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REVISITING THE HEURISTIC RELEVANCE OF THE KINESTHETIC BODY IN DRAWING FOR ARCHITECTURE

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This article foregrounds freehand drawing's untapped potential as vital interface between the body and architecture. Drawing's heuristic role is substantiated by theories of dance, drawing and architecture education, which situate the affective/haptic kinesthetic body at the center of all experience, perception and conception. The insights brought to light through these philosophical perspectives are weaved together to justify (model) drawing's significance and its capacity to transform our corporeal engagement with, and understanding of space. It establishes various points of entry into an epistemological re-evaluation of the place and pertinence of the body, drawing and sketching in architecture (education), through theories of improvisation and somaesthetics that address movement as a form of thinking.

Introduction

Throughout two decades of teaching practice in drawing and design in the context of Architecture, Design and Landscape Architecture, I have had the opportunity to observe the evolution of pedagogical approaches and objectives as they responded to technological advancements and the growing influence of consumer culture and globalization. This article aspires to respond to phenomena that have contributed to augmenting disembodied forms of knowledge and pedagogies in architecture education by dismissing the sentient moving body's capacity to produce other forms of logos and by 'normalizing' the body. It reflects on the significance and role of corporeality in architecture education and proposes that we endorse and work with the breathing, sensing and moving body as a component of lived space. Computers are rapidly replacing conventional drawing tools and methods within the discipline, providing many benefits and creative possibilities, but simultaneously eclipsing the potential specific to freehand practices. Perhaps because heuristic approaches to freehand drawing in architecture education have not metamorphosed and expanded their sphere of practices to interdisciplinary realms in response to changing cultures, exploratory drawing and sketching are fading into the background of architectural discourses and practices; one only has to tune into discussions between certain professors and professionals of architecture to realize that the *death of drawing* appears more and more ubiquitous in pedagogical discourses. Yet I contend that it is precisely this vapor-escence, this 'disappearing into the background' that imbues drawing with a potential for re-infusing the discipline.

As a student of architecture in the mid eighties, freehand drawing practices have had a determining impact on my perception of space and architecture despite its already dwindling prestige in the minds of colleagues. As I have mentioned elsewhere, studying and drawing with live models particularly correlated with and enriched my (ap)prehension and comprehension of architecture by imbuing 'line' with a mediating potential for exploring the ever-changing relations of vital body and space, gesture and thought, interior and exterior, and by analogy, the permeable contingencies of architectural boundaries. My conception of space, which until then had relied on the classical metaphor of the 'empty container' conceived through formalist and pragmatic concerns and devoid of human affect, began to appear as a chiasm between the pulsating, animate and sentient body and its environment; one that recalls the Japanese concept of 'Ma': 'at once interval, void and spacing, "between" in its fullest sense [...that] sets a breathing, a fluctuation and an incompleteness'. (Buci-Glucksman 2001: 36, my translation)

Consequently, architectural elements and surfaces resounded as permeable, resilient membranes responding to forces and energies and modulated by the interplay of my living, feeling body and the changing elements of the landscape or cityscape. Breathing body and breathing landscapes merged in the interval that vibrant architectural surfaces attempted to invoke and mediate in attunement with my own affects, in my design practice. This conception continued to evolve as I acquired tacit bodily awareness and knowledge, derived from an ongoing active experience of drawing from/with the human body in its affective kinaesthetic relation to forces of space, light, sound and matter. I found myself particularly engaged in gesture drawing in which the gestures of the moving body and those of the drawing hand correlated in a form of relational dance in a wandering/wondering of vital space that engaged directly in an exploration of time. The *skin* of the body offered another understanding of boundaries as vibrant and highly responsive to micro-movements and inner felt forces in their fusion with the environment. Nothing appeared fixed anymore, nor bodies, nor space: not even in stillness. My conception of the body, space and architecture as developed in this article, is an inflection and extension of this experience.

Since then, however, the pedagogical situation has significantly changed. Freehand drawing courses have been generally minimized; what ensues on the part of certain students is an often unsubstantiated disinterest. Fortunately, however, I am reminded by students, year after year, that many, despite some ongoing scepticism within the discipline, are moved and inspired by the shift away from cognitive emphasis into new territories. Sadly, most of those students will likely never have the opportunity to experience the state of freedom that emerges from long-term practice, as I have experienced as a student.

Drawing's Role in Architecture Education

Architecture education is a discipline that has long evolved primarily through representation. Practical learning takes place through visual studies and various conventions of drawing, model making and now virtual spatial simulation often generated by computational processes. Tools and practices of exploration and representation have a direct influence on the perception of space and the development of projects within the discipline. Practices currently in effect seem to reflect a prevalent design attitude in which freehand drawing and the live, kinaesthetic body, as medium for spatial exploration and perception, is often set aside in favour of conceptual and digital processes of design. In the last centuries the role of the human figure has also mainly been representative, figural and metaphorical within the discipline; it has predominantly been depicted as an inanimate and disconnected measuring device, establishing scale, proportion and depth in static architectural re-presentations, or at best, as an analogy for architecture itself. More recent practices have shown a renewed interest in bringing the animate body back into design processes by engaging with the potentiality of movement and transformation through theories of emergence¹ as in the work of Greg Lynn or Lars Spuybroek. Others, such as Liebeskind, Hedjuk and Diller + Scofidio, address issues of embodiment by exploiting participative or interactive *performative* strategies². I believe, however, that most underlying design *processes* continue to engage with the body from an intellectual and conceptual perspective that sustains a chasm between theory and practice, text and body.

Bodies are absent in architecture, but they remain architecture's unspoken condition [...] To merely say that there is a body is not yet to deal with it. Bodies are there in a way that architects don't want, or can't afford to recognize. But the body is there in an incontrovertible way. The point is to affirm that it's there, and to find the right kind of terms and values by which to make it profitable for architecture to think its own in investments of corporeality. (Grosz 2001: 14)

Grosz argues that architecture has neglected the dimension of time and duration and has reduced temporality to its quantifiable measure: to space. She insists that architecture must engage with time, change and emergence as an integral aspect of processes of design. The philosophical perspective that sustains this essay reaches beyond a purely cognitive and linguistic understanding of the conception process by emphasizing the importance of felt relations in our experience of/with the environment and the *other* as the primary source of all conceptualisation. It addresses the concept of the 'body' as more-

¹ Emergence theory normally appears in architecture in relation to generative or interactive computational systems. The system generates processes that interact with given parameters (at times gleaned from patterns of bodily movements or social behaviour) to produce organizational complexes that are then translated into built form. (Ednie-Brown 2007)

² Sam Spurr has elaborated on these practices in her doctoral thesis entitled *Performative Architecture* (Spurr 2007).

than-human, as a relational field that includes the body and the world always in co-composition; a concept that Erin Manning has coined *bodying* (as opposed to *embodiment*): a body in-forming rather than formed, a 'thinking in movement' beyond the sensorimotor. This conception distances itself from any understanding of the body in phenomenological terms as the pre-formed centred subject from which all experience emanates, to approach the body as but one element or instance in a relational network of always co-evolving experiences.³ The article argues for the reconsideration and enforcement of complementary practices that could inform and substantiate prevalent conceptual approaches by reinstating the moving collective body in processes that engage directly with an exploration of time, and sensory-kinetic experience in architecture education. I contend that a heightened attunement to the immediacy and relationality of experience, could only enrich students' ability to perceive, conceive of and manipulate the complex potentialities of movement and consequently of body-space relations as well as the thinking-drawing process underpinning architectural conception.

This text, therefore, examines possibilities and ways of heightening one's corporeal, micro gestural awareness of space by considering *drawing-as-dance*. Drawing-as-dance aspires to engender a mode of doing/thinking that draws on different modalities across various fields of rhythmic activity and sensibility to explore the dynamic interval between/across cognitive and felt bodily knowledge. Dance is, in the context of this thesis, first of all an analogy that anticipates the potentialities of drawing; it seeks to open venues onto alternate drawing practices enabling the exploration of tacit bodily knowledge implicit in dance to shed light on the kinetic body's relation with space. It looks to dance and improvisation, and their pedagogical potential as both a sensory action-based paradigm for drawing and as a window into an understanding of felt space. By engaging with modes of *thinking in/as movement* it seeks to explore the *collaborative* potential of dance and drawing to generate intersubjective experiences of implicit relational knowing. In dance space is internalized and becomes a medium perceived through and shaped by gestures: relations of spatial forces and tensions (in excess of the sensorimotor). Dance engages with the essence of movement that is the very basis of the possibility of its spatial modulation and that reveals dynamic forms of vitality emerging from authentic felt experience as a result of creativity, responsiveness and, at times, intentionality. Drawing-as-dance, by appropriating inherent dynamic qualities of dance as improvised event, proposes to seize the temporality of intangible intervals in its formless tracings of bodying forces and movements so as to provide insights into the nature of vital space. In the following statement, Pirson evokes a sense of the spatial affinities of dance to architecture that stands as a point of departure for a drawing inquiry:

Dance and architecture are two ways of capturing space from the fugacity of one to the stability of the other. What we perceive stretches between the instant and the durable. In dance, bodies in movement activate sequences of spaces that follow each other over time. Any form is born of the disappearance of the previous form and in turn germinates the next. In architecture, the play of voids and fully articulate sequences of spaces that coexist and are experienced in the passage from one to the other thus generate the sense of inside and outside. What is played on in the coming and going between the two disciplines, and with a view to habitation, is finally the always greater relativity of the references and possibilities of moving towards other signatures of space, where the

³ I will consequently use the term 'bodied' to differentiate from the phenomenological implications of embodiment.

question of the flows of the living would dominate those of the forms of the material.
(Pirson 2011: 175, my translation)

Drawing-as-dance not only involves a form of kinetic feeling-thinking but may also inform the process of conceptual thinking that is itself constituted of movements, rhythms and tensions meaningful primarily as a projection of our (in)corporeal experience.

Kinetic Bodily Logos

In her article *Thinking in Movement* Sheets-Johnstone claims that thinking and doing, perception and movement, are inseparable aspects of a natural *kinetic bodily logos*. 'Movement is not a medium by which thoughts emerge but rather thoughts themselves, significations in the flesh'. (Sheets-Johnstone 1981: 400) She questions the assumptions that thinking is invariably tied to language and rationality and dependent on a symbolic system, and contends rather that thinking in/as movement is a particular kind of rationality or kinetic intelligence. This thinking that responds to evolving situations, is a 'process, which develops its own logic or integrity' on the basis of an implicit bodily logos. She examines the paradigm of *thinking in movement* through the practice of dance *improvisation*. A spontaneous and unrehearsed form of dance experienced in its immediacy, improvisation is the 'incarnation of creativity as process'. The on-going flow of movement experienced as an ever-changing present is a process of thinking in movement that continually opens onto future possibilities, arising and dissolving in a fluid complex of relationships and qualities.

[In improvising] I am wondering the world directly, in movement. I am actively exploring its possibilities and what I perceive in the course of that exploration is enfolded in the very process of my moving. (Sheets-Johnstone 2009: 31)

She distinguishes improvisation as the creation of dance as *process*, from non-improvisation or the creation of dance as *product*. The former is 'thought in action', the latter, 'thought about action'. Improvisation requires a unity of bodies and mind, it must become the *plane of immanence* on which thought and feeling fuse one with the other.

*That the dancer is thinking in movement does not mean that the dancer is thinking by means of movement or that her/his thoughts are **being transcribed** into movement. To think is first of all to be caught up in a flow of thought; thinking is itself, by its very nature, kinetic. It moves forward, backward, digressively, quickly, slowly, narrowly, suddenly, hesitantly, blindly, confusedly, penetratingly. What is distinctive about thinking in movement is that not only is the flow of thought kinetic, but the thought itself is. It is motional through and through, at once spatial, temporal, dynamic. (ibid.: 30, original emphasis)*

It is of course possible that thoughts emerge autonomously during the process, intruding on the ongoing flow; but these, she claims, are 'spin-offs' of thinking in movement rather than the result of a mental process. Movement does not designate thought but becomes the presence of that thought. It is a form of rationality or kinetic intelligence, borne of a *kinetic bodily logos* that is non-symbolic, nonlinear, non-propositional. It is a bodily-force 'shaping and being shaped by developing dynamic patterns in which it is living; the body is a body that 'knows what to do'. (ibid.: 33) 'Thought is grounded [...] in the tensional relations and orientations interior to living beings between affect and perception'. (Grosz 2017: 188)

Liberated from representation and meaning, it is 'given back its capacity to affect transformation' and metamorphoses. Movement is an encounter with the outside, as a virtual condition of the inside or as the unthought. Thought folds back onto itself transformed.

An understanding of the concept of kinetic bodily logos sheds light on the very nature of sketching as thought in action in this essay; and the potential of improvisation is paramount in the exploration of heuristic drawing practices in architecture education as well. What the concept introduces in the context of this thesis is an understanding of *thought as movement*, which can be projected into conceptual forms of thinking in the design process, through sketching. Drawing-as-dance opens venues onto the nature of thinking, and perceiving *of*, and *in* movement, that can shift attention away from cognitive focuses to a more bodied awareness of experiential processes of drawing (and thinking) that sustain creativity in architectural conception, by activating corporeal memory and knowledge. But what induces the impulse to move once intention has been put on hold? Stern argues that vitality is the sense modality that constitutes the primary qualitative dynamic force impelling us into, and sustaining movement.

Vitality and Affect Attunement

To expose the full significance of the concept of *vitality* in the context of drawing and dance, I turn to Daniel Stern's essay entitled *Forms of Vitality*. Stern considers dynamic vitality forms as the sixth sensory modality that 'senses the duration, speed and time-shape of the force making up felt events'. These vitality forms give temporal shape to bodying as it is acted.

Vitality dynamics refer mainly to the shifts in forces felt to be acting during an event in motion, and thus focus more on the dynamic qualities of the experience, in particular the profile of the fluctuations in excitement, interest, and aliveness. (Stern 2010: 45)

They are also the basis of mnemonic recollection and imagination, calling forth memories through actions that awaken those of past experiences and project them into potential virtual futures. Stern states: 'Dynamic forms of vitality provide another path [...] to access non-conscious past experience, including memories, dissociated experiences, phenomenological experience, past experience known implicitly and never verbalized'. (ibid.: 11) Vitality is therefore the means by which one can enter into the space of drawing and by which one can understand drawing as dance or as an expression of architecting potentiality. The very nature of this understanding is grounded in the *meta-modal* relationshipscape of vitality forms: it connects different art forms to explore the generative effects of their encounter and therefore, depends on their cross-modal fluency to lead them beyond their individual forms.

"Correspondences" between art forms are necessarily created because of the meta-modal nature of vitality forms that assure a common ability to render similar, but not identical, experiences [...] when different art forms are juxtaposed, certain aspects do not translate well from one form to the next [...but] vitality forms are readily transferable between art forms – in large part because of their meta-modality and potential speed of modulation. (ibid.: 78)

Each art form has developed its own technique to code or create the same forms of vitality, shared by all through the meta-modal phenomena. What they all have in common is their impetus to sound the affective dimension of human experience.

Affect attunement is another concept that proves pertinent, especially in relation to improvisation techniques introduced below as the basis of potential heuristic drawing practices. We become aware of our vitality both subjectively and intersubjectively, through our affective attunement with others. In being attuned to others' felt experiences, we share dynamic forms of vitality, but across different modalities. Stern refers to this innate cross-modal fluency as a form of *amodal perception*. He claims that amodal perception is fundamentally affective and pertains to the force or patterns of relations experienced as vitality affects. Intersubjectivity is a 'time-intensity coupling' in which dynamic forms are crucial.

Affect attunement creates and sustains a vital running dialogue of affective exchange that can lead to forms of *implicit relational knowing*: a process by which concepts and abstractions occur when one enacts an aspect of a relationship in a new way without it being reflected upon and verbalized. I contend that both dance and freehand drawing engage in dynamic forms of vitality that are somewhat curtailed in today's prevailing digital drawing processes, attitudes toward the experience of architecture, and pedagogical approaches. Could engaging in collaborative improvisation between dancing and drawing perhaps heighten the student's sensitivity to dynamic forms of vitality inherent in the process of dance and thereby generate intersubjective experiences of implicit relational knowing in the act of responsive drawing, that would move the student towards other understandings of space and *flows of living form*?

Drawing as a Heuristic Tool

As I have mentioned earlier, freehand drawing practices (and particularly model drawing) in architecture education have suffered a rapid and substantial depletion and decline, to which I have been witness, in the last decade. Current controversies and debates maintain the practice of drawing in suspension but its future seems precarious. It seems perhaps difficult to comprehend, in light of the role and significance of the body and kinaesthetic experience, how its relevance can be seriously questioned. But I believe drawing will only become indubitably pertinent when implemented in a sustained and substantial manner that enables it to reach a new heuristic plateau from which a transformative potential generated through bodying can carry the conception process.

In the architecture curriculum, the freehand model-drawing studio often precariously remains one of the few places where bodying can be consciously experienced as a vital movement through drawing. In gesture drawing, the moving body is intentionally studied and its meaning brought to consciousness as the basis of our understanding of living space. Drawing goes beyond mere visual representation by bringing the student back to his own bodily response time. His/her senses are solicited in attunement with the model's through kinetic empathy⁴. S/he strives to feel and capture the vitality, energy and intensity of forces, tensions and releases that underlie the model's movement in his/her interaction with space rather than seek to simply delimit form. S/he reciprocates with his/her own body interpreting and improvising through various mediums this body-space relation in human time and depth, and leaving

⁴ Studies in neuroscience also suggest that through the phenomena of mirror-neurons 'to see another person perform an action activates some of the same sensorimotor areas, *as if* the observer herself were performing the action.' (Johnson 2007: 161, original emphasis) Susan Leigh Foster further points out the anticipatory function of mirror neurons whereby 'watching a dance [is] a continual conjecturing of possible arcs and flows'. (Leigh Foster 2011: 167) Empathy, therefore, activates our ability to predict the actions of others (but in our own individualized and culturally specific manner): what will happen if they move in a certain way.

traces of the intersubjective experience of shared vital movement in its act of appearance / disappearance. Drawing as trace becomes a coalescence of fluxes or forces ensuing from a continuity of instants past and simultaneously projected into imminent potentialities that activate the space. The lines that mark the surface invariably collide, cross and cumulate in junctions that absorb and transfer these forces in space. I contend that drawing immersed in the intensity of felt movement can bring forth and explore tacit knowledge in insightful and new ways. Perhaps model drawing revisited and projected into the contemporary situation may have untapped potential as a heuristic tool in architecture education; and this question has sustained my teaching practice for some time.

Every year as I stand before a new cohort of young, ambitious and motivated future architects, I introduce my drawing course by quoting Laurent Alberti:

Drawing is understanding. Scarpa would say to his students when they were asked to draw together: "let us think". Drawing is a relentless wandering of the surface until the accurate line emerges. Its very appearance enables an understanding of the manner in which built parts link together. There is a certain serenity in the sensation of having seized through drawing, the logic of architecture, it is a calming comprehension. (my translation)

Delving deeper into the potential nature of drawing (sketching) in its phases of pure creative or conceptual exploration, one might advance that it is not so much about the making of form but rather the coming into appearance, the *becoming* of form or, as Nancy has so eloquently argued, *formative form*: form forming itself. Beyond its formal intentions and purposes, sketching concerns a single process:

That of rendering an event (circumstance) of the world (a volume, a displacement, a weight, a mixture, an inflection, etc.) to its pure, originary possibility, to an uprising (surgissement) that owes nothing more to any use or perception than its coming, its sudden arising (survenue), which does nothing but make further demands on itself. (Nancy 2013: 94)

Line, Nancy states:

is not a poor resource for designating as its origin this point of contact between thought and a gesture, between a sensibility and an activity, this indivisible and mobile point where a form and with it a manner are born - all the maneuverability and joint manipulations of what is put into action, in other words, bringing into appearance what is not hidden or given but invents itself in its gesture. (ibid.: 101)

Drawing is not only an expression of thought I explain to the students, but thought (and at times, understanding) itself, in the sense argued above through Sheets-Johnstone. My task is to help students discover what this means for each of them in the most authentic and idiosyncratic way so that they might appropriate drawing as a natural extension of themselves; and an act of affirmation and joy in the Spinozian sense! To achieve this, as any drawing teacher knows, requires dismantling preconceptions and (motor) habits. The best approaches to date still seem to rely on the thesis of the 'right

hemisphere⁵. But most of my introduction to a course that incorporates the live model as a pedagogical medium, is invested in conveying the role of the 'naked body' in such an endeavour, to an often sceptic group of analytically minded and often neoliberal students. Part of my efforts goes into 'reawakening' an awareness of the primordial place of the kinaesthetic body in architecture, of the conjunctive nature of the body-architecture coupling. In order to do so I often use the analogy of the musical instrument (the *string base* more specifically) in which the strings play the part of the fiddling bodies and the casing (or resonance chamber), that of architecture. It is the coupling of an attentively-shaped body of matter with fine-tuned strings that together create harmonious relations and resonances, and that enables indefinite variations. Resonance is the condition of all perception, Nancy claims; each sense vibrates differently among each other, including the sense of meaning. But the sonorous paradigm plays an important role in our understanding of resonance in that it is its most obvious felt manifestation, to which other sense modalities co-respond. Nancy extends this analogy to the body, as drum:

Isn't the space of the listening body, in turn, just such a hollow column over which a skin is stretched, [...] A blow from outside, clamor from within, this sonorous, sonorized body undertakes a simultaneous listening to "self" and to a "world" that are both in resonance. It becomes distressed (tightens) and it rejoices (dilates). It listens to itself becoming distressed and rejoicing, it enjoys and is distressed at the very listening where the distant resounds in the closest. (Nancy 2007: 43)

The body is permeable; it opens up to the very possibility of the sense of self by immediating resonances within and without. It is vibrant and resonant: a continually metamorphosing, feeling-'speaking' organism of rhythms, pulsations, contracting, shivering and breathing in and with its surroundings. It exposes itself to others by sharing its timbre. It is in fact not a *body-instrument* 'organized toward a purpose or function' but a *body-potency*. (ibid.: 78)

The live model therefore can convey an understanding of our affective relation with architecture as a measure of its vitality. But it can also bring us to foundational or structural understandings of architectural phenomena, as dancer, theorist Sondra Fraleigh insinuates:

The arch of the dancer's back imparts a totally different feeling than an arch of steel, plastic or concrete. The arch of a dancer's back is formed of our own body-of-space. We feel the lifting and arching through our own embodiment - through which, in our lifted, back-arched leaning we also feel the upward soaring and backward leaning arch of steel. Our body-of-space is the origin for our perception and understanding of space in general. (Fraleigh 1987: 181)

And so my course introduction concludes by asking students to abstain from broaching the nude model (dancer) conventionally as an object to represent, and to attune themselves to its bodying in search of

⁵ The thesis of the 'right hemisphere' was appropriated and developed (in the context of drawing pedagogy) by Betty Edwards (1979) and more recently by Zomerén and Brouwer (1994). It basically distinguishes the right hemisphere (as a qualitative faculty: of perception, intuition, sensation, metaphor, imagination, connectivity, etc.) and the left hemisphere (a quantitative faculty: analytical, sequential, mathematical, verbal, etc.) and advocates a greater development of the former, which is generally underexercised in western society. Cognitive scientists Nisbett and Miyamoto (2005) attribute this difference to cultural influences arguing that Asian societies tend to converge perception on object-context *relations* holistically whereas westerners tend to focus on *objects* analytically and detached from their context.

relations and qualitative dimensions that may in the end help them ‘feel-think’ space (in)corporeally as conducive to vital life forms and events.

Langer contends that the ‘virtual power’ through which all the vital movements of dancers respond and interact in a performance, are generated by forces that operate beyond the physical gestures of the body. In experiencing a performance we perceive not only the continuum of physical movements of dancers but the display of forces of volition that magnetize, push and pull, orient, drive and whirl the bodies. (Langer 1953) Similarly, the ‘space of the body’ postulated by Gil & Lepecki, created by, or emerging from the movements of the body is an intensified one, invested with affects and forces that imbue it, and the objects within it, with a diversity of textures and emotions. (Gil & Lepecki 2006) The dancer explores the extensity of the space of his/her moving body and in so doing enables one to perceive the limits at which intensities culminate or fade thereby exposing potential virtual interfaces with which architecture engages to maximize vital energies. Exploring this ‘space of the body’ in drawing seeks to unveil the potential vital quality of the spatial interval that relates architecture to the body and to develop in the student, an awareness of space in its ‘aliveness’.

Langer and Gil’s view of the body foregrounds the shift away from the phenomenological body in which immediate experience is *embodied*, centred in, or reduced to the human subject. The body is understood rather as only one element participating in a larger ‘agencement’ of bodies that includes the more-than-human: the environment, the non-human, the collectively shared movement of the world. Forces act with and across bodies, tendencies unfold towards an outside, towards that which exceeds boundaries, and infold back transformed by the forces of qualitative differentials. In this view a finer attunement to that which moves (with) bodies at the micro level is required: that which push-pulls drawing across new thresholds of experience and makes felt the vitality of movements of passage resonating and co-evolving in-fusion.

Unlike traditional ‘gesture drawing’ in which students draw the model once the movement has come to a stop, I have begun to explore pedagogical possibilities of what I call *gestural* drawing that seeks to foreground continuous movement and process. It continues to draw from a spontaneous haptic and ‘mimetic’ improvisational response to the tensions, efforts and resonances generated by the dancer’s movement but students also attempt to seize the indeterminate flows, rhythms and/or continuity of movement that constitute the *space of the body*. Short interruptions of movement are addressed as intervals of potentiality across which students surf, attuning themselves to the incipency of potential virtual actions, as opposed to fixing form in space. Various drawing exercises are initiated in an improvisational manner as the dancer is in continuous motion. Students, for example, may be asked to let their arm/body respond to, and ‘dance’ with the model in an improvised duet; they may be asked to tune into the centre of gravity of the dancer (usually the pelvis or torso⁶) and to carry the rhythm that subtends the whole movement, i.e. to draw the movement rather than the body; they may be asked to connect to the forces that affect and are affected by the body-environment coupling, attending to their points or surfaces of encounter. Other exercises direct students to the space activated through and

⁶ The dancers are normally briefed as to the objectives of exercises before the class begins. I have been working with certain dancers over a decade or two and have developed a complicity and understanding that enables me to experiment freely and effectively.

around the dancer, whereas still others may involve the movement or continuous displacements of students as they draw.

I have just begun to lay out the grounds and a framework for alternate drawing approaches by invoking the practice of dance improvisation and of a somatic temporal (rather than traditionally spatial) awareness that could sustain such a mode of exploration. The essential nature of the dance improvisational process and the optimal 'state of mind' needed to translate it into an act of drawing is evoked by dancer and scholar, Cooper Albright:

*Improvisation is a philosophy of life [...] it is a way of relating to movement and experience: a willingness to explore the realm of possibility, not in order to find the correct solution, but simply to find **out** [...] a willingness to cross over into uncomfortable territories, to move in the face of fear, of what is unknown. This willingness is made possible by the paradoxically simple and yet quite sophisticated ability to be at once external and internal – both open to the world and grounded in an awareness of one's ongoing experience. "Dwelling in Possibility" refers to this dual experience of being present "here" in order to be able to imagine what could happen out "there" [...] Dwelling is a heightened experience of inhabiting – fully and consciously – such that space becomes more than the sum of its parts, such that space **makes things happen**. (Cooper Albright 2003: 259, original emphasis)*

Improvisation, Cooper Albright contends, seeks to release the 'minded body' from habitual responses, expectations, and preconceptions through a suspended attentiveness and a somatic engagement that transforms the psychic organization. It is an act of relating and creating new relations that can reconfigure the very significance of relationships. Improvisation is a means of being present in the moment, of experiencing freedom and the distilled energy that it produces and engages with. In the spirit of Crary's *suspension of perception*⁷, it channels our awareness of the world and is simultaneously a detachment from it, enabling one to inhabit metamorphoses. Nancy refers to the holistic state of mind induced by somatic awareness in improvisation, as the state of *listening*:

To listen is to be straining [in tension-intension] toward a possible meaning, and consequently, one that is not immediately accessible [...it] is always to be on the edge of a resonant meaning, a meaning whose sense is supposed to be found in resonance, and only in resonance. (Nancy 2015: 18)

Bringing students that are intensely embedded in pragmatic, technical and scientific thinking processes and the philosophical perspectives that these may entail, into somatically aware states of mind can prove quite challenging. But perhaps more difficult still, is convincing students that are versed in the frenzy of the vertiginous acceleration of information processing and media onslaught, to embrace *stillness* and the silent discourse of (in)corporeal attunement, and to shift from the left to the right hemisphere. The one medium, albeit different in kind, that still seems to resonate and to link their

⁷ In his study of the paradigms of *attention*, Jonathon Crary proposes modes of attention conducive to transformative forms of experience that I contend can be actualized in drawing processes. The author advocates a mediate position that veers toward a state of *suspension* in which resonates a tension, a stillness, the wonder of contemplation at once immobile and ungrounded, and at the same time, an interruption, a disturbance: 'a perception that can be both an absorption and an absence or deferral'. (Crary 1999: 10)

worlds to that of drawing as advanced in this article is kinetic vitality itself. Movement is, therefore, central to heuristic practices: it is through movement that stillness⁸ will be accessed; that sensations will occur; that gestures and flows will emerge and fuse with thinking; that body awareness will develop; that feelings-with will arise; and that space-time will come to life. It is off movements that thoughts will spin; that relations and dissonances will be perceived. It is also in collective eventfulness that affect attunements will form and implicit relational knowledge develop. Drawing reinvested in the affective kinaesthetic bodied relationscape, I believe, could become a tracing of intensities, a mobilization of deferral, a metaphor of future possibilities, that could unveil the infinite potentiality of other flows of living and expand students' horizons in their experience and perception of space as *duration*: not a homogeneous, smooth, linear space reduced to its quantifiable measure but a 'multiplicity of succession, heterogeneity, differences in kind and qualitative differences [...] a moment of becoming, of opening up and proliferation, a passage from one space to another, a space of change, which changes with time'. (Grosz 2000: 114)

Conclusion

Freehand drawing is part of a significant heritage that has sustained the practice of architecture from its very inception. The presence of digital technologies does not revoke its role as a meaningful interface between corporeal sentience and built form. The practice of architecture as performance is a perpetual enmeshing of many planes of emergence of which drawing as instigation and trace of bodying can be a significant component. This article has attempted to adumbrate a philosophical view of the body that vindicates the value of drawing in architecture education by turning first to Maxine Sheets-Johnstone's insights into movement, as a form of bodying that yields natural *kinetic bodily logos*. It then looked at Daniel Stern's concept of *amodal* perception that, as a result of affective attunement with others, produces *implicit relational knowledge*: a form of knowledge that involves *dynamic forms of vitality* which can be traced back to movement and the perception of inner forces. These theses were further substantiated by insights into *improvisation* from the perspective of dance practitioner Cooper Albright. The essay concludes by broaching the question of drawing as a heuristic tool in architecture education, taking *gestural drawing* and *improvisation* as potential springboards for explorations of bodied forms of knowledge. *Drawing-as-dance* here aspires to open venues onto alternate drawing approaches that might enable the exploration of tacit bodily knowledge implicit in other disciplines to reveal the kinaesthetic nature of the body's relation to space, in response to seemingly prevailing forms of disembodied practices in architecture education.

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⁸ Stillness here is understood in Lepecki's sense : nor pose/pause nor fixity but a 'still point which, at the moment, appears to possess all the vibratile contours of a fluttering *punctum* [...] propelling signification into vertiginous motion while it stays put, vibrating, *there*'. (Lepecki 2000: 334, original emphasis)

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