

SK-INTERFACES: TELEMATIC AND TRANSGENIC ART'S POST-DIGITAL TURN TO MATERIALITY

by jan jagodzinski

There is a remarkable scene in *Star Trek: First Contact* (1996, figure one) wherein Data is bound and shackled to what appears to be a torture rack so that the Borg can extract the encrypted codes within his circuits, which would provide easy access to the spaceship Enterprise. The Borg Queen knows that she must find his weakness in order to ensure such a possibility. She offers Data what he has always desired: the possibility to ‘feel,’ and hence to grasp what it ‘means’ to be human. She grafts human skin onto his circuits and gently blows on it, making the hairs stand on edge, giving Data his first libidinal experience. “Was that good for you?” she coyly asks, as Data’s body undergoes an orgasmic shudder.



figure 1: Data of Star Trek being tortured; film still from *Star Trek: First Contact* (Jonathan Frakes, 1996).

The grafting of skin with artificial intelligence raises the specter of yet another *Brave New World* at the turn of the twenty-first century, for skin is the focus of renewed interest, both theoretically and materially, as a *medium* of ‘wet’ or ‘moist’ technological and artistic experimentation in what has been termed telematic and transgenic art. The line between art and science now has become questionable. Telematic artworks recognize that transformation is conditioned by new information technologies and electronic

communications, while transgenic art (also bioart) refers to the employment of genetic engineering. In the latter case, post-digital organic *presence* of life replaces the emphasis on representation and simulacrum as the visualization of data, which has become the dominant view in an information age.

In this essay, I explore the social and psychoanalytic implications of such technological life-science experimentations by a number of prominent artists, drawing on Jens Hauser's groundbreaking explorations, especially *Sk-interfaces: Exploding Borders —Creating Membranes in Art, Technology and Society* (2008a; Hauser 2008b). This is the name of an exhibition and a book publication presented at the Foundation for Art and Creative Technology (FACT) in Liverpool, England in 2008. The small coterie of artists who were involved can be found on the website: <http://humanfutures.fact.co.uk>. The book's cover was designed by Zane Berzina (2008, pp. 147–149) who explores the biomedical, interactive, tactile, and aesthetic characteristics of human skin as an analogue system from an artist and designer's perspective. It serves as a model and metaphor for her responsive, active, or interactive membrane systems that feel, look, and behave like skin. These systems respond to pressure, sound, light, fluids, heat, electricity, chemical, and mechanical stimuli (see Lupton, 2002). Berzina addresses the embryonic link between skin and brain (they are formed from the same membrane, the ectoderm) by employing a thermochronic sensitive pigment to the book's cover. The orange skin-like color changes with body temperature as various 'white' patterns are temporarily formed from the heat of the palms and fingers, which then disappear leaving no traces. The 'skin' of the book thus acts like a visual thermometer reacting to the heat levels initiated by the human hand as it holds the book with a certain intensity and duration (figures two and three). This reinforces the metaphor of the sk-interface between reader and book.



figure 2



figure 3

figure 2: Before applying touch, *Sk-interfaces* book cover by Zane Berzina, 2008.

figure 3: After a few seconds of pressure, *Sk-interfaces* book cover by Zane Berzina, 2008.

Hauser introduces the neologism [sk-interfaces] as a process of *becoming* where the hyphen between skin and interface takes on the burden of carrying the interval of time and transformation. The bio-artists in question propose a ‘skinless society’; the metaphor addresses a society where boundaries have increasingly merged in such a way that the interfaces have become porous membranes rather than barriers to the exchange of affection most often delivered through contagion—such as epidemics and infection, but also radiation. Such borders are not simply crossed or transgressed, and not even *negotiated*, for unquestionably skin has become increasingly vulnerable to environmental pollutants. Screen fantasies of penetration from the outside and the eruption of rage and revenge from the inside have left little doubt that skin is no longer a membrane of separation but a medium of connectivity, as well as being intensely over-coded by media bombardment. The ‘dermal’ sculptures of Kiki Smith like her ‘skinned’ *Virgin Mary* (1992) or *Blood Pool* (1992) (see Blocker 2004, p. 110), even Mel Gibson’s 2004 film, *The Passion of the Christ* address this exposure of the visceral body.

Re-signing Skin

Consider the importance of the skin's potential for *negotiation* through a passage from Deleuze and Guattari's *Anti-Oedipus* (1983). Paraphrasing Nietzsche they write, "The organization, which traces its signs directly on the body, constitutes a system of cruelty, a terrible alphabet" (p.144). To deterritorialize this 'cruelty' that straightjackets and maps the body through the alphabetized signifier (see Abrams, 1997) requires the grasp of the sensate body of *aisthesis* and not *aesthetics*, or rather an entirely different 'logic of sense' as Deleuze (1990) tried to work out, which goes beyond the naked/nude dichotomy of logocentric thought. Skin raises the 'biology' of communication, by this I mean its 'materiality' or the *physicality* of communication pointing to the exteriority of language that was lost or overlooked given the overwhelming success of Anglo-deconstruction; the reduction of Foucault's oeuvre to 'discourse' in the Anglo-context; and the hermeneutic paradigm, which remains hegemonically based on Ferdinand de Saussure's linguistic sign wherein the (material) signifier and the (spiritual) signified are inseparably related as *presence* in the many ethnographic studies that promote cultural populism. Yet, it is the sign's *physicality* that offers access to the signified. The exploration and recognition of the sign's materiality—its pre-symbolic dimensions—is explored by a different semiotic line of flight initiated by Louis Hjelmslev wherein due attention is given to the materiality (physicality) of expression, not only to form and content.

Skin may well be the in-between or hyphen of Hauser's sk-interfaces, as exemplified by the explorations of bio-artists, enabling complex negotiations between these established dualities given that *its surface is bilateral*. The prospect of such a position is advanced if we take its bilateral surface to be the 'bar' between the signifier and the signified wherein, as a membrane, skin negotiates between the implicit and the explicit body; the implicit body being the body schema, Merleau-Ponty's *schéma corporel* as flesh (which has been mistranslated as 'body image' by Colin Smith throughout *The Phenomenology of Perception*) and the explicit body, which is the over-coded, represented, and inscribed body of the signifier, which can perform its institutionalized cruelty today as did the mutilated, tattooed, ritualistically and physically inscribed bodies of the pre-Enlightenment. When it comes to the explicitly represented body, body image does indeed apply; it shapes a striation that creates institutionalized homogeneity.

Being ambiguously both a metaphorical and metonymical 'bar,' the skin acts as a porous membrane rather than the Saussurean 'bar' that represents either a *union* between signifier and signified, or a psychic *resistance* as in Lacan's deconstruction of the Saussurean sign. These two directions remain as binaries that do not give enough attention to the *transversality* between signifier and signified as a medium of intersubjective connection. It is more helpful to think of the topological *plane* of the skin as a *mixture* of smooth and striated space, following Deleuze and Guattari (1987) in *A Thousand Plateaus*. Skin allows desire to be negotiated through the intensities that pulse through the

body as energy—that is, unmediated deterritorializing *zoé*, which then becomes institutionalized *bios* by organizing the motility of the body in a specific way. The bilateral space of skin—as a mixture of smooth and striated space, is thus more of a translucent *field*, a film whose surface negotiates the implicit and explicit bodily senses (see Marks, 1999, 2002). There is no figure/ground distinction onto which intensities and events are staged. It is haptic rather than optical, textured rather than confined to any one point. The skin crawls, creeps, perspires, and shivers *allover*.

Psychoanalytic Considerations

There are a number of competing psychoanalytic theories (besides those of Deleuze and Guattari) that attempt to negotiate the materiality and ideationality that this paradoxical liminal nature of the skin offers as an interface with the external (always already technologized) world, as well as the mysterious ‘secret’ that is imagined to be inside the body. This ‘secret’ has usually been designated as the ‘soul,’ but in this essay it is the unconscious. Hermeneutics, in general, is the way this ‘soul’ or ‘unconscious desire’ is contained—that is, stratified—by the signifier of language. This modernist dichotomy lends itself to what might be called the ‘onion-skin’ notion of the self that can lead to infinite regress. If the skin is imagined to be ‘outside,’ containing an ‘inside’ within it, then peeling it away leaves yet another ‘outside,’ which in turn can be peeled away to get at the inside. This will eventually lead to discovering some sort of essence, the true kernel or soul of the person.

It is well known that Lacan overturned this Cartesian *cogito* as a ‘presence’ inside wo|man by maintaining that the subject is a secondary construction of the signifier, which has *material* import. Lacan (1981) reaches back into the recesses of prehistory when he writes, “The subject himself is marked off by a single stroke, and first he marks himself as a *tattoo*, the *first* of the signifiers” (p.141, added emphasis). Tattoos, as permanent as they seem to be, also *negotiate* the passage of time between the inside and outside world. Their meanings and interpretations are subject to change, thereby resisting permanent signification. The ‘symbolic subject,’ categorized by the big Other in the Lacanian paradigm, what Deleuze and Guattari refer to as *subjectification*, is assigned a role in the instituted structure to *fix* the signifier and its signification. Skin color, for example, becomes discriminatory only when a social group becomes constituted. It is not because one’s skin is *necessarily* black that enslavement takes place, rather as a slave you *become* Black even if you have light skin (Guillaumin, 1995). The subject is named on the skin, raising the question if the contemporary practice of gentrified tattooing (and piercing) indicates a crisis of failed embodiment of subjectification, becoming now a second protective skin, one which does not and cannot participate in the free circulation of commodities, for tattoos cannot be exchanged (Fleming, 1997; jagodzinski, 2002). The

contemporary tattooed and pierced body finds itself in an entirely different social location, perhaps still abject, but quite unlike its former criminal stigma or ritualistic status. It can be further argued that this practice of mutilation through technology creates a particular Body without Organs (BwO) in Deleuze and Guattari's terms, encompassing a particular somatechnological body, as a direct confrontation with the Real (see Lodder, 2009).

The ego as distinct from the symbolic subject of institutionalized subjectification, on the other hand, belongs to the imaginary register, which may or may not be at odds with symbolic subject. The body image is applicable here as process of idealization, which is stratified by the hegemony of social institutions (schooling, medical profession, law, etc.). The well known psychoanalytic theory of Didier Anzieu (1989), who was a student of Lacan but dissociated from him, has been influential in his claim that the 'Skin Ego' is the seat of consciousness formed during primary narcissism as a protective envelope with the mother's skin. By Skin Ego he means "a mental image of which the Ego of the child makes use during the early phases of its development to represent itself as an Ego containing psychical contents, on the basis of its experience on the surface of the body" (p. 40). Skin-ego can be thought of as an enfolded space. The skin membrane is a 'lining,' which mediates the intrinsic-extrinsic body as a fold (*pli*). The fold has affinities with the Möbius strip. For Deleuze, the Möbius figure negotiates the fold of sense and non-sense. "It is rather the coexistence of two sides, without thickness, such that we pass from one to the other by following their length" (1990, p.22). For Lacan, the Möbius strip is a well-known figure mediating the imaginary and the symbolic, whereas the Real 'outstrips' it.

Obviously, acupuncture, piercing, tattooing, scarring, wounding, cosmetic surgery, sexual reconstructive surgery (see Prosser, 1998) and so forth change the body image, and with it the psyche. For Lacan, the ego can never escape fantasy. It is trapped forever by the veil of representation, always subject to the effects of *méconnaissance*. Yet, is there not an 'excess' or 'remainder' of the signifier which carries its very own physicality as a 'language of the body' registered on the skin? Jean-Jacques Lecercle (1985) identifies this 'remainder' (*délire*) of the signifier as "wildly imaginative" and "painfully literal." "There are no longer any clear frontiers between words and things" (p.162).

The material excess of the signifier replaces the search for essences by maintaining that the center of the onion is better typologically envisioned as an enfolded space where inside-outside are intertwined. There remains a paradoxical absent presence that belongs to the implicit body—the virtual Real body of a complex web of affects and past memories that is neuronally wired, which unconsciously generates the fantasy space of reality as images as Henri Bergson had articulated. The world is 'one' with images, perhaps holographically stored throughout the neuronal networks of the body-brain. In philosophical terms this is the Kantian preconscious noumenal dimension, what Deleuze and Guattari named as a 'plane of consistence' as the chaos of formed matters of every kind that generate an acceptable transcendental network of fantasmatic coordinates, the

transcendental representational ideas. The psychic Real manifests itself in anxiety, when the subject falls out of the fantasy space of the Imaginary and is confronted by the very *materiality* or *physicality* of the unknowable *objet a* in Lacan's lexicon. *Objet a* is more of an affect rather than an actual object. The skin (as bar) in this formula mediates the world of materials between 'gold' and 'shit,' as attraction and repulsion. Material as a sublimated substance of fetishism and fantasy is drained of desire (*bios*); uncoupled it becomes desublimated raw material (*zoé*) during a confrontation with the psychic Real. Objects are either too close or too far away, they can never be attained as they 'are.' When this happens, there is a rupture in 'reality' as time is 'out of joint.'

So, now go back to the opening scene. Data, who is 'cognitively' invested to become human, already lives in the inhuman Real. Symbolically, he is the *implicit* human body who experiences things as they really 'are' (as if that were possible for a machine, like Diega Vertov's disembodied 'Kino eye' that records in and by itself independently of a human body). Data's desire to be human suggests that within his circuitry traces of raw perceptions about what it means to be human exist—like the alien Spock on *Star Trek*, but his human traces are genetic—are already there to be activated. There are many scenes throughout the series where *Star Trek's* Data is attempting to 'learn' to be human. Data can play the violin with great skill, but cannot 'feel' the music. The human skin as a partial object that becomes attached to his servo-circuits is 'activated' by the *materiality* of the air from the Borg Queen's breath. She literally breathes life into him like a Pinocchio effect. This confronts him directly with the sense of reality as human fantasy. He is protected now, as it were, from the affects of the Real—the unimaginable non-existent Being or non-Being. But the Real is teeming with 'life' that we neither know nor are able to consciously communicate with. String theory in particle physics, for instance, posits ten dimensions of reality. Metaphorically, Data, the servo-mechanism that functions by itself, has been covered over with 'human' skin now making him both vulnerable but also paradoxically protected from 'raw' reality. All of the sudden, Data's entire worldview changes, induced by Borg-technology that has enhanced this potential for machine existence. In one sense, Data, a-cephalically standing in place for the implicit body of information flows, now needs to be renamed or reborn for another BwO has been created. He has become the Borg Queen's Adam who has bitten the forbidden fruit. The Borg collective, who represent the unbridled drives (*Triebe*) of the body, (like the body's drives, the Borg never sleep, merely regenerate), their 'machinic' desire trumping any claims to ethical and moral human values in terms of outright assimilation, present the paranoid fantasy of technological superiority. Their ship consists of a cube, the least aerodynamic spaceship structure, suggesting that they maintain their territory as well as marking the relentless stubbornness of the drive (*Trieb*) to capture its goal, but being satisfied by the missed failure of this aim itself. It's all in the 'hunt.' Corporeal intensification (*jouissance* in the Lacanian lexicon or *intensity* in the terms of Deleuze and Guattari) felt on the skin

is ambiguously registered as pleasure-pain. This intensity is ephemeral having a short life span, a momentary release that demands *repetition* as the zone or the orifice undergoes stimulation, its trace marking a pathway (*frayage*) that never repeats itself quite the same way. Data will only want more ‘skin’ to be grafted on, just like there is always a place for yet another tattoo, another body-binding, another fetish, and so forth—endlessly.

To arrive at this potential thesis of the skin’s double-sided fold (*pli*) and twisting interface value (sk-interface), its capacity of turning inside-out the outer (technologized) world into inner objects as boldly articulated by several artists, I first undertake an historical examination of skin as a concept to arrive at the notion of ‘creative skin,’ a skin that is ‘inversed’ from its usual protective and categorizing (racial, ethnic, gendered) functions as defined by a number of Ovidian myths, especially Apollo flaying the Satyr Marsyas and Nessus causing Hercules to rip off his own skin. Perhaps, not surprisingly, this *minitorian* position of skin’s tactility has been historically over-coded as feminine to maintain the masculine/feminine divide in terms of acceptable bodily movements, emotions, and feelings. The level of the implicit biological body would need to be disturbed by “substituting forgetting rather than anamnesis [and] experimentation for interpretation” (Deleuze and Guattari, 1987, p.167) to send the masculine/feminine dichotomy into a ‘queer line of flight’ as a future potential for the proliferation of n-sexes (see Sullivan and Murray 2009). This would supplement or rather modify Didier Anzieu’s (1989) well-known and often quoted thesis that the skin is memory that has been turned outward. Remembrances are tied concretely to the presence of skin perceptions and hence the above quotes by Deleuze and Guattari directly address this skin-ego in the way it mediates the subject and world as a double interface in order to *make* a ‘body without organs.’

Haut

“The skin is faster than the word.” —*Brian Massumi*

In her lauded book by European scholars, Claudia Benthien’s *Haut* (Skin 2002; 1999) follows a similar track established by historians like Barbara Duden (1991; 1987) and Thomas Laqueur (1990). She demonstrates once more, the perpetual becoming of the body as our ‘species being,’ which is continually *drifted* and *modified* (‘individuated’ in Simondon’s terms, 1992) through various forms of inventive technologies—including language—that do indeed ‘mould’ the body into a *representative* ‘molarity,’ to use the language of Deleuze and Guattari (1987). It is only by Benthien identifying epistemological moments, literary and artistic representations, cultural practices, medical interventions and technologies that lead her to present a broad grasp of the symbolic recoding of the skin, what Nobert Elias (1972) termed ‘the civilizing process.’ The

transformation of the body as subject to the *longue durée* becomes somewhat possible to grasp, but impossible to predict. Broadly, Benthien provides a glimpse of this transformation from the Middle Ages (the ‘grotesque body’ as famously presented by Mikhail Bakhtin, 1984 through François Rabelais) to the Baroque, through the Enlightenment, reaching the cusp of the neuronal body explored by cybertechnologies, explorations of cybersex and cyber teletactility as exemplified by the well-known experimentations of the Australian artist Stelarc, whose developments Benthien maintains perpetuate male fantasies of narcissism through the feedback loops generated by the body as experienced through cybersuits; in short, a form of self-masturbation, perhaps the defining libidinal experience of designer capitalism—perpetual self-gratification. Telematic art presents the post-digital extension of this last development—skin as the interface of touching and touch at once as a Deleuzian ‘fold’ (1993) where there is no inside and outside continuously modified by emergent prosthetic technologies.

Succinctly put, Benthien’s thesis maintains that historically, figurative speech about skin presents (unsurprisingly) a duality between thinking about the self *as* the skin and the self *in* the skin. In Rabelais’ world, the self *is* the skin. The skin metonymically stands for the whole human being. It is porous with all the orifices open and exchangeable with the world, as are the boundaries between individuals—the artistic logic of the grotesque concentrates on the body’s excrescences and orifices. With enlightenment rationality, the skin encloses the self and is imagined as a protective and sheltering cover. The authentic self lies *beneath* the skin, hidden inside the body, and with this comes concealing and deception. The notion of the skin as a *wall* becomes the canonical body image through the processes of rationalization and objectification during the century of Enlightenment—the construction of *Homo clausus*—“a little world in *himself*” as Norbert Elias (1978, p. 249, emphasis added) summarized it.

This duality of self and skin (in the skin/as the skin) *still* treats the body ‘naturally,’ that is phenomenologically as heterosexual, as a subject caught between the contradictions of seeing and touching—by an erotic proxemics of distancing and nearness (the extremes of class-status prohibitions of being looked at or touched, as respectively an ‘untouchable’ and an ‘unseeable’ body), of concealment (visual masking, cosmetic, sartorial dress) and revealment (touching, intercourse, fighting, skin against skin). This establishes a nude/naked distinction (Pollock, 2002), the nude being a costume—the zero degree of dress, while the latter is the complete exposure of self, open to touch and vulnerability. Such a straight phenomenology can, of course, be ‘queered’ by spatially orientating it otherwise, re-designing its ‘natural’ compulsory design of how orifice to office are said to ‘relate’ and under what sanctioned socio-cultural circumstances is such coupling permissible—like the transgressiveness of the ‘barebacking’ culture practiced by select members within gay communities. Within this practice the body without organs (BwO) is

remapped and reorganized in ways that intimacy and social risk are no longer institutionally or symbolically contained (Dean, 2009).

In the past two centuries, the model of the skin as a *garment* (subject *is* the skin) was eventually replaced by skin *as* a house—the body being a hollow inhabitable space that ‘houses’ the (Christian) soul, where human perception is through a window. From the middle of the eighteenth century to nineteenth century with capitalism and its accompanying individualism, come a number of unveiling techniques at the *fin de siècle* to expose this hidden ‘self’: physiognomy, eugenics, pathognomy, criminology, and psychoanalysis—all techniques to get at the authentic self and make it immediately visible to the observer. It seems to me that these two notions of the subject (self *is* skin and self *in* the skin) divide-up along gender lines. Transgenic art, as developed in the last section, has the potential to again disturb such a dichotomy.

Creative Tissue: Becoming Animal, Becoming Vegetal

Given this historical assessment of skin, along with some of the telematic artistic concerns, what can transgenic art add to the questioning that can disturb the overemphasis on logocentric representation, which, given the hegemony of the enlightenment, continues to prevail in terms of gender and sexual categorizations, racial divisions, and so forth? One place to start is to raise questions by first discussing the Greek myth of Apollo flaying the Phrygian satyr Marsyas, which has been explored by a host of writers (Benthien, 2002; Dumas, 2008; Kay, 2006; Richards, 1994). The advantage here is that the myth opens up the obvious repressed feminine in Western thought. As Stéphane Dumas explores it, Apollo flays the skin off Marsyas on account of a music contest where Apollo by singing on the cithara (lyre) outdoes Marsyas playing the aulos (oboe). The gravity of the punishment does not seem to fit Marsyas’ crime of trying to measure up to a god. What it does show is the Apollonian agency of the “I” as a signifying voice of logos that triumphs over purely instrumental music. The Renaissance turns this myth into an allegory of “know thyself.” The skinned body of Marsyas becomes the object of anatomical exploration that reveals the essence of things. The myth remains paradigmatic of a recurrent ‘crisis’ of representation that lies inherent in the Platonic tradition: Western art sets out to represent what it cannot, while at the same time dismissing the actual body’s capacity to grasp the impossible representation (Schefer, 1995). Marsyas is basically the *skinned implicit body*—the *bio-body that is virtual in its potential* to act and ‘be’ otherwise. It is coded as the repressed feminine in Western thought. Historically, images of a flayed woman could not be shown—only men appear anatomically skinned. The flayed woman thus represents a threat to the inner and outer border that constitutes the masculine ego. Here the usual figure of the castrating woman manifests itself as Medusa, witch, and *femme fatale*.

By *inverting* Apollo's skin, or what amounts to the same thing, and tapping into the virtual bio-body through telematic and transgenic art, a new topological potential emerges, a folding over of the skin between the virtual (non-represented implicit body) and the actual (the represented explicit body). Such folds act through a paradoxical logic as explored by Deleuze's doctoral dissertation, *The Logic of Sense*. Flaying or (stripping) the skin can be read allegorically as the cartographic mapping of intensifications that impinge on the body. The flayed, outstretched, and surfaced skin acts like the topology of a rubber mat; that is, as a relational set of networked points and pores. Skin cells become the paradoxical figures of life and death. Within the skin tissues, the cells take part in the paradox of both growth and decay. The skin points directly to the mystery of *time*—not chronological time as Chronos but incorporeal time as Aion—where *becoming* is the sense-event that cannot be attained for it has come too early or too late or is yet to happen. Deleuze (1990, p. 9) illustrated this paradox of time in the beginning of *The Logic of Sense* with the figure of *Alice Through the Looking Glass*: she gets bigger than she was, which means she also gets smaller than she is now. The time of becoming is a paradoxical interval of a sense-event.

A number of transgenic artists are thus working with skin as a *sk-interface* where the attempt is to move away from the usual representational dermatographics, the most *deceivably* obvious being tattooing, scaring, piercing, and burning of the skin, in order to raise issues of difference more in keeping with the Deleuzian take that moves away from the usual identity politics of the signifier. It is a way to come to terms with the 'crisis' of representation that the 'history' of the skin shows by introducing materiality. The membrane of the skin as a chink or fold tries to trouble accepted categories of skin color, texture, and the like, including what many critics claim to be progressive hybridity, which often remains only *complexly* categorical. Differentials are counted as measured increments. Questioning representational dermatographics has been overwhelmingly the dominant approach. One thinks of obvious films where skin and text are explored in the way the epidermis is inscribed and questioned, like Peter Greenway's *Pillow Book* (1996) and Christopher Nolan's *Memento* (2000) Willoquet-Maricondi (1999) reads Greenway's *The Pillow Book* (original title was *Flesh and Ink*) as raising the question of 'erasing' the body by calligraphic ideographic text and establishing patriarchy, as does Wieckowska (2005) from a Lacanian perspective. Pile (2009) reads *Memento* as raising questions concerning Andieu's conceptualization of the skin-ego in relation to Freud's Magical Writing Pad.

Transgenic art, on the other hand, is a non-representational approach where the radical attempt is made to reconfigure a new BwO, which raises all sorts of ethical and worrisome questions concerning the creation of life. It is not just fixated on the hegemony of the machinic technological models as raised, for instance, by the creation of a Borgian Data and the long line of sci-fi figures. This is not to suggest that this line of research is unimportant. Jill Scott (2008) for example, describes the benefits of *e-skin* development

that enhances touch and sound and enables cross-modal perception to take place through human-computer interfaces (HCI) so that the visually impaired are able to increase their quality of life. Such research may be thought of as the feminine-feminist counterpart to the more cyborgian military fantasies like Jon Favreau's 2008 film, *Ironman*. One approach, as I will present, is what Deleuze and Guattari called 'becoming animal,' and by further extension 'becoming vegetal,' a difficult concept that begins to disturb the radical distinction between human and non-humans by deterritorializing any hard and fast distinction between them. Vampires and Werewolves usually are treated with a 'cleansing' myth and made to be tolerable monsters that we can accept. When we think of 'becoming animal,' one might think of the comparison between Timothy Treadwell's approach towards grizzly bears in their native habitat, deceptively captured by Werner Herzog's documentary (2005), to Steve Irwin as the 'crocodile hunter.' The former's death is not mourned, rather he is vilified as a 'crazy man,' while Irwin received only adulation for his 'wildlife' work. Deterritorializing the 'human' proves to be a difficult task.

With 'becoming vegetal,' the notion of *hybridity* emerges once again, but with the proviso that a transversal interface across species is taking place where something 'alien' is being incorporated through transplantation. The vegetal capacities of tissues through sowing, transplantation, and deflowering are the technologies in play that have been coded as feminine. Hybridity is no longer a *static* concept. Rather the temporality of biological *growth* becomes all-pervasive. Growth as the ability *to become* remains in the province of nature. 'Bio Artists' and bioscientists share a core experience: waiting for growth. It takes a relatively long time for cells and tissues to grow sufficiently that they can be used as media and means. The phenomenon of growth, in its slowness, mediates between subject and object because it *makes present* the time both share with one another synchronously" (Karafyllis, 2008, p. 56). Transgenic art that deals with biological systems eradicates the borders between bodies and tissues. Nicole Karafyllis coins the word 'biofact' to identify the hybrid as an artefact melded with bios, an epistemic thing, a living being or system.

To approach the inhuman in us suggests an infinity between plants (vegetal) and animals and the human—the homology between the act of reading a text and the reading of animal tracks by indigenous ancestors or the many homologies between the human and animal aesthetics, not to mention the range of gestural and linguistic capacity of chimpanzees, dolphins, and whales. When it comes to skin, the inhuman is foremost extended to the vegetal. Jens Hauser's *Sk-interfaces* presents a number of bioartists who have turned to such explorations. These seem to be artists selected from an exhibition he curated called *Still, Living SymbioticA* (2007), which drew together a small coterie of artists experimenting in this area. Claudia Benthien also joined the Sk-interfaces Conference. Her talk can be found at www.fact.tv/videos/watch/181. SymbioticA is a genetics lab located at The University of Western Australia (Perth). It has become the hub

for promoting and aiding biological art (see www.symbiotica.uwa.edu.au/activities/exhibitions and <http://www.stillliving.symbiotica.uwa.edu>). Both Stelarc and Orlan (more below) have partnered with them and benefited from their technical and genetic expertise. Artists that design and engineer tissue cells from both plant and animal meld together a scientific laboratory with an artist's studio. However, not all of these artists dealt directly with 'life.' The well-known cell of artists called Critical Art Ensemble (CAE) presented a video installation called *Immolation* showing the effects of incendiary weapons on civilians after the Geneva Convention, thereby documenting a US war crime through the devastating effects to the body at the cellular level.

The Tissue Culture and Art Project (TCA), a collective of three (Oron Catts, Ionat Zurr, Guy Be-Ary), has been around since 1996; they call their creations "Semi-Living Entities." Artificial degradable biopolymer is scaffolded in a desired shape and then seeded with cells, which cells depend upon the project initiated. In the past, they have used stem (embryonic) cell technology, mouse endothelial cells, osteoblast cells, prenatal sheep cells, pig cells, and frog muscle cells. Their bioreactors are like artificial wombs where they grow living sculptures. Such sculptures are biofacts, a mixture of synthetic and living biological matter that blur the boundary between what is born/manufactured, animate/inanimate. TCA pushed hybridity even further with their *NoArk Project*. They grew virtually unclassifiable sub-organisms. TCA's artistic intention is to raise social issues and questions concerning these new biotechnologies, especially human conduct with other living systems as Other. Projects have included *Disembodied Cuisine* where attempts were made to grow frog skeletal muscle over biopolymer to raise questions surrounding the consumption of animals. Guatemalan *Worry Dolls* was another project involving six doll-like living entities grown in an artificial womb, each representing a possible 'worry' or set of 'worries': Absolute Truth; Biotechnology; Capitalism and Corporations; Demagogy and Deconstruction; Eugenics; Fear, Genes and Hope.

Death and the ethics that surround killing these created living biofacts are always in play since more often than not these installations have to come down and it is forbidden to transport living tissue across borders. Five weeks into the art installation *Design and the Elastic Mind* at MoMA (2008), TCA had begun to grow a leather-like bio-object that took the form of a 'jacket.' Their concept was to develop a "victimless leather" jacket, subtitled it, *A Prototype of a Stitch-less Jacket grown in a Technoscientific Body*. The idea was to deconstruct the meaning of clothes as a second skin by materializing and displaying the jacket as an art object. They left for Australia, and it soon grew too large and had to be 'killed.'

Marion Laval-Jeantet and Benoît Mangin (2008), who form the duo of *Art Orienté object* (AOo) have been together since 1991. Raised in Corsica, Marion is especially engaged in shamanism. When they first met, Mangin suffered from allergies and continued to do so throughout their relationship. His allergic reactions formed the basis of

questions about what is foreign and alien to the body by paying attention to the skin. AOO experiments with creating 'active objects' (at once conceptual and carnal). Epidermal cells were taken from both artists, cultivated, and then grafted onto pig derma, which was then tattooed with motifs of endangered species. This project, known as *Culture de Peaux d'Artistes* (*Artists' Skin Cultures*), is an attempt to promote a hybrid world where inter-species transplants would become ubiquitous, thus blurring species distinctions. Their *Roadkill Coat* recycled the furs of animals killed by French drivers and provoked questions about inter-species encounters. Only exhibited once, their *Pioneer Ark*, a hanging mobile, revealed the mutations of animals exposed to toxic chemicals and radioactive pollutants by molding transgenic porcelain figures of these species. They have also experimented with Kirlian or 'aura' photography. Their *Telepathic Video Station* was an attempt to convey to the public the emotional content of our species and the animal through the electromagnetic emanations from the skin. Perhaps the most controversial and ongoing experiment, initiated by Marion and called *Que le cheval vive en moi* (*Let the horse live in me*). The horse is hybridized with her body by means of an injection of horse's blood. Her rationale: this is a therapeutic shamanist practice to master the anxiety of an exogenic living element that will enter and change her body and psyche.

Growing body parts becomes socially and politically disturbing with Julia Reodica's (2008) *hymNext Project*. These stylized hymen sculptures are made from mammalian epithelial cells that have been scavenged from an abattoir and grown with her own vaginal cells creating the rodent-human tissue in vitro. Reodica envisions her hymen sculptures as occupying a philosophical and biological stance that is between scientific research and body politics. Symbolically, the hymen becomes a barrier that is broken down to begin a relationship or communication. Her creative intent is to work with skin tissue separately from the gendered body so that the final piece challenges or de-emphasizes the idea of assigned gender. The cell for her, manipulated in a novel environment, is able to avoid gender issues despite the hymen being so heavily coded.

Reconstituting the BwO

"Our sexual body is initially a Harlequin's cloak." —Gilles Deleuze

While the above artists extend the BwO by growing body parts that are outside of it, certainly Orlan and Stelarc present two artistic approaches through which the artist's body is the material used to reconstitute the BwO in a dramatic way. Deleuze and Guattari identify three strata for doing so: the organization of the organism, signification as the stratum of the unconscious, and subjectification. Orlan's plunge into biotechnology through her *Harlequin Coat Project* is not as invasive as her previous bodily perfor-

mances, but it does ‘perform’ on another register. It questions whether Deleuze’s epitaph “what a body can do,” which Olan herself quotes (2008, p. 89), can be extended to the cellular level. *Harlequin Coat* furthers her projects on self-hybridization. *Self-hybridizations Precolombienne* and *Self-hybridations Africaine* were a series of computer-manipulated self-portraits wherein Olan inscribes herself into signifiers of beauty that originate outside of Western culture (scarring, manipulating the cranium by flattening it or enlarging it, lengthening the neck through rings and so on). In so doing, she begins to appropriate physiognomic features from other cultures. However, *Harlequin Coat* begins to go past the explicit body of representation and reaches non-representational status by way of the material of her own cell, which in this project is seeded with a twelve week-old female fetus of African origin and the fibroblast muscle cells from a marsupial (a fat-tailed dunnart) with the help of SymbioticA’s laboratory. The project is meant to further problematize multiculturalism.

Stelarc’s *Extra Ear*, on the other hand, also with the help of TCA at SymbioticA, makes it potentially possible to create an Internet organ for the body through the implant of a miniature microphone that is connected to a Bluetooth transmitter. This last stage, while envisioned, is not completely assured. Stelarc (2008) anticipates all sorts of sensory redistribution of the organized organs so that if you telephoned him he could “speak to you through his ear” (p. 103). So while *Star Trek*’s Data has flesh added to his forearm, Stelarc’s extra ear is meant to push in the direction of the Borg collective imaginary. Referring to his *Fractal Flesh* performance, where half of his body was controlled and choreographed by viewers in the Centre Georges Pompidou (Paris), the Media Lab (Helsinki), and the Doors of Perception Conference (Amsterdam) by way of muscle stimulation equipment connected to his mechanical *Third Hand* located in Luxembourg, Stelarc opens the world of experiencing *remote* bodies. This then is “an excessive technological other. A remote phantom presence manifested in a locally situated body. With the increasing proliferation of haptic devices on the Internet it will be possible to generate more potent phantom presences” (Stelarc, 2008, p. 105). For Stelarc, it is the Borg future, the turning inside out of our implicit body so that “electronic circuitry becomes our new sensory skin and the outering of our central nervous system” (ibid.). We have come full circle to *Star Trek: First Contact*. Stelarc is Captain Picard turned Locutius.

I close with a brief commentary on Eduardo Kac whose biotelematic installations (*Teleporting an Unknown State*), cyborgian experiments (*Telepresence Garment*) and most infamously, his biotechnological installations (*The Eight Day*, *GPF Bunny*—the acronym stands for “green florescent protein”—and *Genesis*) are, in my estimation, a counterfoil to the line of flight sought by Stelarc. His transgenic projects address the thin line and fragility between art and technology, of its potential plunge to Borgian megalomania like the Italian Futurists a century ago. Kac’s genetic rabbit, Alba, which is supposed to glow green from the protein, is a bit of a mystery since few have seen her and

Alba was not released from the laboratory where the gene transfer had occurred. Kac wanted to keep the bunny as a pet at home. The irony that a genetically altered animal was to live with its creator-artist should not go unnoticed. It is part of Kac's continuous attempt to avoid the implosion of art and technicity. He spectacularizes the gaze, like the glowing rabbit, only to show that there is nothing to see. Kac is the Duchamp of contemporary art for isn't his 'bunny' a genetic Readymade, generating the questions and the problematic once again between technology and production? The irony is hard to avoid. Kac's rabbit puts to the *question*, that is, it *reveals* for us the 'truth' of the eugenic future in the guise of a harmless sweet (as was destined to be) pet bunny.

The same goes for *Genesis* where Kac's constructs an 'art' gene by taking the famous Biblical statement from the book of Genesis about human domination over the world and eventually processing it by retranslating first into brail and then into a DNA sequence. This 'art' gene was then inserted into florescent *E. Coli* bacteria living in a petri dish. Its mutation could be influenced by Internet users who could turn off and on a light source illuminating the dish positioned within the art gallery. The installation exhibited the petri dish with its magnified projection on one wall, the Biblical passage quoted was written on another wall, while a third wall had the DNA sequence of the 'art' gene. Kac has thereby presented a parody of technoscientific genetic engineering, exposing the manipulative power placed at the center of existence. Finally, it should not be forgotten that Orlan called her *Harlequin Coat*—"a modified Readymade" (author's emphasis), which she says is an "unsaleable and *almost unshowable*" work (2008, p. 87, emphasis added).

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