

# **From the Sensory to the Rational – Between Embodied Experience and Disembodied Knowledge/Theory.**

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In Systems Research and Cybernetics. IAS - InterSymp 2009.

## **Abstract**

This project exists as an ongoing art and science collaboration between an urban meteorologist, a designer and composer/sound artist. Together we have embarked on a journey to explore modes of data representation, which connect the personal with the scientific, the sensory experience with the rational. The understanding of complex events and processes, involves a unique interaction of sensory, aesthetic, analytical and rational faculties. Through discussion and practical experimentation the project merges different realms of perception in order to contextualise urban climatic phenomena with narrative structures, sensory experience and ambience. The project aims to discover and provoke discussion that is concerned with complex climatic processes in our urban environment such as temperature dynamics within built up areas. Through the use of an evocative audio-visual ‘Ice – Traffic’ installation, with image projections onto ice, we intend to share insights into the challenges of understanding localised phenomena within a global context. The paper explores key questions and aspects of the collaborative cross-disciplinary exploratory dialogue and methods of investigation. It contextualises both interim and projected outcomes. By locating the research in public spaces the project aims to generate a more inclusive debate, with potential to reach beyond the usual peer group discussion.

## **Keywords**

Interdisciplinary (Art and Science) Collaboration, Exploratory Dialogue, Interaction of the Sensory and the Rational, Modes of Representation, Interlocking Dynamic Systems, Urban Climate Impact.

## **Introduction**

The cross-disciplinary collaboration, *The Breathing City* project, is concerned with issues of communication and representation of scientific data through artistic practice. The project brings together diverse fields of research and practice. These include; data representation and interrogation, sonic design, audio-visual composition, narrative structure, material practice, sensory experience and evocation, cognition, urban meteorology and pollution dispersion; within a creative and exploratory dialogue. The project explores how within the built-up environment humans filter and process sensory experiences. Understanding complex events and processes involves a unique interaction of the sensory, aesthetic, analytical and rational faculties. To witness complex systems in nature, such as flowing air currents above a city or the formation of clouds, can be at once highly evocative, while being illustrative of a naturally occurring process that is understood in science through the analysis of data. However, data is not information - it becomes information through translation (i.e. language or other forms of representation). In order to grasp data and to construct meaning we rely to a large extent on metaphorical expressions to communicate ideas to form constructs or theories.

## **Interaction of Sensory and Rational**

The practices within art and science may seem initially to be on the opposite ends of a spectrum, yet the coming together and exploration of shared concerns through exploratory dialogue and creative experimentations led us in our collaboration to use installation practice as a negotiation space, which enables us to create a place of empathy and a forum for the consideration of sharing embodied knowledge. Artistic practice employs thinking through and making before, or outside of, spoken language; thinking and reflection grounded in the physicality and sensuality of the body and the embodied brain. While in the arts such practice is established, to a large extent it appears quite alien (however intriguing) within a scientific process. Creative practice employs exploration of emotion, memory and movement in space and time, together with inflections from the unconscious, which together provide the basis for understanding and higher levels of conceptualisation through (embodied) metaphorical structures.

That the still widely accepted (and in the Cartesian dualism rooted) bifurcation of the person into mind and body, “that separates the mind as rational, thinking, immaterial and private from the body as an irrational, corrupt, and physical substance” (Gibbs, 2006: 4) leads us to the concluding/postulated hypothesis that while artists are mainly concerned with the sensory, emotional and irrational, the scientist is concerned with the rational, is questionable. Lakoff and Johnson claim to disprove the disembodied mind or ‘soul’ by re-imagining ‘transcendence’ as ‘imaginative empathetic projection’ (Hogan, 1999). “The mind is inherently embodied. Thought is mostly unconscious. Abstract concepts are largely metaphorical” (Lakoff and Johnson, 1999: 3). “Reason is not disembodied, as the tradition has largely held, but arises from the nature of our brains, bodies, and bodily experience” (Lakoff and Johnson, 1999: 4).

If this is true, as Lakoff and Johnson argue, then we need to question a number of issues: e.g., the relationship of disembodied theories and their reliance on metaphorical expression in order to construct meaning; and the representation of data and time in relationship to ourselves. This might raise deep and considerable discrepancies in our ability to find the right languages in order to communicate complex phenomena. The challenge is to find a way that enables a sympathetic engagement of all faculties, and the engagement has to extend beyond the peer group. Discrepancies here need to be respected, since at the beginning and centre of any cross-disciplinary collaboration is the concern to find a shared vocabulary and basis to be able to establish an effective way of communicating. This work needs to go beyond established ‘insider talk’ within peer groups; it is a considerable challenge and requires discovering and agreeing new forms and ways to communicate to reach understanding.

“Embodiment may not provide the single foundation for all thought and language, but it is an essential part of the perceptual and cognitive processes by which we make sense of our experiences in the world” (Gibbs, 2006: 3).

## **(Embodied) Modes of Representation**

To create an audio-visual physical installation appeared to be the most appropriate practice within which to locate our debate, experimentation and exploration. By juxtaposing the embodied and disembodied elements in their constructed

constellation, the design of the interaction space expresses, represents and associates common and shared concerns between the collaborators.

Having initially started with sound and still images, the progression to experiment with ice, image projections, soundscape composition and ambience as an installation piece seemed a necessary step to develop an collaborative practice for further reflection on the principles articulated above. It is grounded in physicality as a form of expression appealing to emotions, evoking memories and thoughts, encouraging and enabling placements and movements in space and time. “In moving we come back to the body – it helps us to feel through our senses again. This sense of embodiment profoundly affects how we enter and explore whatever we do or make” (Tufnell and Crickmay, 2004: 43). This form of experimentation is intended to reach beyond the realm of our individual research practices and forces us to enter new territory. It requires re-orientation and re-thinking of established assumptions and questions our established ways of communication and use of language(s).

Through the installation project we aim to create a more common basis for experiential understanding, by engaging in an artistic process of developing multi-sensory modes of representation – through sound, space, moving image, elemental/ephemeral material (ice) and to communicate in a more evocative, symbolic way to non-experts and experts alike, which will lead to a wider and more inclusive debate. We are creating an installation that experiments with an innovative/unusual combination and use of materials. The central focus is a projection of fast-moving (time-lapsed) images of urban movement/traffic on to a mass of ice. This will be combined with a multi-channel soundscape composition consisting of processed live urban location recordings with sounds of breathing and water. Live sound and moving image location recordings from New York’s Brooklyn Bridge and street crossings in central London and from the British Telecommunication Tower and City of Westminster Council rooftop, where live data recordings of atmospheric conditions are continuously being monitored.

The project involves experimentation and essential testing of ideas, into how recorded data of complex dynamic systems can be physically represented and understood. The project has evolved and reached a point where we need to experiment in a gallery space, which will promote and provide the opportunity to physically and intellectually test out our ideas in a gallery context/setting. We will be experimenting with scale and time-based processes by producing scaled prototypes of various sized ice masses. The installation will be time-based – initially calculated on a dynamic temperature model but ultimately determined by the real time duration of melting ice. Therefore an unknowable element is integral to the project that creates indeterminacy and fascination. We believe the installation work will develop upon our artistic practice and have a considerable visual, aural emotive, intellectual and physical impact and debate.

The installation is intended to be an embodied representation of a dynamic urban climate model (energy transfer due to melting ice) through the use of key elements: ice, moving images, sound within an ambience. The displacement of these elements within a new contextual space are intended to provoke a sense of disorientation, by providing the observer with the possibility of re-mapping their experience. An important provocative aspect of the installation’s conceptual design is the disruption of experience through displacement. This displacement could lead to a lowering of

association barriers, making new experiences through common and familiar elements. The evocative combination of ice with very fast moving image projections ('image bombardment') of traffic and the illusion of traffic melting ice, brings together geographically dispersed elements within a new contextual setting. The displacement of the ice mass, a symbolically 'charged', elemental object can provoke and evoke strong reactions from our deep-rooted experiential, archetypal relationship and knowledge. "Objects or words taken out of their everyday context may acquire a potency that is not ordinarily evident – yet in their new context they acquire a new, charged meaning" (Dissanayake, 1988: 84). We had considered the use of different materials and the effect of their properties. None excited us as much as the choice of ice, an ideal medium to convey our ideas. We found it extremely evocative, full of associative and poetic potential, embodying metaphorically a symbolic dynamic climate model, central to our discussions and experimental practice.

### **Inappropriate metaphors towards Climate Crisis Debate**

"Embodied experience alone will not provide the conceptual and linguistic capital necessary for recognizing the (double bind) thinking that limits our ability to renew the intergenerational patterns of self-sufficiency and mutual support that represent alternatives to the industrial/consumer lifestyle that is moving us closer to the tipping point that will have huge consequences for the embodied experience of the individual" (Bowers, 2008: 7).

The basis of our behaviours and the thinking that may underpin metaphors must migrate away from attempts to 'read' notions of information from a mechanistic world towards an understanding of what it means to inhabit the anticipatory world we move towards and intend to meet. Since fundamental aspects of our embodied life such as the action of walking are based upon this anticipatory paradigm, it follows that other processes of successful or continued embodied relationships in the broader context of the carrying capacity of the global planetary energy system must similarly resonate within this anticipatory domain. We also know that the manner in which something is introduced to us will condition the expectations that arise, and that such expectations condition our actions.

Once we 'feel' a mismatch between behaviour and consequence, a change of behaviour becomes actually possible and likely. To have this mismatch merely described, however carefully and fully, has little effect; this much we know from the last thirty or so years of climate change discussion. While language may connect data to perception, this is an area of negotiation and assumptions must be critiqued. Since language and data are not to be confused or conflated with each other, a navigable experiential space has to be imagined. The perceptual co-construction enabled by such a space may draw upon resources of multiple-intelligence and thus provide a locative property in terms of building connections between experience, 'knowledge', and social actions.

The body recoils from that which it does not want to relate to. However, 'consciousness' of that which is unsustainable cannot of itself separate us from the essential materiality of our connection with the world through the surfaces of the body, and with the world's systems and actions. That this relationship can melt, reform and melt again is the paradigm that affords us the possibility of developing intelligences or 'clear views' and embodied responses. - This reformation can happen

through the agency of connective narratives. It is also evidence that we can live differently should we choose to do so. The world is an open place and our relationships with it are shaped by the way in which we utilise a narrative of connection.

## **Conclusions**

We construct our relationships between encounter and meaning as we learn to extend our meaningful experience. When we 'experience' that vehicular traffic (in its totality) is 'the same' as melting ice our behaviour really is influenced by our perception; and data, language and embodied meaning together with the ecological processes of the planet, may converge in our imagination.

When we work with what we call data, we are essentially transporting signifiers from one location to another or from one domain to another. The artist can work with 'data', or even just aspects or parts of it, and achieve something 'other' with it, that is other than the role of data in scientific work. The perceived discrepancies between these constructed domains indicate an area of knowledge yet to be explored. Any question of validity of this process of exploration can be directed toward the effect that the exploration of these discrepancies has upon an interdisciplinary knowledge building process, rather than what any specific instance of data signifies in itself.

The project, as a cross-disciplinary collaboration, intends to provide and provoke discussion through creative and explorative dialogue within experimental practice and to provide an open and inclusive framework for an ongoing physical and critical debate. The overall aim is to facilitate cross-disciplinary practice, which engages in a public debate and discourse reaching beyond the usual peer group discussion.

## **References**

Bowers, C. A. (2008); Why the George Lakoff and Mark Johnson Theory of Metaphor is Inadequate for Addressing Cultural Issues Related to the Ecological Crises; *Green Theory & Practice: The Journal of Ecopedagogy*, Vol. 4, No. 2

Dissanayake, E. (1988); *What Is Art For?*; University of Washington Press

Gibbs, R. W. (2006); *Embodiment and Cognitive Science*; Cambridge University Press

Hogan, R. (1999); Editorial Review: *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*; Amazon.com

Lakoff, G. and Johnson, M. (1999); *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*; Basic Books

Tufnell, M. and Crickmay, C. (2004); *A Widening Field – Journeys In Body and Imagination*; Dance Books