

We Are Cells: BioArt, Semi-Livings, and Visceral Threat

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In September 2003, the National Gallery of Victoria refused to exhibit an artwork that used human tissue as part of its installation. *Extra Ear – ¼ Scale* was developed by artists from Tissue Culture & Art Project (TC&A), including Oran Catts and Ionat Zurr, in collaboration with performance artist, Stelarc. Using Stelarc's cartilage cells, they grew a scaled-down replica of a human ear; an object of partial life – living and growing tissue – that resembled the shape of a human organ. [1] But, according to Catts and Zurr, two weeks before the show was due to open the curators at NGV said that they had no policy in regard to presenting living tissues in their gallery (2006a: 160). After continued negotiations with the artists – including a request by the gallery that the artists include a statement indicating that the work did not raise ethical issues, a statement the artists could not provide because 'we see the primary aim of our work to act as a tangible example of issues that need further ethical scrutiny, and to critically engage with the biomedical industry' (2006a: 160) – both parties compromised. A human ear grown with mouse cells was to be exhibited instead (for image see http://www.tca.uwa.edu.au/extra/images_extra_ear.html).

I say 'compromised' but the substitution of mouse cells for human cells was, for the artists, neither here nor there. If anything it added to the piece. As Catts and Zurr explain: 'using non-human animal cells [...] enhanced the non-anthropocentric stand of the Semi-Livings and partial lives' (2006a: 161). 'Semi-Livings' and 'partial lives' are the deliberately provocative labels Zurr and Catts have given to artforms involving still-living tissue grown from human and animal cells *in vitro*. Pioneers in the use of tissue engineering technologies in art, they established Tissue Art and Culture Project in 1996, which, since 2000, has been housed as the founder of SymbioticA Laboratory at The School of Anatomy and Human Biology at The University of Western Australia. SymbioticA is an art and science collaborative research laboratory for non-specialists to engage in wet biology practices, and artists from around

the world undertake residencies there. This essay is, in many ways, a response – and, I hope, a contribution – to Catts and Zurr’s reflections on projects coming out of TC&A and SymbioticA, as I explore how the extraordinary work of these artists has the potential to produce powerful corporeal affects in people who encounter it.

Living tissue artforms are ‘constructed of living and non-living materials; cells and/or tissues from, one or more, complex organisms grown over/into synthetic scaffolds and kept alive with an artificial support’ (2006a: 154). They fall under the category ‘bioart’, a loose term applied to artforms that relate to biology, living matter, and biotechnology, covering a diverse range of practices and projects, from radical body modification to genetic engineering. As Goldberg puts it, ‘tissue engineering is merely a squishy aspect of the greater beast’ (2007: 1). Catts and Zurr are among several artists including Stelarc, Kira O’Reilly, Julia Reodica, Catherine Fargher, Marion Laval-Jeantet, Benoît Mangin, Bioteknica and Critical Art Ensemble who are using living animal and human tissue in their performances and installations. These artists have exhibited and performed (with) a two-headed worm, a multiethnic skin coat, ‘victim-less’ frog steak, caterpillar cell cultures, and, in the case of O’Reilly, living lace of skin cultured from her own cells. Increasingly, the discourse around this work involves, in part, how practitioners use living materials to create and grow ‘fragments of life’ (see Catts and Zurr 2006a: 153); as well as the ‘ontological status’ (see Willet and Bailey 2006: 71; Catts and Zurr 2006b) of these new living forms. Less discussed are the corporeal implications for spectators. What happens to our bodily being when we encounter growing, living artworks?

At the same time, questions from audiences and galleries concerning what cells are being used – human or animal? Which human? What animal? – are coming to be regarded as ‘anthropocentric’ and ‘speciest’.

In the dominant discourse exploring the human position within the living world, humans are compared and contrasted with other animals. This already takes a ‘speciest’ position as a starting point for interweaving

humans in the ecological fabric. (2006b: 3)

However, while we spectators can acknowledge that we live in a human-centered world, and that humans are part of the animal kingdom, this does not lessen the jolting sensation we experience when encountering living humanness in art. While empirically there may be no visible or structural difference between human and rat nerve cells (Catts and Zurr 2003); and while I know that the chromosome difference between humans and apes is barely detectable; I also know that artworks grown from human cells can create profound embodied affects in audience members in ways that art made from frog or mouse cells cannot. Put simply, different artworks provoke varying degrees of impact.

To an extent, artists like Catts and Zurr know this too; they know that their projects force us to question ideas about the human subject, about the body, and about species categories. But they sell their work short, for the projects don't only work at the level of ideas. Human cells grown into living, growing sculptures: at stake here is not merely an *idea* or a *representation of life*, but *our experience of being-and-having a body*, and our intercorporeal relationship with other human bodies and beings.

Knee-Jerk Reactions

In 2002, the Art Gallery of South Australia exhibited the installation, *Pig Wings*, in a small laboratory built by the artists (for image see <http://www.tca.uwa.edu.au/pig/installation1.htm>). TC&A had created three sets of fleshy, colourful 4cm x 2cm life forms; wing-shaped sculptures from pig bone marrow cells that had been grown over/into polymers. The artists kept the tissue wings alive by administering cell nutrients – except they didn't call it 'administering', but 'feeding'. They also introduced 'The Killing Ritual' where they 'killed' the wings by taking them 'out of their containment and letting the audience touch (and be touched by) the sculptures' (2006a: 158). The

bacteria in the air and on human hands contaminated the cells, which then died.

The point of the ‘feeding’ and the ‘killing rituals’ – practices TC&A include in most of their exhibitions – was to emphasise the aliveness of the artwork; that it had to be kept alive, and that it could then die. ‘On more than one occasion people from the audience have approached us after the [killing] ritual and told us that only by killing our sculptures did they realise they were alive’ (2006a: 158). However, emphasising the aliveness of the wings was not necessary for gallery staff who actually witnessed the growing forms first hand. Throughout the duration of the exhibition, they saw the sculptures slowly change from their original shape. In fact, ‘when it was time to kill the wings, a couple of security guards [...] approached [the artists] and asked [them] to train them to look after the *Pig Wings* as they had grown attached to them and “did not want them to die”’ (2006a: 159). People *growing attached* to artforms. What if this is less a literary conceit regarding emotion or empathy, and more a *lived* metaphor of intercorporeality? What if this ‘attachment’ describes an experience approaching, what Philipa Rothfield might call, a ‘connective possibility’ (1994: 61) where ‘the plasticity of materiality, its mobile boundaries’ (1994: 64) circulates between us and these living forms?

Bioartists working with tissue cultures are well aware of the new and interesting legal, bioethical and philosophical issues surrounding their work: how their projects offer new epistemologies and ontologies; how they challenge taken-for-granted boundaries between species and between human/animal relations; and how they force a rethinking of the body and of the life/non-life binary. As Susan Merrill Squier notes: ‘Tissue culture calls into question the definition of the individual, the boundaries of the body, the relations between species, and the authority of medical science’ (2004: 61). What isn’t explicitly explored is the potential for the artworks to produce affects in audiences at the level of embodiment.

Our relation to these projects involves more than *ideas* about philosophy, ethics and ‘the body’; it also involves very real corporeal affects. Yet this dimension is rarely discussed beyond the notion of ‘emotion’ (see Catts and Zurr 2006a: 153, 159), or an ‘ickiness’ (see for instance Goldberg 2007: 1). While Catts and Zurr acknowledge that the ‘phenomenological experience of the audience (as well as the artists) is of major importance for the TC&A’ (2006a: 153), and while they recognise that ‘the Semi-Living are sharing the same time and space of the engaged audience’ (2006a: 153), a sustained exploration into the potential for new corporeal experiences for-and-in spectators tends to get overlooked in favour of the potential for more detached reflection. They write:

Usually people who oppose our project find it difficult to articulate the source for their disapproval and react more from a knee-jerk impulse. We believe this is a result of the TC&A forcing people to reassess their perceptions of life by presenting life at its visceral and somewhat abject form as manifested by the Semi-Living. (2006a: 161).

The beginning of a discussion about embodied spectatorship, (bodily, ‘knee-jerk’ responses that are ‘difficult to articulate’), dissolves into more abstract thinking, (‘reassessment of perceptions’). As Susan Broadhurst writes: ‘Conventional ways of interpreting performance and art practices [make] the body a secondary phenomenon’ (2007: 16); and she calls for the ‘immediacy of the body’ to be made the focus of interpretation. Surely ‘reassessment’ – a conceptual rethinking – *follows*, and almost never precedes, embodied reaction. As Maurice Merleau-Ponty might put it, bodily being ‘is not, as it were, a handmaid of consciousness’ (1962: 139).

In this essay I am not trying to make a case for the primacy of bodily being and experience, nor am I advocating a kind of inverted Cartesian dualism. Instead I argue that, alongside questions of science, ethics and philosophy, the work of TC&A and others should also be considered in the context of states of bodily affect for audience members. Using Merleau-Ponty’s position

that consciousness is ‘a being-towards-the-thing through the intermediary of the body’ (1962: 137), this essay attempts to get at the ‘knee-jerk’ impulse we might feel upon encountering living tissue artforms; how we might experience these ‘things’ corporeally, ‘as real “in one blow”’ (Moran 2000: 403); and how meetings with ‘semi-livings’ have the potential to produce powerful bodily experiences for flesh-and-blood spectators – especially when the tissue involved is human. [2]

Degrees of visceral threat

For the past decade, there has been, what neuroscientist Stuart Bunt refers to as, a ‘renaissance’ in bioart. Bunt, the scientific director of SymbioticA, says that this burgeoning creativity is due to the fact that:

biological technologies have such an impact on our life at the moment – and so many people are worried about what this is going to do in areas such as cloning, artificial reproduction, genetically modified food. It is a large issue for society, and people are particularly concerned and feel a personal, visceral threat from biological material (2006: 61).

Bunt’s language points to embodied affect: people are not only worried about current scientific technologies, but they feel viscerally threatened. As he points out, exhibiting living tissue involves risks of infections, and ‘escape of modified organisms into the environment’ (2006: 60). For the *Pig Wings* installation, for example, the Art Gallery of South Australia employed private security guards to remain on standby, reflecting ‘a somewhat Frankensteinian fear’ that something would ‘go horribly wrong’ (Catts and Zurr 2006a: 159); and artist, Tamara Stone, says that, by using living cultures in her work, she hopes to inspire ‘a new level of creepy feelings’ in people (Goldberg 2007: 1). Be sure, I am not concerned as to whether or not people *should* feel threatened, but rather to consider the nature of corporeal threat. ‘By presenting something that is “sort of alive”,’ write Catts and Zurr, ‘TC&A lay bare the hypocrisies created to deal with the paradoxes in human relationships with other living beings’ (2006a: 153). What they don’t write, and

what I am trying to make explicit here, is that questions around hypocrisies and paradoxes are rooted in embodied affect.

Moreover, in the tissue-culture world of bioart, all projects won't necessarily threaten our (usually neat, contained) corporeality in the same way – or with the same force. Projects provoke *degrees* of threat depending on the cells used. While biologists, and, increasingly, many bioartists, are trained to study and experiment with molecular structures of 'life', we non-specialists cannot help but ask: What life? Which life? Whose life? As Davis and Morris observe: 'The body—whose, what, when, where—is always in question' (2007: 418). These questions frustrate some artists, who prefer to understand 'life' beyond usual species categories, and aim to trouble the human/animal binary. In fact, for bioartists like Catts and Zurr, my distinction between the use of human cells or animal cells would be evidence of my having entirely missed the point of their project. When TC&A write on their website that they 'are interested in the new discourses that surround issues of partial life', they are careful in the use of the term 'life', remaining deliberately unspecific as to the origin of the cells in question. Catts and Zurr have coined the term 'The Extended Body' to refer to the millions of tons of biomass of living (human and animal) cells that are disassociated from the bodies that once hosted them; 'in theory, every tissue in every living being has the potential to become part of this collection of living fragments' (2006b: 1). They point out, for instance, that cells that were originally derived from a human donor in the early 1950s are in use these days, long after the death of the original donor (2003).

Despite moves to understand all cells and tissue as a biomass of living stuff, audience members encountering tissue sculptures will have particular embodied reactions depending on what the biomaterial once 'was' and where it came from. Earlier I pointed to the potential for intercorporeality between spectators and living tissue art grown from animal cells; this potential is intensified when that tissue is, in part, human. In performances and exhibitions of semi-living sculptures, the presentation of, what audiences know and therefore experience as, 'living human-ness' poses a particularly extreme visceral danger. The more 'human' the living tissue, the more the

visceral threat escalates for the living, breathing, ageing, fleshy audience member.

Living human-ness

For her artwork, *hymNext*, artist Julia Reodica cultured her own vaginal cells with rodent smooth muscle cells and bovine collagen scaffolding to create artificial hymen sculptures (for image see http://www.vivolabs.org/living_hymnext.html). For her show, *Marsysus – Running out of Skin*, Kira O'Reilly took biopsies of her own skin to create an *in vitro* living lace of skin. For their project, *Culture de Peaux d'Artistes*, French duo, Marion Laval-Jeantet and Benoît Mangin of Art Orienté Objet, deposited their own cellular material on a layer of pig skin that they tattooed with animal motifs (for image see <http://www.we-make-money-not-art.com/archives/2007/01/aoo-was-formed.php>). For us, there is living humanness here – and it feels fundamentally different to work created from mouse, frog or rodent cells. The question is, how?

When artists use their own cells in their artwork, the discourse is just that: 'my' cells; how a part of them (the artist) is literally (in) the artwork. Reodica explains: 'My cells are in the sculptures because I wanted myself to be new art media. In each sculpture, my DNA is a personal signature' (in David and Morris 2007: 14). Reilly says: 'Making direct and explicit interventions in my body I have bled, scored, marked and scared by way of investigating the unruly and chaotic materiality of my substance and the disparate narratives at play within'. [3] Art Orienté Objet explain: '[W]e presented genuine pieces of ourselves, submitted to biotechnology. In this way we are working with ourselves and no other living organism' (2004, in Adams 2007: 16). And bioartist Trish Adams recounts her experience in the laboratory:

Holding containers of my own cells in the laboratory had a profound and intense effect on me. This unusual emotional and physical proximity generated an ambiguous relationship between myself and my cellular material (2007: 12).

'My cells', 'my substance', 'pieces of ourselves', 'my cellular material'. When we encounter artwork grown from the artists' cells, this is no doubt part of our experience: here is Roedica-ness or Reilly-ness living and growing before me. At the same time, however, there is the potential to experience – to feel – not just *a* person's cells, but 'person cells'. Human cells. Our cells. There is visceral potential for the 'you' – the 'other' – of the artist to become, albeit momentarily, a 'we'.

My interest in living tissue sculptures was sparked by research I undertook on the subject of human embryonic stem cells. In 2006, in the months leading up to the Australian government's vote to overturn the ban on human therapeutic cloning, I visited the stem cell laboratory at Sydney IVF, which, at the time, held one of only four licenses nationally to conduct human embryonic stem cell research. While I will refrain here from going into the science of stem cells (see Finkel 2005; Rossmanith 2007), I recount my experience because it was just that: an experience – and a very visceral one at that. I not only read the literature, and interviewed scientists and ethicists; I also stood in a laboratory and watched a scientist cradle a Petri dish that seemed to contain a viscous-like liquid which held, I was told, human stem cell lines; and I pressed my face to a microscope and studied embryonic stem cells taken from a couple's unused five-day-old embryo. The cell colonies – sprayed flecks carrying a couple's DNA – looked like fine paint sprays, delicate squirts of spores (Rossmanith 2007: 123); cells that would continue to divide, coaxed to grow and grow.

Seeing the tiny cells before me, knowing they were human, they were alive, that I was encountering human life growing and multiplying, produced exhilarating and uncomfortable affects in me. I say that I 'saw' the cells, but this did not carry with it the usual distance that 'seeing' implies. There was, instead, a collapsing of distance. Ian Maxwell, writing about autopsies and the theatrical aestheticism that sometimes accompanies them, points out that: 'The visceral reaches across us, even as we are invited to imagine we are merely watching' (2008: 11). Drawing on the work of Drew Leder in *The*

Absent Body (1990), Maxwell argues that there is a tension between ideas about visibility ‘through which human bodies yield knowledge through an aestheticised [...] display’ (2008: 9), and an idea about co-existing knowledges ‘derived from a more tangible, performative, embodied grasping of those same bodies’ (*ibid*). He writes:

At stake, I am suggesting, is a certain (and literal, rather than figurative) *reaching out*, enacted between the stuff of my own corporeality and that of the cadavers being revealed to me, that exceeds the epistemological sureties – indeed the epistemological hegemony – of vision and sight (*ibid*).

At Sydney IVF, my own corporeality reached out towards that human biological material. At the time, however, I did not experience it – *know* it – as ‘biological material’ but rather an extension of ‘me’, of ‘us’, *people, humanness*. Part of what was at stake was my experience of myself ‘as a completely self-contained being that develops in the world as an expression of its own unique essence’ (Mansfield 2000: 13).

Confrontations with living human-ness potentially give rise to new forms of embodiment. While Catts and Zurr use the term ‘the extended body’ to refer to biomass, I wish to borrow it to describe my own experience of embodiment upon encountering living human cells and tissue. Lowell Lewis points out that:

Embodied selves are not only sites for mediating language and experience, they are also where subjectivity meets objectivity, since we live our lives as our bodies, but these bodies also become objects other than (or ‘othered from’) ourselves (1995: 222).

When seeing living human-ness my experience of myself as a body reaches beyond the boundaries of my skin, taking in – *connecting with* – another living form. In that moment, I am not thinking about the body – my body – as objective presence; I simply ‘am body’, ‘extended body’.

This potential for intercorporeality is explored by dance theorist, Amanda Card, when she describes and studies her visceral response as an audience member watching a dancer; how her own corporeality relates to this other human body. She cites Merleau-Ponty:

There is taking place over there, a certain manipulation of things hitherto my property. Someone is making use of my familiar objects. Who can it be? I say that it is another, a second self, and this I know in the first place because this living body has the same structure as mine. [...] [Now] it is precisely my body that perceives the body of another, and discovers in that other body a miraculous prolongation of my own intensions, a familiar way of dealing with the world (1962, in Card 2007: 1).

For Merleau-Ponty, the property being manipulated are tools or everyday actions, and Card borrows his observation to make her body parts her ‘property’ that are being ‘manipulated’ (ibid). ‘My anatomical bits are my “familiar objects” being made use of by another. Indeed this living, other body does have a “similar structure to mine” and a “familiar way of dealing with the world” (ibid).

Here Card recognises human-ness – sameness – through movement and motion. The reaching between is enacted between the dancer’s movement and the movement potential of Card’s own arms, thighs, chin, toes. When we encounter living sculptures made from human cells and tissue, the feeling of human-ness – of sameness – does not come in the form of immediate recognition. We do not see/feel ‘people’ like us: legs running, chests heaving. Rather we encounter *human viscerality* – ‘human’ not because we can see/recognise the human-ness but because we have been told what it is. The lace sculptures, we have been told, are grown from human cells, are still living, and this knowledge, for us, works at the level of embodied affect. The human tissue is *growing*; in it there is *movement toward life*. Rothfield writes of ‘a connective possibility’; for connection to occur, there must be a sense of *movement between*. For Card, the connection is in the dancer’s extensions

and contractions and the potentiality of her own limbs and flesh, her own extensions and contractions; for us encountering bioart, the betweenness is in and across the human cells dividing and growing 'out there' and our own cellular activity. What we feel is the feelingfulness of embodied cellular recognition. As Maxwell writes: 'even as I (merely) watch, I touch, I smell, I hear, feel and sense [...]; I *intuit* the breadth, depth and implacability of the visceral' (2008: 11).

We Are Cells

In our encounters with living human cells and tissue, this reaching between us and the human-ness 'out there' simultaneously gives rise to the emergence of a cellular self. The artwork with the growing human tissue does not confront us with a discrete organ or a quantifiable surge of blood, but what feel like infinite cells (Rossmanith 2007: 127). Encountering such work offers the potential to feel 'here is person-ness, us-ness'; but it also confronts us: *we are cells*; I am – we all are – trillions of cells.

It was this experience artist, Trish Adams, explicitly set out to create for spectators in her work, *Machina Carnis* (for image see <http://www.realtimearts.net/article.php?id=7937>). During the show, audience members – or 'participants' as Adams refers to them – took turns to lie on a couch with a modified stethoscope pressed to their heart. The magnified *beat beat beat* of their heart echoed around the gallery. At the same time, the spectator watched video images of cardio (heart) cells that had been cultured in a laboratory by modifying stem cells taken from Adams's blood (2007: 11). Using programmed time-lapse video, the human cardiac cellular digital images appeared to pulse in rhythm with the spectator's heart. Ironically, by using images rather than living cells in the gallery, Adams was able to play around with audience involvement and, therefore, with their relationship to these cells. (This recalls the argument Philip Auslander makes in *Liveness* (1999), questioning whether there are indeed clear-cut ontological distinctions between live forms and mediatised ones.) Adams describes how each viewer

became 'immersed as a collaborative participant' (2007: 14), the project foregrounding our cell-ness, the very limits of our own materiality.

Our cell-ness has become central to bioethics, politics and industry – a fact reflected, for example, in the difficulty of obtaining ethical clearance to use human cells and tissue in art, even if that 'material' is taken from the artist. Adams took more than a year to obtain ethical clearance to use unscreened human tissue, 'regardless of the fact that it would come from my own body' (2006: 37); and Bioteknica artists, Jennifer Willet and Shawn Bailey, write about 'being propelled into a new set of disciplinary rules, standards and concerns' (2006: 70) at the prospect of using primary human stem cells sources. Nikolas Rose points out that while the 'vital politics' of the eighteenth and nineteenth centuries was a politics of health – 'of rates of birth and death, of diseases and epidemics, of the policing of water, sewage, foodstuffs, graveyards, and of the vitality of those agglomerated in towns and cities' (2007: 3) – the politics of the twenty-first century is a politics of 'life itself'; Catherine Waldby (2000) uses the term 'biovalue' to categorise the ways in which tissues and cells from deceased people are being used to enhance our health; and Gabriella Giannachi, in *The Politics of New Media Theatre* (2006), suggests that the use of cells in creative practice will give rise to the most political public art of the future.

What I am suggesting is that caught up in the politics of human cells in art is the potential for the audience to experience a profoundly different way of being-and-having a body. Rose points out that most people still imagine their bodies at the molar level, 'at the scale of limbs, organs, tissues, flows of blood';

indeed, this was the body – the body as a systematic whole – that was the focus of clinical medicine, as it took shape over the nineteenth century, revealed to the gaze of the physician after death in the post mortem dissection, visualized in the anatomical atlas (2007: 11).

Nowadays, he says, ‘biomedicine visualizes life at another level – the molecular level. The clinical gaze has been supplemented, if not supplanted, by this molecular gaze, which is itself enmeshed in a “molecular” style of thought about life itself’ (2007: 12). The use of human cells in art foregrounds ourselves as molecular beings – ‘biological selves’ (2007: 4) – not just as an idea or an issue, but as bodily affect. This notion that we are cells does not merely operate at the level of discourse and discussions about ‘the body’. It operates at the level of our lived bodily being. I don’t just ‘think’ I am cells, I feel it viscerally, I experience it. In fact, recently I visited my doctor about a mild burn on my leg, and, upon administering appropriate ointment, she told me: ‘You must imagine lots of cellular activity in the deep layers of your skin. This is important for the healing process. Imagine your cells busily stirring and buzzing and generating new cells’.

Of course, when Rose writes of ‘biological selves’, he doesn’t speak for all human beings. And when Nick Mansfield (2000) writes of the ways in which theorists have discussed ‘selfhood’, the ‘we’ that he writes of, like the ‘we’ I have used in this essay, is the ‘we’ of the modern West. Living tissue sculptures can provoke unsettling embodied affects in us because of the default sense we have of ourselves as beings detached from others, bounded and self-contained. This is not a universal theory and experience of personhood, a fact explored in many ethnographies detailing the latent connective tissue between people between people and their world. [4] For us, however, ears grown from mouse cells, wings grown from pig cells, and, more troubling, hymens and skin grown from human cells, can call forth in us new and profound sensations of visceral attachment existing beyond the usual boundaries of our material being. Such artworks create the possibility of a ‘reaching out’ enacted between tissue forms and our own active cell-ness; the possibility that together we might experience ourselves as one growing, living extended cellular body.

NOTES

1. For his project *Extra Ear on Arm 2006-7*, Stelarc had doctors insert a soft, ear-shaped prosthesis into the inside of his left forearm. His skin 'was suctioned over it to shape the ear. Using a suction drain, the skin cells were encouraged to grow into the scaffold and retain adhesion to it, and it was then injected with stem cells which grew onto the cartilage' (Debelle 2007).
2. Dermot Moran is rephrasing Merleau-Ponty's critique of Kant's idea that perception is a synthesis of representations.
3. SymbioticA:
http://www.symbiotica.uwa.edu.au/residencies/residents2/kira_oreilly
4. See, for example, Clifford Geertz (1976: 225); Michael Jackson (1996: 33; 1995: 162); as well as Anne Fadiman's account of a refugee Hmong family's experience of a Californian hospital in *The Spirit Catches You and You Fall Down* (1997).

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