3×4: a telematic/architectural hypersurface

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Abstract

In her 2004 publication 'Virtual Theatres' Gabriella Giannachi wrote on the processes of doubling presence in interactive artworks, from liquid architecture to telematic performance, where the physical and virtual realms meet and intersect at a place she termed the hypersurface.

"Through the hypersurface, the viewer can enter the work of art, be part of it, as well as interact with it. Because the hypersurface is a liminal space, the viewer can double their presence and be in both the real and the virtual environment simultaneously."

Ten years on, the authors of this paper produced on three occasions a telematic/architectural installation 3×4 metre 'blue-box' rooms linking public audiences at London's Southbank Centre with residents in New Delhi's Khirkee Extension, an informal settlement where Khoj International Artists' Association is located. This installation reflected the changing spatial and digital fabric of both cities, as well as the prescribed dimensions of dwellings in some of Delhi's new resettlement colonies. Whilst these audiences shared and compared these familiar dimensions across the global north/south, they explored a kinaesthetic experience of 'doubling presence'. Through self-choreographed telematic performance within digital architectures with physical constraints, they crafted new social fictions, imaginings and happenings in the hypersurface.

This paper discusses this juncture between telematic-kinaesthetic experience and the 3×4 metre dimensions to explore new hybrids of hypersurface space, as observed and experienced by public audiences. Reflecting on this doubling public presence, we conclude by considering their telepresent proprioception for future thinking on the interlacing of performance, architecture and telematic art forms.

Contents:

- **Hypersurface** where the real and the virtual meet

- **Doubling presence** an extension of the bodily synthesis

- **Liquid architecture** whose form is contingent on the interests of the beholder

- **3×4** exploring metaspace platforms for inclusive future cities

- **Happenings in the hypersurface** performing architecture

- **Touched** by text

- **Telematic-kinaesthetic proprioception**

Hypersurface

The hypersurface is **where the real and the virtual meet each other**. It is materiality and textuality, real and representation. It is also the site of virtual performance. Through the hypersurface, the viewer can enter the work of art, be part of it, as well as interact with it. …

… In performing through the hypersurface, the viewer enters the world of simulation while maintaining a direct rapport with their own environment. **The theatre of the hypersurface is not immersive but it simulates immersiveness**. *Gabriella Giannachi, Virtual Theatres, 2004*
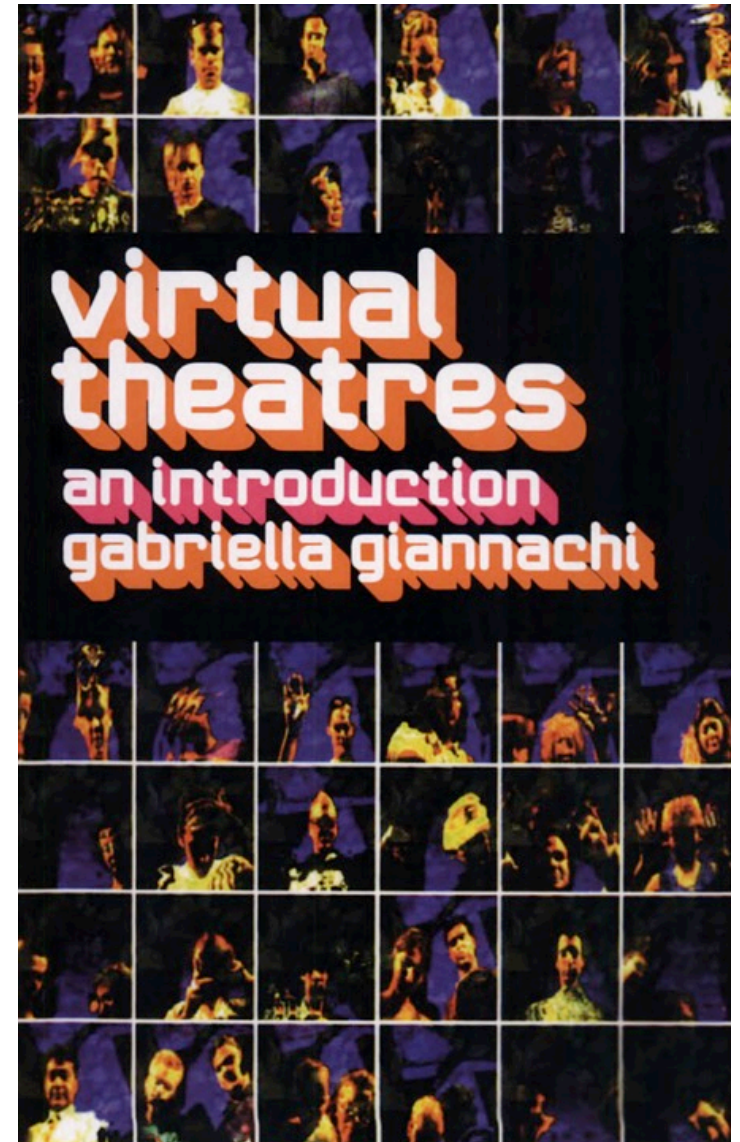
Doubling presence

Because the hypersurface is a liminal space, **the viewer can *double* their presence and be in both the real and the virtual environment simultaneously**. In other words, the viewer may be part of both the realm of the image and the sphere of the real, and may modify one through the other. *Gabriella Giannachi, Virtual Theatres, 2004*

Being both embodied and re-embodied does not imply a split subject, but rather a doubled subject. The physical body is conjoined with its (identical or non-identical) twin image in the virtual realm, **linked by the loops of intention, action and feedback**. *Sita Popat & Kelly Preece, Pluralistic Presence: Practising embodiment with my avatar, 2012*

As Kozel notes: 'Telepresence has been called an out-of-body experience, yet what intrigues me is the return to the body which is implied by any voyage beyond it' (1994). **As the body becomes an Other, an object and a double** (on the other bed), the experience provides 'double consciousness' of the body as a vacillation between separation and oneness. *Steve Dixon, Cybernetic Existentialism, 2016*

Liquid architecture

Hypersurfaces are often found in innovative and experimental forms of virtual architecture, such as what (following Novak's neologism) is now known as 'liquid' architecture. Novak described this as follows:

an architecture that breathes, pulses, leaps as one form and lands as another. **Liquid architecture is an architecture whose form is contingent on the interests of the beholder**; it is an architecture that opens to welcome me and closes to defend me; it is an architecture without doors and hallways, where the next room is always where I need it to be and what I need it to be.

A work of liquid architecture is no longer a single edifice, but a **continuum of edifices, smoothly or rhythmically evolving** in both space and time. Judgements of a building's *performance* become akin to the evaluation of dance and theater. *Marcos Novak,* Liquid Architectures of Cyberspace*, 1992.*

Hypersurface Architecture II , Stephen Perrella
Guest Editor, Architectural Design, 1999
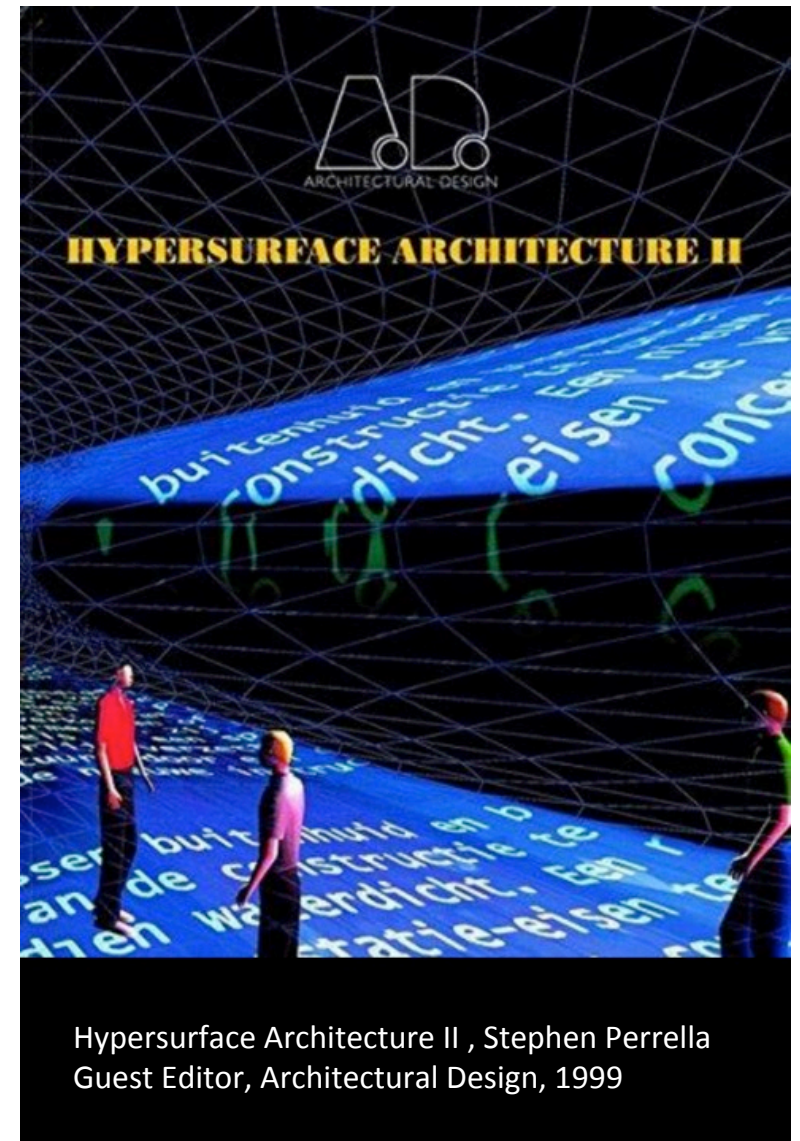
3×4 exploring metaspace platforms for inclusive future cities

3×4 looks at informal settlements differently where informality is not viewed as a problem, but a promising new model of urbanism for the global south. The project uses an immersive telematic networked environment to provide a playful, sensorial exploration of new hybrids of digital space. http://www.3x4m.org

Merging two 3×4 metre room installations in Delhi and London through mixed-reality, this transnational dialogue intends to set an aspiration for developing metaspace platforms in megacities of the global south. It builds upon practice-based research conducted as UnBox LABS 2014 Fellows in Ahmedabad, India; which used an immersive installation to explore the qualities and values built through self-organised communities that are lost in the resettlement process.
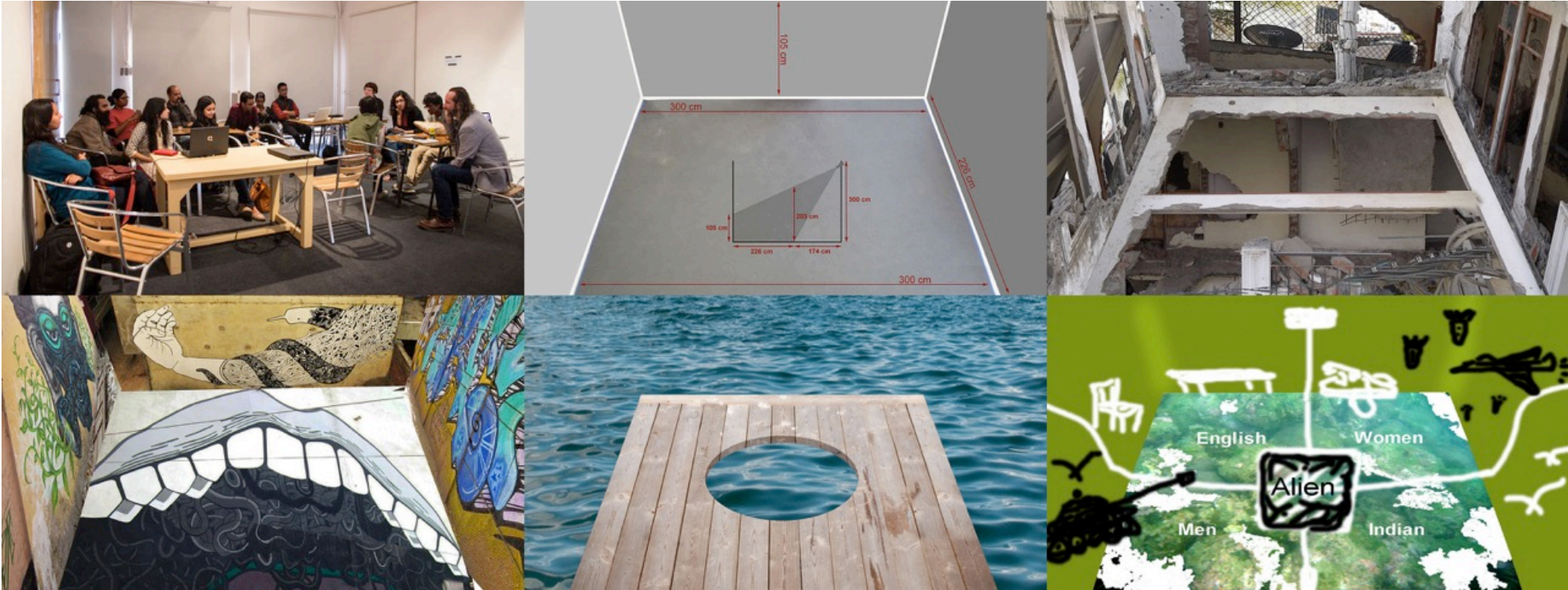
3×4 exploring metaspace platforms for inclusive future cities

Concept creation UnBox LABS at the National Institute of Design in Ahmedabad, India, March 2014

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Content generation: Co-creation workshop and uploads at Khoj Studios in Delhi, 10 December 2014

Between Southbank Centre London and Khoj Studios in Delhi for the UnBox Festival 12 to 14 December 2014

3 × 4

exploring metaspace platforms for inclusive future cities
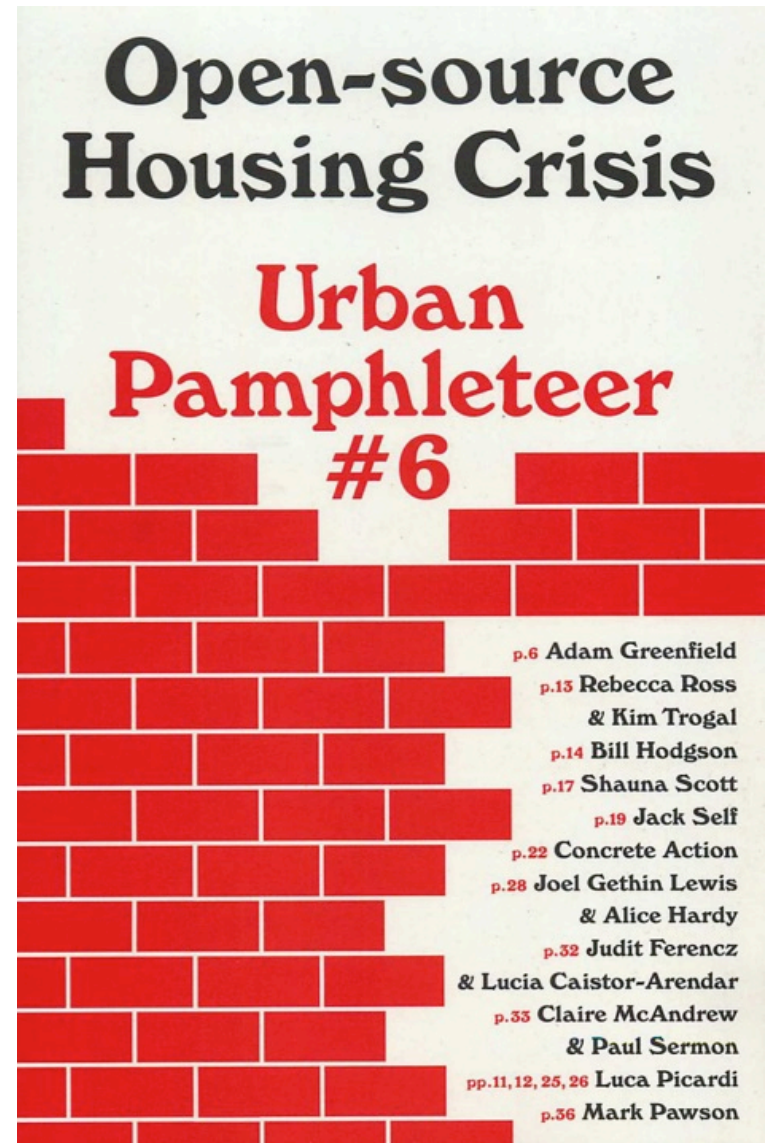
Happenings in the hypersurface

Performance architecture is a transaction between artist and audience that exposes the permeability between subject and space. Public audiences were invited to **create and perform within a third space**.

Third spaces **produced by the conflation of real and imagined futures** can envision new forms of exchange and co-creation.

Blended living spaces can **provide a sense of connectedness to globally distributed others** through a contraction of distance.

The forced compression of micro-economies within living spaces point toward the ways DIY and self-made solutions can **fuel counter movements and future metaspace platforms**.

Claire McAndrew and Paul Sermon, Performing Architecture, Urban Pamphleteer #6 Open-source Housing Crisis, 2016
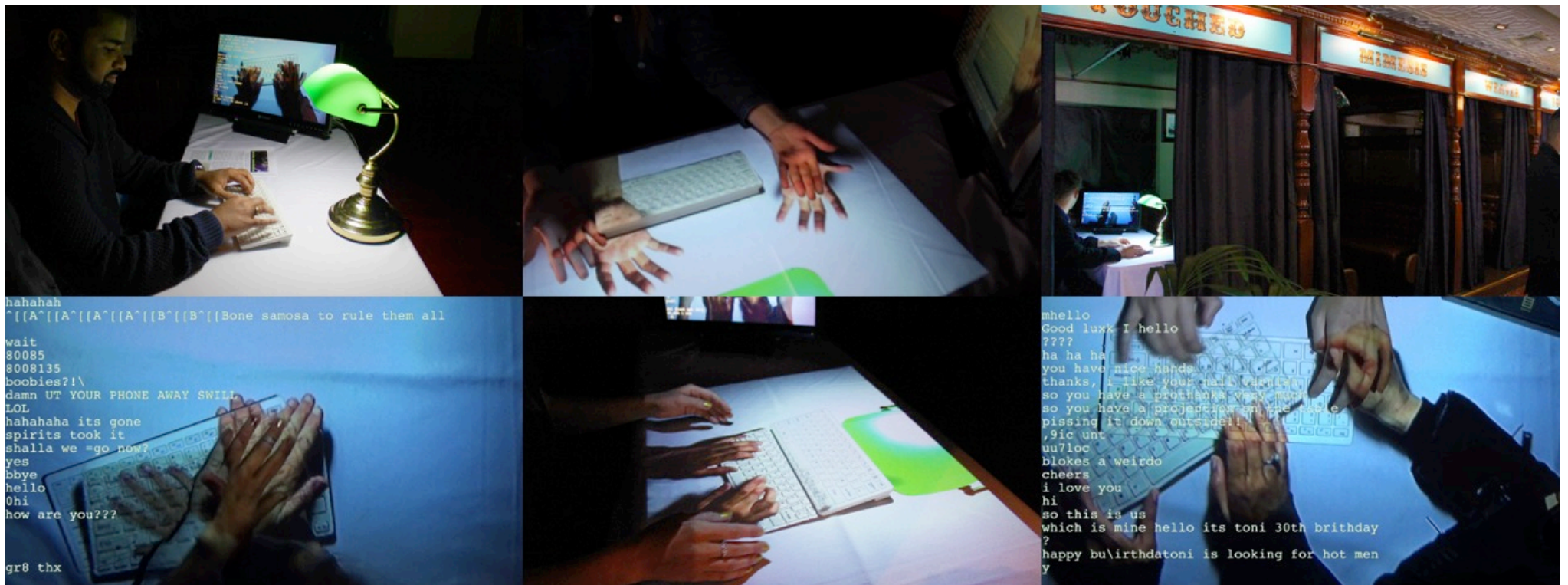
Open-source
Housing Crisis

Urban
Pamphleteer
#6

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Touched

British Science Festival, Brighton, September 2017

Touched

British Science Festival, Brighton, September 2017

TOUCHED

Documentary video

British Science Festival, Digital Encounters Show
Horatio's Bar, Brighton Palace Pier

Paul Sermon, 2017

Telematic-kinaesthetic proprioception

There is another difference in the way that the hypersurface facilitates the connections between physical and virtual in telematic performance. When the carpenter picks up the hammer, **her body schema encompasses the hammer**.
Sita Popat & Kelly Preece, Pluralistic Presence: Practising embodiment with my avatar, 2012

Consider a blind man with a stick. Where does the blind man's self begin? At the tip of the stick? At the handle of the stick? Or at some point halfway up the stick? These questions are nonsense, because **the stick is a pathway along which differences are transmitted under transformation**. *Gregory Bateson, Steps to an Ecology of Mind, 1972*

The stick is no longer an object perceived by the blind man, but an instrument *with* which he perceives. It is a bodily auxiliary, **an extension of the bodily synthesis**. *Maurice Merleau-Ponty, Phenomenology of Perception, 1945*

From a phenomenological perspective, man and stick essentially become one. **The man is familiar with the stick and uses it proprioceptively**, usually without conscious intervention, in order to be in the world. Thus motor-sensory activity is undertaken by man-plus-stick, as **the stick is incorporated and hidden within the man's body schema**.
Sita Popat & Kelly Preece, Pluralistic Presence: Practising embodiment with my avatar, 2012

Rubber hands 'feel' touch that eyes see. The effect reveals a **three-way interaction between vision, touch and proprioception**, and may supply evidence concerning the basis of bodily self-identification.
Matthew Botvinick, Jonathan Cohen, Nature, Vol 391, 1998

Thank You

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