there was some intelligence, some thing that was happening, but not a person. Just something… strange"; "At some point it sounded like something was going to come out of the wooden closet. The noises in the back…"; "I had the impression there were people outside of the immediate room, in the space, with the option of coming in the entrance that I couldn't see. I thought that someone was going to… not grab me violently, but… embrace me, from behind".

There also were two extreme cases of experiences. One participant's experience was so intense that she had to leave the experimental space after only a few minutes. Another participant never noticed anything bizarre happening in the space. There are a number of factors that can influence personal thresholds and vulnerabilities. In general, openness to felt presence largely depends on one's cultural and religious background as well as on personality types (Solomonova et al. 2008). Also, knowledge and familiarity with felt presence (in the context of sleep paralysis, for example) affects how suggestible and expectant one might be if presented with a felt presence inducing experimental paradigm.

As much as The Other is an experiment in both psychological research and new media technologies, it is equally unconventional for both. It seems that our experiment did not result in the expected collaboration with respect to both fields of research but rather established its own separate ground. In scientific experiments, one normally extracts a desired phenomenon, limits the scope and intensity of other possible influences and then observes it in an almost sterile, controlled manner. In contrast, media-rich installations develop a mix of various experiences simultaneously and perhaps even create new ones. In such environment, empiricism of the scientific experiment with volatile, vaguely defined phenomenon of felt presence is questionable. Even to the evolving field of new media, flourishing around fetishizing the new medium, our non-technocentric approach almost grotesque to the medium is somewhat peripheral. Such a method might not produce a definite scientific knowledge; however, it allows us to tackle the ethereal materiality of the phenomenon which, in the case of felt presence, might be the only way of approaching it.

References

Bachelard G (1969 (1958)) The poetics of space. Beacon Press, Boston

Blesser B, Salter L-R (2006) Spaces speak, are you listening? Experiencing aural architecture. MIT Press, Cambridge

Brook P (1996) Empty space. Simon and Shuster, New York

Carrol L (1992) Alice in the wonderland. W.W. Norton and Co., New York

Chesterton GK (1955) The poet and the lunatics; episodes in the life of Gabriel Gale. Sheed and Ward, New York

Cruz-Neira C, Sandin DJ, Defanti TA (1993) Surround screen projection-based virtual reality: the design and implementation of the cave. In: SIGGRAPH '93: Proceedings of the 20th annual conference on computer graphics and interactive techniques. ACM Press, New York, pp 135–142. ISBN 0897916018. doi: 10.1145/166117.166134, doi:10.1145/166117.166134

Godwin J (1988) Music mysticism and magic. Penguin, Harmondsworth

Grotowski J (1968) Towards a poor theatre. Simon and Shuster, New York

Hayman R (1979) Theatre and anti-theatre. Oxford University Press, New York

Hufford D (2005) Sleep paralysis as spiritual experience. Transcult Psychiatry 42(1):11–45

James H (1935) The novels and tales of Henry James. Scribner, New York

MacKillop J (1998) Samain. In: a dictionary of Celtic Mythology, Oxford University Press [electronic resource]

Mills DM (2005) Darkness in the theatre: the perception of the embodied self in action. Personal Construct Theory Pract 2:1–9

Nielsen TA (2007) Felt presence: paranoid delusion or hallucinatory social imagery? Conscious Cogn 16:975–983

Poe EA (2004) Selected poems and tales. Barnes and Noble Books, New York

Ralls-MacLeod K (2000) Music and the Celtic otherworld: from Ireland to Iona. Polygon at Edinburgh, Edinburgh

Rybczynski W (1987) Home: short history of idea. Penguin, Harmondsworth (non-classics)

Sandars NK (1985) Prehistoric art in Europe. Penguin Books, Baltimore

Sears LL (1989) Aesthetic displacement in Javanese shadow theatre: three contemporary performance styles. TDR 33(3):122–140

Solomonova E, Nielsen T, Stenstrom P, Simard V, Frantova E, Donderi D (2008) Sensed presence as a correlate of sleep paralysis distress, social anxiety and waking state social imagery. Conscious Cogn 17:49–63

Wagner R (1993 (1849)) The Artwork of the Future and other works. University of Nebraska Press, Lincoln, Nebraska

Minor Houses/Minor Architecture

T. Hugh Crawford

Georgia Institute of Technology

678 525 0309

hugh.Crawford@lcc.gatech.edu

Abstract:

Deleuze and Guattari develop a notion of "minor literature" in their short book on Kafka, and the opposition major/minor has been used with varying degrees of success by critics working in a range of disciplines including architectural theory. Teasing out the potentially subversive implications of the major/minor opposition requires reading it in relation to other binarisms developed by Deleuze and Guattari in those same years, e.g., state /nomadic science, striated/ smooth space, optic/haptic, as well as Guattari's useful concept "machinic heterogenesis." Then one ends up with a minor architecture concerned with partially subversive practices rather than with structure per se. A building's minor status is figured through its deployment in and production of a space that is a technological, social and political pattern as well as a line of flight. This paper reads minor architecture by examining the minor house built by Henry David Thoreau at Walden Pond and those currently being assembled by the Mad Housers in Atlanta, Georgia.

Keywords: *Minor Architecture, Thoreau, Deleuze, Guattari, Walden Pond, Smooth Space, Striated Space, Machinic Heterogenesis, Mad Housers*

Main discussion

Some years ago, in an attempt to mitigate graduate student poverty, a friend of mine and I posted flyers advertising our services for "House Painting and Minor Home Repair." In typical English-major fashion, one of our colleagues noted that he had a minor home that needed repair. I am not sure why that smartass comment has stuck with me all these years, but recently the idea of the minor home, along with the broader concept of minor architecture, has become something of a preoccupation. In *What is Philosophy?* Deleuze and Guattari

(henceforth D&G) note that the purpose of philosophy is to create concepts--tools that, one hopes, can be appropriated for other, sometimes distant purposes. Their concept "Minor Literature" articulated in the book on Kafka, points potentially toward my own graduate student experience with minor houses, and also perhaps toward my current area of inquiry—the writings of Henry David Thoreau along with related texts on small houses or thinking spaces (e.g., Henry Beston and Michael Pollan). And given sufficient nuance, it could perhaps shed some light on the effects of the work of a group of homeless advocates who build small plywood shelters for homeless people squatting on vacant land in the city of Atlanta. This paper is an attempt to draw those threads together: to appropriate the D&G minor in an attempt to articulate the pressure produced by the minoritarian dwellings of Thoreau and the Atlanta "Mad Housers."

D&G develop their notion of "minor" literature in *Kafka: Toward a Theory of Minor Literature*, and their opposition major/minor has been exploited (with varying degrees of success) by critics working in a range of disciplines including architectural theory. Taking the terms in isolation can lead to facile conclusions; therefore, it is important to see this opposition in the context of other binarisms developed by D&G in those same years, specifically their notion of state (royal) / nomadic science, and striated/smooth space. Reading the idea of minor architecture through these concepts can develop an understanding of partially subversive architectural practices that are concerned not so much with structure per se, but rather the deployment of non-monumental buildings in physical space as a technological, social and political gesture.

Appropriating the notion of "minor literature" for other practices is by no means a seamless operation. D&G are concerned primarily with the subversive capacities of Kafka's language, and (obviously) they frame their definition in

terms of that language: "The three characteristics of minor literature are the deterritorialization of language, the connection of the individual to political immediacy, and the collective assemblage of enunciation" (*Kafka* 18). Nevertheless, as mentioned earlier, D&G's concepts are malleable, and the spirit of the minor can be linked to deterritorialization writ large, the weaving of the individual into a politics of the moment (moment here as both time and space), and to larger collective machinisms.

In discussions of the minor in architectural theory, there is a general tendency to deploy it as a way to both articulate and critique the notion of the major. Such a project in keeping with the spirit of D&G's reading of Kafka's work, concerned as they are with how a minor literature can subvert from within, though it does not provide much understanding of the function of the minor as minor in architectural practice. As her title suggests, Joan Ockman's "Toward a Theory of Normative Architecture," takes precisely this approach. The minor gives her a perspective from which to describe the major. She is careful never to reduce any of D&G's paired terms to mutually exclusive oppositions: "It must be stressed that the relationship between minor and major architecture that is being proposed is to be understood as a historical condition in which that which is major is constantly redefining itself in relation to that which is minor, and that which is minor is always potentially challenging or hybridizing that which is major" (123). Nevertheless, the minor in Ockman serves simply as an access point into the major on the road to the normative.

Jennifer Bloom, on the other hand, has a genuine interest in the minor as minor as but still primarily as a way to criticize the major—here for its complicity with large scale political power structures: "One of the tasks of minor architecture is to operate critically upon the dominance of the visual—the image—as a mode

of perceiving and understanding architecture. Thus, what a work of minor architecture looks like is irrelevant outside of the condition of its 'looking like' architecture. I do not, therefore, propose a style or an *architecture parlante* but a revolutionary architectural criticism, a 'criticism from within' that goes deeply into the within, into the conventions of architecture's collusion with mechanisms of power" (174). Bloom makes clear that minor architecture is not a style, not a specific form that could fall within or be added to existing categories. Rather, it is a critical stance, and therefore remains in the category of language (which she is clearly articulating through her discussions of Joyce et. al.). The minor for Bloom regardless of her rejection of the term as part of an *architecture parlante,* is a critical vocabulary that enables direct critique of the "mechanisms of power" rather than part of a socio-technical practice of dwelling. Nevertheless, Bloom's rejection of the "dominance of the visual" is a key move in an unfolding understanding of the minor in architecture.

Hans Frei also deploys the concept, arguing in "Poverty & Architecture" that minor architecture "renounces the representative functions of major architecture in charge of the ruling order and global acting corporations… Instead of being the "highest expression of the self-consciousness of a society", it forges the means for another consciousness and another sensibility. It stands rather on the side of the ordinary building and is like it performative, not representative…." Frei begins very much in the mode of Ockmann and Bloomer, focusing on the D&G notion of minor/major languages, but his slide toward ideas of performance set the stage for a much broader and more productive notion of the minor. A building's ordinariness, in and of itself, does not place it in the category of the minor. It is to be found not in representation but in performance—in the function

the building serves as a node in a network of practices, a haecceity or zone of intensity experienced proprioceptively.

Although she does not use the term "minor," Elizabeth Grosz comes closest to deploying the richness of D&G's concepts in an encounter with architecture. In "Architecture from the Outside" she positions D&G's discourse in comparison to the already-appropriated Derridean concepts in architectural theory, arguing correctly that Deleuze's theorizing of the outside in his book on Foucault provides a way to destabilize traditional boundaries, seeing them instead as transition points, the folding of the inside in the out. Ultimately Grosz's concerns are with distinguishing what D&G offer from the then-dominant Derridean textual criticism in some quarters of architecture theory, points that shed light on some of the problems associated with adopting the minor literature concept: "If we are no longer to explore the textuality of building—its immersion in discourses, its textual implications and investments, its own modes of marking as Derrideanism entails—but to explore the possibilities of becoming, the virtualities latent in building, the capacity of buildings to link with and make other series deflect and transform while being transformed in the process, Deleuze's work may prove crucial." (73).

Fortunately D&G make the way for a move away from the visual and textual directly into the performative through their often discussed concept of striated/smooth space which gives direct access into a positive definition of minor architecture. In *A Thousand Plateaus*, D&G connect the smooth with the haptic: "Smooth space is filled by events or haecceities, far more than by formed and perceived things. It is a space of affects, more than one of properties. It is *haptic* rather than optical perception" (479). This of course builds on Bloomer repudiation of the visual as monumentalizing, and directly links to Frei's

celebration of the performative, but most importantly, when linked to architectural practices, it puts the body—humans—in affective space, a space produced by just such affectivity (though modulated through "machinic heterogenesis"). Set in opposition to the smooth is the striated: "Striated space, on the contrary, is defined by the requirements of long-distance vision: constancy of orientation, invariance of distance through an interchange of inertial points of reference, interlinkage by immersion in an ambient milieu, constitution of a central perspective" (494). D&G's links to Foucault are clear here, particularly the Foucault of *Discipline and Punish*, and could at the same time be describing the monumental in architecture. All one has to do is recall Le Corbusier's circle and ray diagrams of buildings, defining their exterior proportions from precise and well defined points of view. In striated space, one may be immersed in an "ambient milieu" but nevertheless one is always defined by the central perspective.

This all leads to the question of what exactly are the architectures of smooth space and, I would argue, that is where we will encounter the minor. Minor architectures as events in smooth space do not partake of traditional architectural visibilities. The minor is not meant to be seen, or at least, its perspective is subordinated to haptic and affective practices. Therefore, there can be no consistent style in any traditional sense of the word, attitude perhaps. This loss of visibility, though, raises the importance of the affective writ large. A minor architecture, deployed or deploying smooth space produces zones of intensity, haecceities that to a greater or lesser degree avoid the striations of authoritarian political structures, but at the same time perform, produce, articulate desire. Dwellers of smooth space feel their way through processes invisible to state planners, and experience both dwelling and self in a potentially profoundly different fashion.

Terms with direct kinship to smooth/striated space are D&G's state/ ambulant science. As one would suspect, royal or state science is generally seen as supporting striated space and is concerned with institutionalizing knowledge practices, defining material and disciplinary relations. It is Cartesian in its insistence on locating stable, individual objects in an objectively gridded space. "Royal science is inseparable from a 'hylomorphic' model implying both a form that organizes matter and a matter prepared for the form; it has often been shown that this schema derives less from technology or life than from a society divided into governors and governed, and later, intellectuals and manual laborers. What characterizes it is that all matter is assigned to content, while all form passes into expression." (*A Thousand Plateaus,* 369). Set against state science are practices that evade such location which at the same time unleashing the productive powers that can inhere in the marginal or the minor. From this perspective a minor architecture is an ambulant practice (*A Thousand Plateaus*, 372). It is haptic, not optic, feral, not monumental. It is transitional in all senses of the word—transient populations, transient connections, and transient structures. It is not that these structures rot (but they do), or that they are transportable (the nomad's tent) or they fall down or they are shoddy. Rather ambulant science reappropriates: objects and practices in minor architecture are continually repurposed, denying the authority of the magisterial architect or a design that is purpose-built. Thoreau's house became a shelter for fishermen, a storage house, a wood shed, and a cultural icon.

Before turning to Thoreau and the Mad Housers, let's return to the original definition of "minor literature" and, by dint of some linguistic ambulance, attempt a transition to minor dwelling: "The three characteristics of minor literature are the deterritorialization of language, the connection of the individual to political

immediacy, and the collective assemblage of enunciation" (*Kafka* 18). Given the necessity of a foundation for a building (one of Thoreau's many obsessions), it is difficult to imagine a "deterritorialized" architecture (except of course in the world of the nomad), but, as readers of D&G well know, deterritorialization is a plastic term that points not toward specific determined and defined spaces, but rather toward the possibilities of evasion, of effecting a line of flight away from centers of state power, while at the same time affecting a transformation of spatial, cultural and political relations. The deterritorialization of minor architecture is the movement from the optic to the haptic, and it connects its individual dwellers with a political immediacy in its very line of flight. A minor architecture by no means provides a transcendental guarantee that its dwellers will be good, politically engaged citizens. Rather, the minor by its very nature creates dwelling practices that produce a different relation to the state political machine.

And, finally, it is a "collective assemblage of enunciation." To effect this final translation, it is useful to look briefly to Guattari's essay on "Machinic Heterogenesis." There the move is to argue that ambulant assemblages work through a processual unfolding of alterity (machinic, diagrammatic, symbolic) that cannot be reduced to static or structural forms, but instead always function through the proximity of a range of components. As Guattari goes on to argue, "A machinic assemblage, through its diverse components, extracts its consistency by crossing ontological thresholds, non-linear thresholds or irreversibility, ontological and phylogenetic thresholds, creative thresholds of heterogenesis and autopoiesis" (*Chaosmosis* 50). A key term here, in relation to a collective assemblage of enunciation, is consistency. Machinic assemblages such as those produced via minor architecture are by no means chaotic. A minor architecture is not a scattering of huts (though the mad houser villages appear to be just that);

rather, a consistency is produced through the processual unfolding of complex relations— ontological and phylogenetic—which produce difference, create possibilities of new relations, and occasionally subvert the old. Machinism is irreducible, particularly to signification: machinic enunciation couples the referential with the material in novel, burgeoning, and prolific forms.

In some ways, it is easy to make the case that Thoreau's house is an example of a commonsensical and deliberate minor architecture: a single room, 10'x15' timber-framed and shingled structure built primarily from materials on-site or transported by hand a short distance. Couple that with Thoreau's constant deriding of the superficiality of ornamentation and any sort of "high style" and he seems to be the Kafka for this form of minor. But the story is much richer and more complicated.

Architectural historian W. Barksdale Maynard makes a convincing argument that Thoreau's retirement to the woods was not the radical political gesture it is regularly depicted as, and instead places Thoreau's thoughts and ideas regarding housing reform and the somewhat gentlemanly pursuits of a "rural retreat" firmly in a current of thought exemplified in the United States most prominently by Andrew Jackson Downing. Downing, whose *Treatise on the Theory and Practice of Landscape gardening*. . . and *The Architecture of Country Houses* were widely disseminated, may not have directly influenced Thoreau, but, as Maynard convincingly argues, they both echo an attitude very much part of their era. Maynard discusses one of Thoreau's more direct discussions of architecture and his celebration of the picturesque, noting that Thoreau's attitude was very much part of a mainstream for the era: "Far from being novel, this is an eloquent summary of philosophies of the villa books, signaling Thoreau's sympathy for a central goal of those books—to reform architecture in light of the

'humble log huts and cottages of the poor'" (308). Thoreau clearly does celebrate the simple cottages of the poor, at times, but, as Maynard also notes, looks with some displeasure on others. In other words, his celebration of the picturesque carries with it a good bit of Yankee practicality.

Perhaps the strongest objection new readers bring to *Walden* is the fact that the house was located within an easy walk to Concord, a walk Thoreau regularly availed himself of, and how he even on occasion had his laundry done (if we are to believe his cost balance sheets). Maynard once again serves as useful answer to this objection, not by arguing that Thoreau was really roughing it[1], but instead by locating Thoreau's move to Walden pond as part of a broadly accepted movement of temporary rustication. As Maynard notes, "To see Thoreau's sojourn in the context of the retirement phenomenon helps resolve a number of problems that have long troubled readers of *Walden*, including the apparent hypocrisy of the "solitary" author's frequent visits to town. In the course of retirement—always a genteel habit—one was expected to maintain close ties with friends and relatives" (305). Maynard's explanation, while assuaging reader's objections, goes a long way toward undercutting any strong claims that Thoreau is participating in the sort of minor architectural adventure that fits the concepts of D&G. Instead it positions him firmly in an upper-middle class gentility, availing themselves of a carefully constructed, picturesque rural retreat—hardly a political gesture, let alone machinic heterogenesis.

This is all just to say that Thoreau's own architectural theorizing and his basic dwelling practices are, in and of themselves, not particularly helpful in

---

[1] Something, for those who are not convinced, he did do in his Maine woods excursion. All disbelievers are advised to go climb Katahdin with today's state-of-the-art gear and then continue objecting

attempting to understand minor architecture. So it is better to look elsewhere in *Walden* for a minoritarian gesture, and the question of visibility is the best place to start. What is fascinating about *Walden* is that Thoreau describes in considerable detail the construction of his house. Indeed, he provides enough detail that any number of enterprising, strong Thoreau scholars are capable of reproducing with some degree of accuracy complete replicas of his house (there are a number just in the Concord area). In part this is because the construction is fairly simple, and Thoreau's book offers up enough detail to assure fit and finish. However, in the face of this detail, readers of *Walden* really don't see the house. Thoreau is always directing the reader's gaze elsewhere. His house is not visible, but it is haptic. It is a thinking space as long as one sees thinking as a nomadic practice. Thoreau, ever the peripatetic, may have built himself a country seat but he never sat for long.

Thoreau comments, "I speak understandingly on this subject [dwelling], for I have made myself acquainted with it both theoretically and practically" (27). Of course his practical understanding comes from his own familiarity with the pitch of the pines, the smell of the chips, and the sweat from using an axe, but it also stems from the practical research he did in order to come to this point: his long walks across many a pasture considering possible dwelling places, rejecting others, but, and this must be emphasized, actually dwelling there in those practices. A simple point perhaps, but dwelling does not mean stasis; rather it is a dynamic, unfolding process. Thoreau achieves a practical and theoretical understanding of dwelling because he is, in an ongoing way, engaged in the practice of dwelling. The house serves as a node in that network, but by no means an endpoint. In the spirit of D&G, a minor architecture is always in-between and never an end.

Thoreau signals this position in the very beginning of his book, observing that, "I see young men, my townsmen, whose misfortune it is to have inherited farms, houses, barns, cattle, and farming tools; for these are more easily acquired that got rid of." (2). He goes on to rail against what amounts to striated space: farms determined by surveyor's lines (somewhat ironic given Thoreau's own sometime occupation), and linked tightly into networks of credit and commerce that close off most if not all lines of flight. To inherit a plow is to inherit a lifetime of economic responsibility. Of course Thoreau is not some cheap luddite; the discourse on ownership, commerce and credit is directed against its abuse through dense striation (recall his mourning property lines in the essay on Huckleberries). And he is not exactly celebrating simplicity for its own sake—instead he advocates keeping open the lines of flight. The lesson: a minor architecture maintains and even produces maximum deterritorialization (definition #1). That deterritorialization does not mean the house is mobile, but rather that it is transitional (as are all houses) and, more importantly it enables new configurations of being and dwelling.

By retreating to Walden Pond, Thoreau clearly puts himself in a new relation to society (though, one would suspect that he always had a unique relationship with his townsfolk), but it does not remain as simple as the fact that he is now someone who only occasionally appears in town. The second principle of a minor architecture is that it somehow links the individual to a political immediacy; there is a two-fold politics in his rural retreat. The first, and most frequently noted, is that his rustication, much like the courtiers from Queen Elizabeth's court, afforded the opportunity to observe and comment on politics at a distance. However, such practice is by no means part of a minor architecture. Indeed, it is more directly linked to royal science and striated space—a genteel

practice by a well-educated citizen. The minor elements come from the other side of the fold: the society he then encounters and produces in his rustication. He has happenstance commerce with many people—hunters, fishermen, woodchoppers, and the curious onlooker (along with a considerable number of animals, plants and insects)—but that commerce takes place in his (de)territory, on different terms, or, more precisely, on terms that produce difference. Poets, philosophers, friends, acquaintances, and strangers each enter into different relations with Thoreau and with each other. While those relations might not be political with a capital P, they nevertheless produce alternative lines of flight, they disturb the easily traveled lines of striated space.

Which brings us to the most interesting and final part of the tripartite definition of minor architecture: machinism and the collective assemblage of enunciation. Although we must take the notion of "enunciation" in the broadest of possible meanings, it is useful to start with more traditional senses. In one of his many comments on architecture and building, Thoreau makes the following comment: "There is some of the same fitness in a man's building his own house that there is in a bird's building its own nest. Who knows but if men constructed their dwellings with their own hands, and provided food for themselves and families simply and honestly enough, the poetic faculty would be universally developed, as birds universally sing when they are so engaged?" (31). One can take this as typical Thoreauvian hyperbole, but, in a sense, he is describing the production of just such a collective assemblage of enunciation. Long before Heidegger, Thoreau clearly understands that building, dwelling and thinking are directly linked, and that his building his own house and two year rustication places him in a machine to enable him to think differently. His voice is modulated every bit as much as the town's church bells are modulated by the distance and the

trees. His thoughts are transformed and clarified every bit as much by the ice he daily inspects as by his reading, and, indeed, his reading is transformed completely by the circumstances and situation in which it occurs. The minority of his architectural experiment at Walden Pond is that this machine enunciates. It does not always sing as clearly as Chaunticleer, but nevertheless it sings previously unheard songs.

Now to turn briefly to a remarkable example of minor architecture in all senses of the term: the work of the Mad Housers in Atlanta. In 1988, two Georgia Tech Architecture students—Michael Connor and Brian Finkle—presented their Masters theses detailing their work establishing the Mad Housers, a still-active group of homeless advocates who adopted an interesting strategy to address the crisis of inner city homelessness.[2] Connor, Finkel and a number of colleagues acknowledged the need for long-term solutions to homelessness, but instead chose to focus on the immediacy of people living in the open, out in vacant lots, abandoned spaces in the middle of the city. They designed and constructed simple 8x6 plywood huts (some equipped with woodburning stoves) and, like true nomadic technologists, transported them to vacant lots where homeless people were squatting illegally. They came in quietly, constructed quickly, and got out fast (a strategy they still use today).

Early in their discussion of smooth/striated space, D&G make the following observation: "In contrast to the sea, the city is the striated space par excellence; the sea is a smooth space fundamentally open to striation, and the city is the force of striation that reimparts smooth space, puts it back into operation

---

[2] Their theses and an archive of material about the Mad Housers including video interviews, architectural plans, etc.can be found online at http://smartech.gatech.edu/simple-search?query=mad+housers&submit=Go

everywhere, on earth and in the other elements, outside but also inside itself" (481).[3] This is a somewhat opaque comment that comes a little clearer when read against the activities of the Mad Housers and their clients. One can readily imagine the city—the official city of state science—as mapped, gridded, and defined to such an extent that all inhabitants have a place, and their daily practices a pattern. But, of course, the very notion of the homeless defies this. The clients of the Mad Housers live in a smooth space just beneath or outside the official city, and of course, just under the noses of the state citizens. A Mad Houser house is designed and built to function as both shelter and storage (a key element for the homeless is to have a lockable, safe place to store their belongings while they work or look for means of subsistence), but it is also designed specifically not to be seen, no monumental visibilities there. [4] Indeed, currently the most popular model of Mad Houser hut is called the Lowrider, a four-foot high shelter that can be positioned at the edge of a vacant lot out of the chance passerby's line of sight.

The Mad Houser communities form alternative (de)territories in the midst of some of the most territorialized space on the planet, and, as one would imagine, their territories are constantly shifting as vacant lots are transformed, and communities are driven away. The hut itself is also designed to be transient and even nomadic. They will only last so many years without seriously deteriorating, but are usually destroyed before that anyway. The minoritarian strategy of the

---

[3] On the striation of the sea, see T. Hugh Crawford, "Captain Deleuze and the White Whale: Melville, *Moby-Dick*, and the Cartographic Inclination' *Social Semiotics* 7.2 (Fall, 1997): 219-232.

[4] On a side note, when advocating for the homeless, the Mad Housers have been known to put up brightly painted huts in public places, see their web site for examples: http://www.madhousers.org/

Mad Housers is not permanence but instead ongoing production. They continually seek out clients and help them out as long as they are able. The huts themselves are also clearly minor as they in no way aspire to the monumental, nor even to a notion of the architectural. In his thesis Connor relates a story from the beginning of their activism. They spend several days designing what they think is an ideal hut, choosing a site, and go in one day to put it up. They return a few days later only to discover that the new occupant had dismantled it, and built a new (and differently configured) hut at a site further back on the lot. One would expect Mad Houser huts to eventually be repurposed (in the Funtown community, one is now the library), but perhaps not during the first week of its deployment. The main point here is that these are nomadic structures, used by a transient population who are, for a brief or a long time, occupying (and producing) a zone of intensity in the heart of striated space.

In part, this need for invisibility subverts the more overt political nature of the practices of the Mad Housers, yet this intervention has clear and obvious political implications, something acknowledged by Connor and Finkle from the beginning. In the section of his thesis where he introduces the concept of the Mad Houser hut, Michael Connor opens with a quotation from Thomas Jefferson: "A little rebellion, now and then, is a good thing, as necessary in the political world as storms in the physical" (111). This theme carries through in the practical manner in which they found they had to address their practices. As Connor notes, "There are of course other problems with the idea of building a better hut for the homeless —namely, the fact that the new huts would be built on somebody else's land —whether vacant or not, the land these squatter's lived on belonged to *somebody*--and the new huts would obviously have to be built without the approval *of the owner* of the land. In addition, the new huts would obviously be

well below the current housing standards, and as such, would not come close to meeting any city housing codes (or any other codes, for that matter)." (Connor 114). These huts must be designed and deployed in such a manner that they surf the smooth space of invisible cities.

It is on this point that the two final terms of a minor architecture coalesce. The political and the collective assemblage of enunciation are firmly linked as the network of Mad Houser communities and the activists who support it are first and foremost, a political gesture creating novel linkages amongst individual citizens. But it is, as the same time a material assemblage voicing condemnation for socio-technical practices that enable (and demand) its very invisibility. As Connor notes regarding questions of the law, "[Our] action may very well be *illegal*, but by no means could this action be held to be *immoral*" (114).

Ultimately a minor architecture is about dwelling; it is about being as articulated through difference producing practices which wash back and forth between the smooth and the striated. The minor cannot be known through state regularity, only through deterritorialized practice. There, on those barely visible margins, beckons the minor. In some ways, Guattari puts it: "Existence, as a process of deterritorialization, is a specific intermachinic operation which superimposes itself on the promotion of singularized existential intensities. And, I repeat, there is no generalized syntax for these deterritorializations. Existence is not dialectical, not representable. It is hardly livable!" (*Chaosmosis* 52)

Conclusions: "On Civil Disobedience"

Atlanta Mayor Andrew Young said that the Mad Housers perform "the kind of **civil disobedience** I can get behind."

In response to Thoreau's **civil disobedience**, Emerson visited him where he was in jail for refusing to pay an unjust tax, asking "Henry, what are you doing in there?" Thoreau replied, "Waldo, the question is what are you doing out there?"

"**Unjust laws** exist: shall we be content to obey them, or shall we endeavor to amend them and obey them until we have succeeded, or shall we transgress them at once?" Henry David Thoreau "**Civil Disobedience**"

"One has a moral responsibility to disobey **unjust laws**" Dr. Martin Luther King "**Letter from a Birmingham Jail**"

From "**A Letter from a Birmingham Jail**," Dr. Martin Luther King said "… you seek to explain to your six-year old daughter why she can't go to the public amusement park that has just been advertised on television and see tears welling up in her eyes when you tell her that **Funtown** is closed to colored children."

Funtown: Today one of many Mad Houser communities in Atlanta

Acknowledgements

I want to thank Victor Lesniewski, Lindsay Anglin, and Nirouz Elhammali for teaching me about the civil disobedience and the Mad Housers.

(Deleuze ; FREI ; Downing 1844; Thoreau and Thomas 1966; Downing 1969; Deleuze and Guattari 1977; Deleuze and Guattari 1983; Deleuze and Guattari 1986; Connor 1988; Deleuze and Hand 1988; Finkel 1988; Grosz 1991; Bloomer 1993; Guattari 1995; Cline 1997; Crawford 1997; Ockman 1997; Deleuze, Holland et al. 1999; Maynard 1999; Thoreau and Rossi 2002; Emerson 2007; Le, Cohen et al. 2007)

References

Bloomer, J. (1993). Architecture and the text : the scrypts of Joyce and Piranesi. New Haven, Yale University Press.

Cline, A. (1997). A hut of one's own : life outside the circle of architecture. Cambridge, Mass., MIT Press.

Connor, M. (1988). A place to call home, Georgia Institute of Technology, 1988. Directed by Alan Balfour.**:** xiii, 284 leaves.

Crawford, T. H. (1997). "Captain Deleuze and the White Whale: Melville, Moby-Dick, and the Cartographic Inclination." Social Semiotics **7**(2): 219-232.

Deleuze, G. Kafka

.

Deleuze, G. and F. Guattari (1977). Anti-Oedipus : capitalism and schizophrenia. New York, Viking Press.

Deleuze, G. and F. Guattari (1983). Anti-Oedipus : capitalism and schizophrenia. Minneapolis, University of Minnesota Press.

Deleuze, G. and F. Guattari (1986). Kafka : toward a minor literature. Minneapolis, University of Minnesota Press.

Deleuze, G. and S. Hand (1988). Foucault. Minneapolis, University of Minnesota Press.

Deleuze, G., E. W. Holland, et al. (1999). "Deleuze and Guattari's Anti-Oedipus introduction to schizoanalysis." from http://www.library.gatech.edu:2048/login?url=http://www.netlibrary.com/urlapi.asp?action=summary&v=1&bookid=60817 An electronic book accessible through GALILEO; click here.

Downing, A. J. (1844). A treatise on the theory and practice of landscape gardening, adapted to North America; with a view to the improvement of country residences. Comprising historical notices and general principles of the art, directions for laying out grounds and arranging plantations, the description and cultivation of hardy trees, decorative accompaniments to the house and grounds, the formation of pieces of artificial water, flower gardens, etc., with remarks on rural architecture. New York, London,, Wiley and Putnam.

Downing, A. J. (1969). The architecture of country houses; including designs for cottages, and farmhouses, and villas, with remarks on interiors, furniture, and the best modes of warming and ventilating. New York,, Dover Publications.

Emerson, B. (2007). The Shelter People. Housing and Dwelling. B. L. Miller. New York, Routledge**:** 431-434.

Finkel, B. W. (1988). An investigation of urban homelessness, Georgia Institute of Technology, 1988. Directed by Richard Dagenhart.**:** xi, 140 leaves.

FREI, H. "POVERTY & ARCHITECTURE." Retrieved 3-22, 2009, from http://www.hans-frei-arch.ch/texts_poverty.html.

Grosz, E. (1991). Architecture from the Outside. Architecture from the Outside. Cambridge, MA, MIT press**:** 56-73.

Guattari, F. (1995). Chaosmosis : an ethico-aesthetic paradigm. Bloomington, Indiana University Press.

Le, C., J.-L. Cohen, et al. (2007). Toward an architecture. Los Angeles, Calif., Getty Research Institute.

Maynard, W. B. (1999). "Thoreau's House at Walden." Art Bulletin **81**(2): 303-325.

Ockman, J. (1997). Toward a Theory of Normative Architecture. Architecture of the Everyday S. H. a. D. Berke. New York, Princeton Architectural Press**:** 122-152.

Thoreau, H. D. and W. J. Rossi (2002). "Wild apples" and other natural history essays. Athens, University of Georgia Press.

Thoreau, H. D. and O. P. Thomas (1966). Walden, and Civil disobedience. New York,, W.W. Norton.

AI & Soc (2011) 26:187–192
DOI 10.1007/s00146-010-0297-z

ORIGINAL ARTICLE

Thinking about stuff: posthumanist phenomenology and cognition

Ron Broglio

Received: 6 January 2008 / Accepted: 13 August 2010 / Published online: 14 September 2010

Abstract Emerging digital technologies, such as sensors and pervasive computing, provide a robust interplay between digital and physical space. Architecture as a disciplinary endeavor has subsumed the capacities of these technologies without allowing the difference these technologies afford to challenge fundamental notions of architecture, such as cognition, visibility, and presence. This essay explores the inverse of the architectural ground by exploring the cognitive capacity for non-animate entities. The implication of this posthuman phenomenology is that entities themselves pose questions and that "stuff" thinks. Given an expanded definition of thinking, the environment is an active agent of entities that respond to human building with forces, tensions, marks, and crossings—physical elements that yield symbolic significance in our world.

Keywords Architecture · Cognition · Martin Heidegger · Maurice Merleau-Ponty · Phenomenology

1 Introduction

A crucial characteristic of architecture that distinguishes it from non-human building is a verticality of thought. Before we hoist beams of a building, we assume a unique quality of humans, the ability for self-conscious and self-reflective thought. Otherwise said, we have the ability to get outside of our immediate situation and have a look around, contemplating alternatives and plotting new directions well into the future. Yet, architecture is more than self-conscious thinking about ourselves and our sense of place. It encompasses an unspoken awareness of surroundings and unconscious attentiveness to environmental and cultural situatedness. Martin Heidegger refers to our reflexive and ambient comportment in the world as our way of dwelling. Dwelling precedes and develops with our building and thinking. Digital technologies have expanded the realm of architecture with computational media, sensors, pervasive computing, and sensory materials. Accompanying the capacity of digital technologies for architecture, everything from very fine grained to large scale spaces can be folded into how we dwell and how we build our dwellings.

R. Broglio (✉)
Department of English, Arizona State University,
P.O. Box 870302, Tempe, AZ 85287-0302, USA
e-mail: ron.broglio@asu.edu

2 Main discussion

Exploring a minor architecture provides the opportunity to reconsider the fundamental grounds upon which architecture thinks itself and performs its task of building and dwelling. The term "minor architecture" takes its cue from Deleuze and Guittari's "minor literature" chapter in their book on Kafka (1986). For Deleuze and Guittari, Franz Kafka writes according to a style that attempts to negotiate his place as a Jew within citizenry of Prague. While Kafka must be able to speak the language of the majority, he must also maintain a difference that cannot be assimilated and co-opted. As a minority he works at the margins but in such a way that it strikes to the root of difference between a major and minor literature. In a similar fashion, a minor architecture plays at the fringes but in doing so calls into question the structure that dictates definitions and boundaries of what constitutes major and minor, center and periphery.

Digital technologies employed in architecture provide a robust interplay between digital and physical space. Yet as a cautionary note, the ready implementation of the digital into major architecture loses the opportunities these new technologies afford for allowing us to question the very boundaries of what constitutes building and dwelling. Major architecture stands ready and well positioned to colonize digital devices. In contrast, taking digital technologies as operators of difference (rather than machines for producing efficiency within the status quo) creates opportunities to construct a fragile architecture, a minor architecture that offers new ways of dwelling. In such instances, the fundamental and grounding thinking of architecture get reconfigured. Within the scope of this essay I'll take up some of these key components by asking what constitutes thinking and how important visibility and emergence are to the concept of architectural space. Too often digital technologies are employed to provide a fullness of presence and knowledge about space, environment, and individuated subjects. By challenging the privileged position of human thought and the notion that architectural space should provide presence, visibility, and knowledge, my intention is to de-center architecture and offer a minor path which emerging electronic technologies may explore.

3 Phenomenology and building

In "Building, Dwelling, Thinking" Heidegger considers the fundamental components of a major architecture by examining the grounds upon which the thinking which authorizes architecture takes place. For him, thought should not be abstracted from everyday life. Rather thinking is possible only within our immersion in the world, our "being in the world." There is no way of thinking prior to bodily being and any thought that progresses from our situatedness in the world is already formed by our bodily comportment with an environment. Heidegger calls such thinking in relation to an environment "dwelling": "The way in which you are and I am, the manner in which we humans *are* on earth, is *buan*, dwelling" (1993a, 349). Heidegger links the German word "to build" or *bauen* to the word for dwelling and then through a rather tenuous etymology he links building and dwelling to being, *ich bin*, *du bist*. Our way of being is one of building, and building already presupposes a particular relationship to the world which he calls dwelling. Heidegger then goes on to explain that dwelling means caring for the world. He gives a variety of names for our role in the world including caring, sparing, preserving, shepherding, freeing, and bringing into the open.

An often cited example of such caring or freeing is Heidegger's meditation on a Greek temple in his essay "Origin of the Work of Art." The temple as a building defines the values for the Greeks in which "the temple-work… fits together and at the same time gathers around itself the unity of those paths and relations in which birth and death, disaster and blessing, victory and disgrace, endurance and decline acquire the shape of destiny for human being" (1993b, 167). As object and space for the event of communal worship, the temple defines the lives of a people. More interesting in relation to dwelling, the temple also "gathers around itself" or shepherds the environment:

> Standing there, the building rests on the rocky ground. This resting of the work draws up out of the rock the obscurity of that rock's bulky yet spontaneous support. Standing there, the building holds its ground against the storm raging above it…. The temple's firm towering makes visible the invisible space of air. The steadfastness of the work contrasts with the surge of the surf, and its own repose brings out the raging of the sea. Tree and grass, eagle and bull, snake and cricket first enter into their distinctive shapes and thus come to appear as what they are. (Heidegger 1993a, b, 168).

The temple "makes visible" the invisible sets of relations and calls things into the open, by which we see and comprehend them. Buildings bring together what Heidegger calls the fourfold of earth, sky, divinities, and mortals. Hubert Dreyfus observes that for Heidegger each era develops its own art which reveals different things. Each era shepherds different things into the open: "For the Greeks, what showed up where heroes and slaves and marvelous things, for the Christians, saints and sinners, rewards and temptations. There could not have been saints in ancient Greece…. Likewise, there could not have been Greek-style heroes in the Middle Ages" (Dreyfus 2006, 298). To extend Dreyfus's observation further, earth and sky appear differently in each era too. In the contemporary era with rockets, jets, and impending global warming, human building (from missiles to skyscrapers) reveals the sky differently from former eras. How we build both dictates and furthers the grounding by which we dwell. An inquiry into dwelling provides a look at the fundamental means by which we comport ourselves and construct a world and world view through various shepherding and revealing.

While Maurice Merleau-Ponty was not directly influenced by Heidegger, they share the notion that man's role in the universe is to reveal the nature of being. Unlike Heidegger's skepticism toward science, in *Phenomenology of Perception* Merleau-Ponty uses physiology and neuroscience to help him think about embodied cognition. As he says in *Primacy of Perception*, "the perceiving mind is an incarnate mind" (1964, 3). His goal is "to re-establish the

roots of the mind in its body and in its world, going against doctrines which treat perception as a simple result of the action of external things on our body as well as against those which insist on the autonomy of consciousness" (Primacy of Perception 1964, 4). For Merleau-Ponty, our bodies and sensations carve a particular sort of perceived space-time within the environment which we then call "world." Other creatures with different bodies and perceptual apparatus have a different sense of space and world. Yet, unlike animals, for Merleau-Ponty and Heidegger, our ability to bring embodied perception to consciousness makes us and our human crafted world unique. Such reflexive thought separates humans dwelling in the world from animals living in their environments.

Recent architects influenced by phenomenology provide examples of how an incarnate mind works in relation to surroundings and how such a relationship can influence building. (See, for example, *Dwelling, Place and Environment*: *Toward a Phenomenology of Person and World*, with works by leaders in this field such as Joseph Grange, Robert Mugerauer, Edward Relph, and David Seamon.) In "Body-subject, Time-space Routines, and Place-ballets," David Seamon describes how a set of habitual body behaviors are coordinated over time and according to cues from the environment and other people in the shared space. Seamon sites a series of examples in which "the habitual nature of movement arises from the body, which houses its own special kind of purposeful sensibility" coordinated by cues in the environment (1980, 155). In one example, a man describes that while driving in a familiar neighborhood, he turned left rather than to continue straight as he should have. The driver explains that he usually turns left at that intersection because he has a friend on that street whom he often visits. His body responded to the environment before the driver could consciously correct the movement. Seamon suggests here that "the body is an intelligent subject manifesting [knowledge] in its own special fashion" (1980, 155). What Seamon terms the "body-subject" makes decisions based not only on conscious cues but also on perceptual cues that have become habitual and prior to conscious awareness. Seamon calls a series of such habitual activities, such as morning routines or bedtime routines, a body-ballet. The routines are useful because they prevent a continued expenditure of conscious thought for mundane activities and they provide continuity from 1 day to the next. Seamon then goes on to expand his notion of body-ballet by suggesting that whole groups of people performing their individual routines in coordination with one another create a "place-ballet." For example, one may go to the same cafe about the same time everyday, and this routine intersects with a café workers' schedule and other patrons' routines such that a neighborly familiarity grows from the group of body-ballets called a place-ballet.

Seamon's body-ballet describes the role of the body in helping to fashion cognition. The body as it is fitted to an environment creates particular habitual patterns of behavior. Over time, such patterns have an effect on how one sees and thinks about the world. Translating Seamon's ballet to Heideggerian terms, there is a mutual reciprocity between bodies and built space that helps establish practices of dwelling. Through dwelling (through a recognition of the relationship between the body-subject and the environment), we develop a sense of care for beings. As with the Greek temple that reveals a particular relationship between earth, sky, sea, and people, at a more mundane level, the space-ballet reveals particular relationships between people, places, and things. Such relationships develop over time and lead to a particular sense of world. As in the café example, the place becomes the site of rhythmic relations that change with natural and man-made particulars from time of day, seasons, and weather to traffic patterns and economic factors. The ballet and shifting rhythms create an awareness of an environment and bring together or shepherd man and nature.

4 Revising an architecture of presence

While preparing to write his unfinished text *The Visible and the Invisible*, Merleau-Ponty noticed a fundamental problem within phenomenology. In *Phenomenology of Perception*, he pursued "experiences that have not yet been 'worked over,' that offer us all at once, pell-mell, both 'subject' and object,' both existence and essence" (1962, 130). As such, the distinction he made between abstract rational thought and perceptual knowing still maintained a divide between subject and objects. The persistence of such a divide troubled Merleau-Ponty. As Barbaras summarizes the issue, after *Phenomenology of Perception* "the relevant opposition for him is not the opposition between a philosophy of reflexive consciousness and a philosophy of embodied consciousness, but between an ontology of the object—to which both of these philosophies refer—and a new kind of ontology, which he must delineate" (2000, 78).

By challenging the ontology of the object, issues of cognition and body-ballet become much more complex and rich. For the remainder of this essay, I will turn to the unraveling of an object ontology as Barbaras describes it, and the implications for dwelling given a post-object and posthuman phenomenology. Merleau-Ponty observes that phenomenology "succeeds in overcoming the natural attitude by changing the beings into their meaning but is mistaken in defining the meaning itself as *essence*, namely, as something fully positive and clearly determined, a plenitude attainable by an intellectual intuition" (Barbaras 2000, 78). We grasp the essence of the object through its appearance.

However, phenomenology is mistaken in describing the meaning gleaned from appearance as the essence of the thing. The problem here is that essence maintains a sense of plentitude, of something full and fully present as grasped by an intellect. Such perception implies a perceiving subject and one with consciousness and a self-consciousness that can discern presence from non-presence.

Perception of presence is equated with knowledge. In *Visible and Invisible*, Merleau-Ponty gestures toward a new kind of ontology "against the philosophy of the thing and the philosophy of the idea. Philosophy of 'something'—something not nothing." (1968, 109). Such a philosophy would allow for "something" or what we might call "stuff" without the need for full presence and a conscious subject to discern the stuff as a "thing" or object. Barbaras explains that Merleau-Ponty moves from a "philosophy of the positive [full and fully present] thing to a philosophy of *something*" (Barbaras 2000, 80). As the title *Visible and Invisible* implies, visibility and knowability are but the one side of "stuff." Vision and knowing do not take place simply as immanence and presence of the thing known before the perceiving subject; rather vision and knowledge implies distance and invisibility. Such invisibility is "not nothing" as if the object can only either exist or not exist. Rather, the tension between the visible and invisible describes the opacity of the world of stuff itself within a world of perceptions rather than a feature of consciousness (Barbaras 2000, 82). Opacity is not a consequence of our failed sense organs but rather the nature of stuff in a world of perception. Withdrawal or invisibility is an essential part of the being of beings.

What are some of the consequences for dwelling in the shift away from an ontology of objects, conscious perceiver, and things to a "philosophy of something" or thinking about and even with stuff? Foremost, the shift displaces Heidegger's notion of humans as the shepherd of beings, as ones who care for and attend to the relationship between elements Heidegger calls the fourfold of earth, sky, divinities, and mortals. The difference between *physis* (nature making things) and *poesis* (human craft and *techne*) is fundamental to Heidegger's notion of dwelling. The temple, the cathedral, and even the café are spaces crafted by humans that set up relationships between elements. Without the primacy of the conscious perceiver and possibility of full presence of things, *poesis* collapses into just another sort of *physis*. That is to say, in a philosophy of something human crafting of relations between objects has characteristics that are unique, but it does not provide a privileged nor more "true" access to stuff. There is no sense in which we access the things themselves (which would imply an ontology of objects and an overvaluation of presence). Rather, *poesis* and human craft functions as simply another set of relations among stuff.

The problem then is how to talk about "stuff" without re-encoding the role of consciousness and re-instantiating the distance achieved when talking *about* a "thing." Language and its structures seem ill suited for the task of talking about stuff and prevent us from getting outside of our system of structuring nature (Whitehead 1978, 11–13). For example, nouns as substantives reflect the idea of substances or object-oriented ontology wherein substances/nouns can stand on their own and can function as identifiers even outside of a sentence. Such substances may be qualified by modifiers and may take action or be acted upon with verbs. This language structure maintains a way of thinking about elements in the world as "objects" and "substances." A variety of thinkers have tired to break out of this language trap. Alfred North Whitehead's early twentieth century philosophy of organism serves as useful example.

For Whitehead, philosophies engaged in a discourse about substance maintain a "fallacy of misplaced concreteness" (1978, 9). Substance provides a useful means of categorizing and thinking about the world, but its abstraction from actual entities remains under-recognized. "Parts" of entities get overlooked in the process of transforming things in the world into substances. In place of abstraction through substances, Whitehead proposes a new set of terms. The most basic unit for Whitehead is "actual entities" as "the final real thing of which the world is made up" (1978, 17). These entities are also called actual occasions. For Whitehead, the objectness of the "object" varies over time. Likewise, the scale of the object is flexible—a whole forest or a single tree or a part of the tree. What differentiates entities from abstracted substances is Whitehead's further terms "prehension" and "nexus." Prehensions are the means by which an entity is revealed in the world. Each prehension is a small part of the infinitely divisible entity.

The prehension serves as an actual entity's referent to the external world. It has a "vector character" of relatedness, a particular directed force of how the entity interacts with its world. The relationship and togetherness among actual entities (including their prehensions) is called a nexus. The consequence of this construction is a plane of relations: "You cannot abstract the universe from any entity, actual or non-actual, so as to consider that entity in complete isolation. Whenever we think of some entity, we are asking, What is it fit for here? In a sense, every entity pervades the whole world; for this question has a definite answer for each entity in respect to any actual entity or any nexus of actual entities" (Whitehead 1978, 28). Whitehead's method here is interesting. Prehension (how stuff shows up in the world) and nexus (relations between stuff) develop from a question "What is it fit for here?". Entities arise through a problem that establishes relations

while delaying or holding in abeyance an actual answer that would solidify entities into objects. With prehensions and each moment of fit, we arrive at a relationship between the visible and invisible. The entity is never fully present nor do all its possible relationships impinge upon a particular moment of prehension or visibility.

With Whitehead, we gain a language for talking about stuff or entities while working around the problem of consciousness. What Merleau-Ponty adds to Whitehead is an understanding of the shift from object to stuff as well as a critique of presence which extends Whitehead's notion of prehensions. I would like to pursue the way prehensions work in relation to an interrogative mode. The interrogative is not simply a mode of consciousness in this case but a comportment of entities. That is, with the interrogative, there is a suspension which prevents a closure of relations and forestalls an answer to comportment itself. Stephen Laycock describes the dynamic of an open question and positions it against our more common mode of question and answer:

> We can, and we do, interrogate a mute reality which offers us only silence in response. Silence is no refutation of the question, but an index to its depth. Questions that inhabit the surface of our concerns can be "answered," abolished as questions, by repletion. But answers that obturate their questions without remainder comprise no more than "information." Such "digital" questions are minimal openings, like the negative internal space of a puzzle piece that awaits a specific extroverted form, or like a specifically designed lock that can offer itself only to a key of particular specifications, thus "giving only dead and circular replies to a dead and circular interrogation" (1999, 272).

While Laycock is concerned with questions and "answers" developed by conscious thought, his description fits with what I am suggesting here: that the interrogative is a mode of being and relations that expresses the dynamic of actual entities/actual occasions as never fully visible.

5 Stuff thinks

The implication for a posthuman phenomenology is that entities themselves pose questions. Stuff thinks—and it thinks without us shepherding beings toward being. To imply that entities think outside of human consciousness is to redefine what we might consider cognition. Generally thought entails symbol processing, be it linguistic, mathematical, or otherwise computational. The issue, then, is whether symbolization is necessary for thinking. I would like to illustrate this dilemma though an example from cartography.

In *Cognition in the Wild*, Hutchins explains how maps and charts function as computational devices: "As a physical analog of space, the chart provides and interface to a computational system in which the user's understanding of the form of the symbolic expressions (lines of position) is structurally similar to the user's understanding of the meanings of the expressions (relations among locations in the world)" (1995, 115). In order to find relations between things in the world, the navigator uses a simple tool, the parallel rule that measures distance and establishes angles for triangulating points. However, even the simple act of drawing a straight line between two points on a map is a set of symbolic computations. As Hutchins explains: "Charts were in wide use by the thirteenth century, but the most basic of plotting tools—the parallel rule—was not invented until the late sixteenth century…. Why? Because a straight line has no special meaning on an early chart. Not until the Mercator projection did a straight line have a computationally useful meaning" (1995, 113). The Mercator map provides correct angular relations between points and represents rhumb lines as straight lines. In order to do so, it has to distort physical features and equal area. Thus, the map yields some information while obscuring others. It provides an opportunity to pose a set of questions. A line on a Mercator map asks questions about distance and angular relationships. The symbolic values given by a line on a chart in meters or degrees are descriptive representations of actual entities. For convenience and practicality, the symbols are taken as answers to navigational questions. However, the line on a chart can also be considered a question itself, in which the numbers generated provide queries into actual entities. The "answer" to such questions is in the world itself and the space between actual entities. However, such an answer is never complete. To use Laycock's phrase, it is a "Silence [which] is no refutation of the question, but an index to its depth" (1999, 272). From map to landscape is a shift from points as computational objects to stuff as actual entities/actual occasions. Time shifts entities and distances, however, minutely. How one entity perceives another is an issue of "prehension." The space between entities is not vacuous but is the very real calculation of distance as distance itself at a moment or duration. As much as this distance impinges on the entities, it is visible in their perception and prehension of one another. To the degree that such distance makes no impact on them, it remains invisible.

So, for example, the measure of distance between a warm current of water and an iceberg is a perceived and felt distance by the ice. Its flow and melting are reactions to the water and response to its proximity or distance to warmth. Melting and flow are thinking—the iceberg thinking its relations and comportment. However, such thought is not abstract, transcendent, nor symbolic. Rather,

it is a relation as relation working as a set of presentations rather than representations. To characterize thought in this way means turning from thinking as descriptive to thinking as performative. Thought in such cases is the very action of its thinking rather than a characterization of actions or events.

In light of this redefinition of thought, it is worth reexamining the examples by Seamon of the place-ballet and Heidegger of the Greek temple. For Seamon the habits of routine are a particular kind of thinking in which "the body is an intelligent subject" (1980, 155). Yet the body is not alone in this thinking. For Seamon, it receives cues from the environment. So, for example, the kettle is on the stove in just the right place for coffee and the cereal on the same shelf each morning. Displacement of an object interrupts the bodily routine and corporeal intelligence. With a philosophy of something, we might push Seamon's notion a bit further by saying that the stuff itself holds memories. The worn lid of the tea kettle measures the temporality of use and the space on the shelf where the cereal box stands is itself a placeholder for breakfast. Turning to Heidegger, the earth and sky do not rely on human *techne* and the temple for their coming together (as in the fourfold). They are always already together.

Given such a way of thinking about thinking and thinking about and alongside stuff, dwelling takes on a slightly different role from that which Heidegger attributes to it. Human dwelling is a human way of thinking, but thought is not exclusive to humans. Furthermore, dwelling is how we perform our relationship to the comportment of entities rather than human shepherding over a flock of objects. To dwell is to build and move objects to set up new relations which establish new configurations of entities. To recall Heidegger's famous examples of a dam and a bridge, human objects establish a new environment that sets entities into new relations. The dam changes water levels and flora and fauna while the bridge changes relationships between stuff on the two sides by making passage easier. The buildings perform dwelling as a way of being and thinking in relation to the environment. Likewise, in the expanded definition of thinking, the environment is an active agent of entities that respond to human building with forces, tensions, marks, and crossings—physical elements that yield symbolic significance in our world.

6 Conclusions

Returning, by way of conclusion, to the issue of a minor architecture and the role of digital technologies, my attempt in these pages has been to show a path by which ubiquitous computing and sensor technologies do not have to work at the service of full presence and offer the promise of greater visibility and knowability. Rather, they may work as players alongside the already thinking entities that surround us. They may compliment and even enhance the unknowable and invisible. I'm reminded here of the film *Kasper Hauser: Every Man for Himself and God against All* (1974) by Werner Herzog about a wild boy taken into civilization. One day while on a walk, a learned professor teaches Kasper about gravity. He explains to the simpleton that apples, like those at his feet, fall because of gravity. The boy retorts that the apples fell because they were tired and they are now resting. Determined to instruct the boy, the teacher rolls an apple down a dirt lane in order to display the properties of force, inertia, and friction and to show that the apple is not resting because it is tired but is simply obeying laws of nature as discerned by science. However, the apple gets away from the professor and rolls far out of sight at which point the boy exclaims "Smart apple." How, then, might we think of a minor architecture constructing more smart apples and less learned professors? The result would be a more robust world but one in which humans function as only one of many actors.

References

Barbaras R (2000) Perception and movement: the end of the metaphysical approach. In: Evans F, Lawlor L (eds) Chiasms: Merleau-Ponty's notion of flesh. State University of New York Press, New York

Deleuze G, Guattari F (1986) Kafka: toward a minor literature. University of Minnesota Press, Minneapolis

Dreyfus HL (2006) Heidegger on the connection between nihilism, art, technology and politics. In: Guigon CB (ed) The Cambridge companion to Heidegger. Cambridge University Press, Cambridge

Heidegger M (1993a) Building, dwelling, thinking. In: Krell DF (ed) Basic writings. HarperCollins, New York

Heidegger M (1993b) The origin of the work of art. In: Krell DF (ed) Basic writings. HarperCollins, New York

Herzog W (1974) Kasper Hauser: every man for himself and god against all, US distribution 2002, Anchor Bay Entertainment

Hutchins E (1995) Cognition in the wild. MIT Press, Cambridge

Laycock SW (1999) The animal *as* animal: a pleas for open conceptuality. In: Steeves HP (ed) Animal others: on ethics, ontology and animal life. State University of New York Press, New York

Merleau-Ponty M (1962) Phenomenology of perception. Routledge, New York

Merleau-Ponty M (1964) Primacy of perception. Northwestern University Press, Evanston

Merleau-Ponty M (1968) The visible and the invisible. Northwestern University, Press Evanston

Seamon D (1980) Body-subject, time-space routines, and place-ballets. In: Buttimer A, Seamon D (eds) The human experience of space and place. St. Martins Press, New York

Whitehead AN (1978) Process and reality. Free Press, New York