

Posthuman Dance: Body Heat and Haptic Intimacy in *ORA*

Hilary Bergen (Concordia University)

Heat is transfer of energy without transfer of matter. Because temperature is molecular motion, heat is not something inherent to a body but rather a quantity transferred from one body to another. Speaking in simile, heat is like the motion that the dancing body produces: a surplus of energy, released into the world. Both heat and dance originate in the body while also exceeding it. As fluctuating ephemera, their traces linger but cannot be held fast. *ORA*, a 2011 National Film Board collaboration between Montréal choreographer José Navas and Montréal filmmaker Philippe Baylaucq, explores these various energies. Filmed with 3D thermal imaging technology, *ORA* renders the dancers' body temperature, usually imperceptible to the naked eye, visible. Every subtle variation in heat is detected by rare and extremely sensitive cameras developed by American defense and security company Lockheed Martin which are usually limited to military, scientific and medical applications. *ORA* is the first full-length art film that utilizes this technology, and the result extends beyond the metaphorical treatment of heat (and dance), uniting these energetic forces in a material thermopoetics.

A thermal imaging camera like the one used by Baylaucq detects infrared energy emitted by the body and converts that data into electronic signals which are then processed to produce images on a video monitor, translating heat into something visible. The use of a machine to extend or enhance human sensation is not a new phenomenon, but whereas in science, instruments of vision are often used to penetrate the human body in pursuit of information (or truth), the human-machine interface in *ORA* evades such mastery by presenting a unique body – what Douglas Rosenberg calls a 'double graft, both screenic and kinesthetic' (2012: 53) – situated in between our own unseen visceral corporeality and the specific materiality of the infrared camera. The strange, auratic forms on screen conjure our secret vitalities, inviting haptic engagement or the act of 'touching with the eyes' (Marks, 2000: xi). The ephemerality of dance (and the vitality of the body) is captured in *ORA* by the heat-seeking apparatus, and then rendered in

post-production through editing and colourization of the grayscale footage. I argue that although this process may seem to reinforce the primacy of vision, the optical representation of heat in *ORA* is shaped by a ‘haptic visuality’ (Marks, 2000: xi) that complicates critiques of ocularcentrism. The combination of military surveillance technology with dance in *ORA* presents a unique assemblage in which a machine of control in fact works to engender intimacy rather than alienation or fear. This intimacy opens onto a new aesthetics of the posthuman body that swaps technophilic materiality (steel, gears, wires, circuits) for a sensual presence that invites touch and interaction.

Against Ocularcentrism

Like the discourses of heat and light, dance is freighted with metaphor. American modern dance pioneer Isadora Duncan rejected ballet for its ‘artificial subject matter, restrictive costumes and unnatural technique’, which she felt stifled the inner essence and motor of dance – the human soul (Alter, 1994: 28).¹ According to Duncan, the soul guided ‘the body’s movements in harmony with nature’, and as such her dance vocabulary was inspired by elements of the natural world: the movement of ocean tides, the pattern of light refracted under water, or the shifting assembly of birds in flight (Alter, 1994: 28). Through mimesis, the dancer evokes the image of nature with her body, inevitably shaping that image through self-expression; after all, the most common metaphor applied to dance is that of the body as *instrument*. So we have the body as instrument twofold: for conveying natural imagery and for accessing inner soul. If the dancing body is the vehicle in this metaphor, it is also the interface between inner feeling and outer expression, or rather the tension between what Susanne Langer calls ‘actual movement [and] virtual self-expression’ (1953: 177). Practitioners like Duncan believed that this ‘interface’ (although Duncan never would have used such a word) was disrupted by accessories such as pointe shoes, artificial light or stage makeup. Duncan maintained that the most ‘pure’ form of dance was that which occurred outside, in natural surroundings, using only the (ideally, naked) body. Today, the dancing body continues to be seen as incompatible with, and even antithetical to, emergent mediating technologies such as mocap, VR and interactive video, which, in shifting the performative interface from body to machine, are often accused of dehumanizing or disembodimenting dance itself.

This strain of technophobia is understandable in our post-digital age, in which the (often undetected) force of everyday

technologies on our bodies has fundamentally changed our concept of what it is to be human. Infrared cameras like the ones used by Baylaucq and Navas are regularly employed in surveillance, for thermal weapon sight, in medical imaging and tests, and for global monitoring of environmental pollution and climate change; these devices are both invasive of our privacy and crucial to medical, scientific and military practices. The infrared camera was invented in the early 1800s by a German musician and astronomer, Frederick William Herschel. Herschel used prisms to study the spectrum of light, measuring the temperature of each colour, which led him to discover infrared light (Rogalski, 2012: 279). It is rare to conceive of heat without light. The flickering candle, the blinding sun, the glowing ember—each gives itself to us first as luminescence. Our bodies, of course, and the bodies of warm-blooded mammals, expend heat without throwing off light, but to render body heat legible on screen, it must be converted from the infrared energy that the camera sees to the kind of light we can see with our eyes, known as a thermal image, via an electronic signal. Such is the case with *ORA*, in which the intimate sensation of heat, usually only felt at close proximity to the warm object (or in this case, body), is translated into glowing patterns and colours, an image perceivable from a distance.

The same arguments that are levelled at inter-media dance may also apply to analyses of *ORA*: that the camera disembodies the dancer, even more so given that the film promises to be about heat (a tactile, corporeal quality) but turns out to be about light (visible at a remove from the object/body). Critics of ocularcentrism such as Luce Irigaray and Donna Haraway take an embodied, feminist approach to argue against the primacy of sight in the hierarchy of senses. A recurring theme in Haraway's work is her interrogation of the patriarchal primacy of sight in our culture. As she writes in 'Situated Knowledges', 'the eyes have been used to signify a perverse capacity – honed to perfection in the history of science tied to militarism, capitalism, colonialism and male supremacy – to distance the knowing subject from everybody and everything in the interests of unfettered power' (1988: 581). Rosi Braidotti likewise notes the 'omnipotence of visual media' and suggests that visualization has become the 'ultimate form of control' (2006: 204) in which objects are held apart and either reified or scrutinized. Feminist thinkers often reject vision as the primary sense because of the way that the eyes have been linked to the brain, delineating it from the body and perpetuating the gendered problematics of Cartesian dualism. To privilege vision, or light seen at a distance, is to separate 'matter from illumination' or body from 'truth' (Bolt, 2000: 204). Barbara

Bolt writes that ‘the metaphors of light’ have ‘informed European philosophy from Plato’s cave until its apotheosis in Enlightenment thinking’, aligning knowledge and understanding with luminosity (2000: 202). Taking these criticisms into account, I wish to propose a reading of *ORA* that acknowledges its reliance on the visual while also complicating sensory categories. Following Laura U. Marks’ work on ‘haptic visuality’ and embodiment in film, I suggest that Baylaucq’s non-utilitarian use of military heat-sensing cameras, paired with dance, complicates the way we think about dance-metaphors and the posthuman body. In presenting bodies that are not only images but also heat-traces of living corporeality, *ORA* creates an aesthetic that is textured and indexical rather than purely symbolic or merely visual, thus moving away from paradigms of control and towards the production of haptic intimacy.



Fig. 1: *Ora* ©2011 National Film Board of Canada. All rights reserved.

The Camera’s Touch

The camera is haunted by a history of disembodiment, from the notion that a picture can steal your soul to the photographic motion studies of Eadweard Muybridge and Étienne-Jules Marey, which, acting as visual proof of the way the human body functioned, established human motion as a series of fixed shapes through space. The medical and military use of surveillance technologies have historically sought out the body’s heat only to treat it as an object of distanced, ‘objective’ study. However, intimacy between bodies and machines does not always lead to alienation from the organic human presence or the category of Nature which we hold so dear. Projects like *ORA* utilize the probing reach of technology to explore contact and consent.

Against its prescribed military use, *ORA*'s thermographic camera gazes upon a dark room full of dancers who are also willing participants. The dancers expose their bodies to the camera and make themselves vulnerable to the heat-seeking technology. This opening, one to the other, constitutes a human-machine interface that is founded on intimacy; rather than hold the body at a distance in order to label or contain it, the camera brings the body nearer through its heat-seeking sensibility—its own sense of touch. Dancers are, of course, used to being in close proximity with one another's bodies, and sensate interaction is part of their daily work. In the making of *ORA*, the dancers worked in complete darkness, forgoing sight and relying on other senses, particularly their capacity to feel one another's bodies nearby (*ORA* Press Kit: 4). Although it may seem that capturing this particular dance on film would leech some intimacy from the dance, in fact the thermographic quality of the camera reaches out in much the same way the dancers do in the dark, seeking the radiating heat, the warmth of a body, rather than the outlines of its form in space. In this way, the infrared cameras penetrate beyond the skin or shape of the dancers' bodies to their inner vitality. That the dancers are consenting participants in this interaction is crucial, given the invasive history of surveillance technologies and the dancers' inability to see the camera capturing their bodies in the dark.

Darkness and visibility appear as opposites, but darkness is an important aspect of what is seen and on display in the production of visual media. In his book *Artificial Darkness*, Noam M. Elcott historicizes the dark as a 'technology that fused humans and images [...] negated space, disciplined bodies, and suspended corporeality in favour of the production and reception of images' (2016: 5). This statement juxtaposes organic bodies with constructed images, a common impulse when analyzing the effect of visual technology on the human corporeal presence. Elcott writes that 'artificial darkness enabled the spectral virtuality of the body', and while this is true for *ORA* as well, where bodies are read as aesthetically virtual, the film also enables the *camera* to be more like a human body, and further, presents an imaging of bodies that is unique in its preservation of their organic traces (2016: 9). In her book, *Death 24x a Second*, British feminist film theorist Laura Mulvey writes, 'The cinema combines, perhaps more perfectly than any other medium, two human fascinations: one with the boundary between life and death and the other with the mechanical animation of the inanimate, particularly the human, figure' (2006: 11). Working from C.S. Peirce's theory of semiotics, Mulvey distinguishes between the *icon*, or

recognizable sign, that refers to the thing it represents through ‘similarity of appearance’; the *symbol*, or decipherable sign, which ‘refers to the thing it represents by means of conventions or codes’; and the *index*, or sign produced by the thing it represents (9). As an example of the index, Mulvey suggests a footprint or the shadow of a sundial; the index is something that leaves ‘a mark or trace of its physical presence’ which ‘inscribes the sign at a specific moment of time’ (9).² Dance scholar Felicia McCarren also refers to Peirce’s theory of indexicality to argue that it is precisely the physical connection inferred by the camera as index that ‘makes the camera a dancing machine’ (2003: 27). The camera resembles dance not only through mimetic representation (icon) but also through indexical images, ‘linked to their subject through physical proximity’ (27). *ORA* represents the dancing body, then, both as icon (an image of the body) and index (a trace of the body’s heat), uniting the moving image of the body with its ghostly past and doubling the dancer across space and time.

Because *ORA* was shot in complete darkness, the dancers’ bodies (warm, alive), become the only source of light in the film. Glowing softly, the human forms look almost computer-generated; avatars whose liveliness is symbolized by the light that emanates from inside them. Isadora Duncan’s theories about dance as a channel to inner soul here coincidentally align with the metaphor that *ORA* presents, of soul as luminescence, but while this inner ‘light’ may function as symbol, it is also the most animal thing about the dancers – their *heat*. As the dancers stroke the walls, which are outfitted with textured, heat-reflective aluminum panels, the surface glistens, having reflected some of the body heat of the dancers. Their caress reminds us of the tactile engagement that we as viewers experience with the film. The dancers’ bodies light up the walls and floor, and the cameras capture the material traces of heat, left behind when the dancers make contact with surfaces, inviting Haraway’s question, ‘Why should our bodies end at the skin, or include at best other beings encapsulated by skin?’ (1991: 178). The visualization of human heat in *ORA* configures the dancing body as a fascinating way to trace heat as a technology of the living mammal. Conversely, there is a deathly veneer to the dancing forms, even as they glow with life. The places where the dancers’ faces lack the warm flow of blood (the nose and the eyes) remain dark and cavernous, drawing our attention, not just to the life pulsing through these bodies, but to their skeletons as well, configuring them in a *danse macabre*. It is significant that the dancers’ eyes, their ocular-receptors, are revealed as heatless zones. Being without illumination, their eyes become ‘soulless’ in this conception.

How ironic that the very signs of life in these bodies (heat) should make them look more dead (or simulated) than alive.

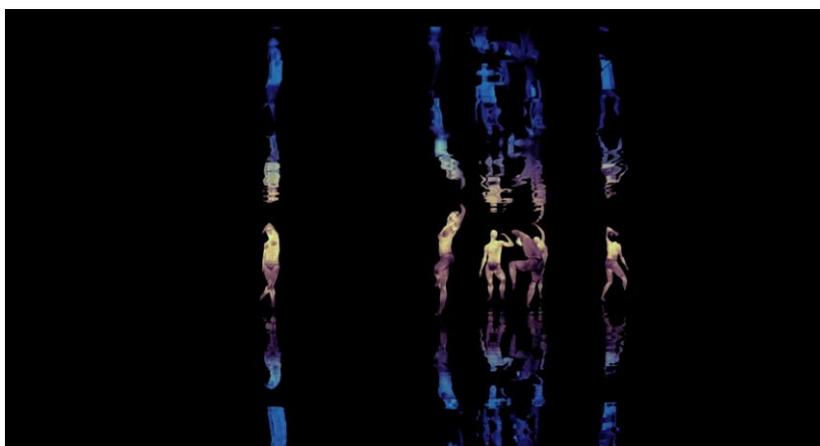


Fig. 1: *Ora* ©2011 National Film Board of Canada. All rights reserved.

The way these bodies look – their skinless radiance, their textured innards – invites Marks’ cinema theory of ‘haptic visuality’, which can add nuance to a reading of *ORA*, complicating the film’s perceived tendency towards ocularcentrism. With haptic visuality, Marks explains, we do not see things on the screen as sharply defined objects (as in optical visuality). Rather, our eyes ‘graze’ across the image, feeling for texture rather than form: ‘While optical perception privileges the representational power of the image, haptic perception privileges the material presence of the image’ (2000: 163). Gazing (or grazing) upon these bodies, I am at first enchanted or perhaps disgusted, entranced by their shimmering material consistency. Eventually, however, I begin to identify with the presence on-screen; I feel a kinship stimulated by the awareness that my own body would also appear alien under the thermographic gaze. This follows Marks’ suggestion that film is not just a bearer of signs, but rather that ‘our experience of cinema is mimetic, or an experience of bodily similarity to the audiovisual images we take in’ (2000: xvii). Mimesis is premised upon the concept that I am different from the object or force that I wish to emulate and therefore I must enact a change in my body/gesture/dynamism to faithfully enact similarity to that object. Marks distinguishes mimesis from semiotics in that it is not so much about understanding and interpreting the world at a distance (semiotics) as about transforming the world from within. Like its homonym ‘aura’, *ORA* ‘enjoins a temporal immediacy, a co-presence, between viewer and object’ that likens it to mimesis more than to semiotics in that to ‘be in the presence of an auratic object is

more like being in physical contact than like facing a representation' (Marks, 2000: 140). Baylaucq's and Navas' collaboration uses multiple arts of mimesis – dance and film – to demonstrate mimetic engagement as a 'form of yielding to one's environment rather than dominating it' (2000: 140). In *ORA*, the ocularcentrism of film media is rearranged through the textured quality of the infrared image and the haptic nature of dance.

Dancers already know about the interplay between vision and embodiment, as experienced through proprioception, a feedback loop that Maurice Merleau-Ponty and other phenomenologists address without specifically mentioning dance. Merleau-Ponty writes that 'visual experience, which pushes objectification further', allows us to 'flatter ourselves that we constitute the world' whereas tactile experience 'adheres to the surface of our body; we cannot unfold it before us, and it never quite becomes an object [...] It is not I who touch, it is my body' (2002: 369). Dancers have always been in possession of this sensuous knowledge, which relies upon an intimate relationship to one's own body in order to deeply understand the bodies nearby. As Brian Massumi writes, 'technologies are not [the only] prostheses of the body' – 'the senses are already that' (2011: 147). Dance therefore is a generative ground from which to think through a new type of posthumanism, where self and other (whether technological or organic) come together. Haraway mentions dance several times in her descriptions of animal-human relationality, writing that while certain beings may not share a common language, 'closely interacting bodies tend to tell the truth' (2008: 26). This notion of truth is rooted in, as Haraway writes, a kind of 'material-semiotic dancing in which all the partners have face, but no one relies on names', demonstrating Haraway's commitment to relationality over hierarchies of control (2008: 26). For Haraway, who has written against the West's obsession with ocularcentrism as a form of patriarchal control, truth is better gleaned through 'situated' or 'embodied' knowledge than through 'a conquering gaze from nowhere' (581). Although the film makes use of the very instruments of omnipotent surveillance that Haraway rejects, *ORA*'s duet between the infrared camera and the dancers distributes power and agency across multiple acts of relationality between machine, performer and audience. Through its combination of dance with heat-sensing technology, *ORA*'s filmic bodies are revealed to be 'impressionable and conductive, like skin...' (Marks, 2000: xii) that the viewer can, in turn, touch with their 'fingery eyes' (Haraway, 2008: 6).

Circumventing Metaphor

We experience heat through touch. We lay the back of a hand to a child's forehead when we suspect fever; my cat nestled in my lap radiates warmth. The camera's reach in *ORA* also performs a kind of touch, a touch which is highly nuanced. Distinct from human touch, the infrared camera reads heat like light, as a series of electronic signals. Infrared lies between the visible and microwave portions of the electromagnetic spectrum, which our eyes cannot detect. The cameras used for the film shoot in black-and-white and are 'sensitive to 10,000 gradations of grey', says Baylaucq, each of which corresponds to a fraction of a degree of temperature (NFB, 2011). Post-production stereographer Yannick Grandmont, who has ample experience with stereoscopic production, explains that he assigned colours to the gradations of grey in post-production by playing with pixels in the digital imagery. This additional embellishment serves to illustrate the force of dance-motion as streaks of colour that follow the trajectory of limbs through space. Despite the fact that the camera is sensing a vital force, this translation, from haptic to optic, turns the human body visually strange, or even uncanny.

There are those who claim that dance should not be filmed, as the process produces an image-double of the dancer's body, a body which is meant to be unique and singular (according to thinkers like Duncan). Of Jean Baudrillard's 'simulacra', Thomas Heyd writes, 'We might say that a simulacrum is a "dishonest" copy, one that hides some of the knowledge about the nature of the original that a faithful copy would transmit' (2000: 16). Insofar as the bodies in *ORA* are images, reproduced by the camera, they could be thought of as simulacra. Yet as strange as these figures are, they do not hide so much as reveal knowledge about their referent body. Their simulated aesthetic is exacerbated by the fact that even as we are aware that we are made up of circulatory systems and hot blood, we are simultaneously out of touch (or rather, out of sight) with these inner workings that endow us with vital energy. When viewed optically, our hidden insides seem, plainly, alien.

Another foreign body is the infrared camera itself, which produces so much heat while filming that it must be periodically cooled with liquid nitrogen. Pierre Plouffe, Technical Supervisor and Digital Imaging Specialist for *ORA*, describes the inaugural use of the camera in production as a kind of 'performance' in which the dancers huddled around in

hushed awe, using their cell phones to record the dry ice billowing from the apparatus and even breaking into applause. Additionally, in order for *ORA* to be produced in 3D, it had to be shot using two cameras, ‘placed side-by-side and synchronized, like human eyes’ (*ORA* Press Kit, 2011). Baylaucq’s use of high-definition, stereoscopic cameras ensured that the bodies of his dancers would be more precisely defined in their heat patterns, almost uncannily so. Furthermore, because the cameras are owned by Lockheed Martin, an American security company, they could not travel outside the United States. The Canadian crew travelled to Vermont to shoot the film in a set of early 19th-century foundries, and the lack of insulation in the stone walls made it difficult to maintain a constant ambient temperature.³ Each human body differs in their patterns of heat loss. Isadora Duncan believed that the dancer should be free to move their instrument, (their body) unrestricted by clothing – that if possible, the dancer should be nude (Alter, 1994). Although the dancers in *ORA* wear briefs, the camera denudes them further, revealing their individual patterns of blood flow like leopard spots or ‘virtual leotards’ (NFB, 2011).⁴ In comparison with the kind of synchronicity of movement and form expected in dance, these dancers exhibit patterns of heat loss unique to their own situated position—a factor beyond their motivation or control. As a result, even if the bodies are moving in unison, they appear unique and singular, each to their own.

Navas’ choreography displays a subtle mimetic quality: dancers’ limbs sway like underwater sea creatures, and bodies moving in formation resemble the relational processes of organic systems. Mimesis is abstracted, however, by the fact that these are not recognizable human forms. The dancers in *ORA* are what Gilles Deleuze calls the ‘genesis of an unknown body’, (1989: 201) created by remixing the qualities they already possess, so that ‘the certainty of what counts as nature [...] is undermined, probably fatally’ (Haraway, 1991: 153). It is not that *ORA* opts out of ocularcentrism – the history of military surveillance technologies and their highly precise vision could easily be seen as a dominating force – but when used in this particular context (with willing bodies as participants, and without a utilitarian end-goal), the technology produces not dehumanization of the organic, corporeal presence so much as an exercise in imagination. Confronted with *ORA*’s strange bodies, generated in collaboration between sensate dance and the specific (and highly sensitive) materiality of the infrared camera, we can imagine other potentials and possibilities for the body, whose energy and impact radiates beyond the presumed container of the skin. We can imagine

agency, relation and interactivity as alternatives to hierarchies of domination. Dance can act as a channel for this alternative mode of knowledge, not only metaphorically, but through physical choreographic exploration.



Fig. 3: *Ora* ©2011 National Film Board of Canada. All rights reserved.

Emergent Posthuman Aesthetics

The dancers in *ORA* are not only representational but also material. Their moving bodies are revealed to be more than singular units; inhabited by many visible currents (blood, heartbeats, breath), they help us visualize the ‘assemblage of forces, or flows, intensities and passions that solidify in space and consolidate in time, within the singular configuration commonly known as an “individual” self’ (Braidotti, 2006: 201). Dance is often used as a figuration to explore process philosophy (Gilles Deleuze; Brian Massumi; Erin Manning), which posits ‘the primacy of relations over substances’ and the fluidity of thought in motion (Braidotti, 2006: 199). Similarly, dance can aid in diversifying concepts of the posthuman beyond body-transcendence and human-improvement, toward a network of embodied relations. Anna Tsing opposes the forward-looking trajectory that the ‘post’ in posthumanism implies. She resists teleological courses as guided by progress as the ultimate goal. Instead, she writes, we must ‘watch unruly edges’ (2015: 20). We must ‘put unpredictable encounters at the center of things’ (2015: 20). If we can destabilize our understanding of human success as innately tied to ideas of progress, Tsing suggests, we might be able to both ‘live inside’ of this ‘regime of the human’ and ‘still exceed it’ (2015: 20).

There is a feminist ethos of care in this understanding of the posthuman not simply as a human-improved, but as a mode of thinking beyond the human toward a practice of ‘nomadic thought’ (Braidotti, 2006: 201). This is a practice that puts forth attentiveness as a mode in which the as-yet-unknown is witnessed rather than conquered or colonized. Anna Tsing’s mantra, ‘Look around rather than ahead’ is about noticing the beauty that surrounds us, but also about paying attention to the various rhythmic occurrences that emerge out of our “polyphonic assemblages:” the minute unseen labours and injustices that the blazing march of progress cannot and will not observe’ (2015: 22). Tsing observes that she ‘hardly know[s] how to think about justice without progress,’ but that there is a kind of quiet justice in looking around, in attenuating *to*.

The openness that Tsing advocates is not only about a state of mind, but rather is very much rooted in the body – and various bodies, human and non – and is therefore engaged not only intellectually but sensually as well. Braidotti’s statement that ‘any theory of subjectivity worthy of its name must take into account the embodied and organic structure of the subject’ likewise insists on the importance of acknowledging the *specificity* of bodies within assemblages, positing situated knowledges as an alternative to the ‘objective’ scientific lens (2006: 197). Inspired by the nomadic qualities of thought—the political potential in the flow of ‘transitions between potentially contradictory positions’ rather than at any fixed point or at the end of a projected teleology (2006: 199) – Tsing, Haraway and Braidotti return to the body as a source of innate knowledge without setting the body apart from its surrounding forces and objects. Machine Age thinkers like Isadora Duncan saw the human body as an emotive instrument of soul whose natural expressivity was stifled by the intrusion of emergent technologies such as film. Our current information era poses many of the same impulses – to stave off the onslaught of technologies that seek to control and disembody the human. The dancer is the fulcrum around which the persistent discursive binaries of human/machine revolve. As such, the dancer is also a dynamic site from which to explore the potential of various human-machine aggregations. In order to be revealed to itself, a sensing body must be open to the others (human and non-) in the assemblage that surrounds it, simultaneously situated in the body and extended into various relations with other systems and objects. Sensitive to the interplay between the bodies that comprise this delicate assemblage, dance is the art of noticing.

The dancers in *ORA* notice one another just as the camera notices them, feeling for presence in the dark. The scientific technology in *ORA* invites the viewer to share in its haptic engagement, giving us a way to reimagine the body, not just as a self-directed, contained instrument of function, or as a tool for mimesis, but as a porous entity that imprints other bodies. Rather than repel or de-corporealize its spectators, the film attracts us with its spectacular visuals and then kindles a flame of recognition unrelated to sight. That recognition enables us to share in the consenting nearness with other bodies; screenic bodies, yes, but ones that are fleshed-out through their haptic qualities. Usually only a lover or a family member would get close enough to read one's body heat. In this way, *ORA* turns audiences into intimates.

Notes

1. In *Descartes' Error*, Antonio Damasio makes a case for the 'self' as purely a product of the series of kinetic interactions between distinct areas of the brain. If concepts of soul and selfhood are complementary, we can see how the soul could be read *as* movement.

2. As another example of indexicality, Giorgio Agamben offers an anecdote in 'Notes on Gesture' about Gilles de la Tourette, a hospital intern in Paris who in 1886 had patients step in powdered iron sesquioxide (a rust-red powder) in their bare feet and walk along a strip of paper in order to measure their gait (length of stride, distance breadthwise, angle of downward pressure, etc). In citing this example, Agamben acknowledges that although the index of footprints produced by Tourette gleans information from the bodies that walked on the paper, the prints remain merely images, fragments of gestures that would only 'regain their true meaning' were they reunited with the fully embodied gestural sequence of which they are a trace (1993: 139). *ORA*, however, preserves not only the bodily trace, but the gesture through space and time that created it.

3. That *ORA* was filmed in former foundries, factories where great amounts of fiery heat were once produced and where bodies laboured under capitalism in the name of progress, provides a necessary tension with my reading of the film.

4. One of the artists involved in the making of *ORA* describes a kind of non-intentional mimesis in the appearance of the dancers' skin under thermographic cameras. He explains that

they look like ‘minerals, stone or marble’ (*NFB*, YouTube, 2011).

References

Agamben, G. (1993) ‘Notes on Gesture,’ in *Infancy and History: The Destruction of Experience*. Trans. Liz Heron. London: Verso.

Alter, J. B. (1994) *Dancing and Mixed Media: Early Twentieth-Century Modern Dance Theory in Text and Photography*. New York: Peter Lang Publishing.

Baylaucq, P. (2011) ‘ORA: Meeting with Philippe Baylaucq’ *NFB* YouTube. (10 January 2018). Available at <https://www.youtube.com/watch?v=swXqdroLE3E>

Bolt, B. (2000) ‘Shedding Light for the Matter’, *Hypatia* 15.2: 202-216.

Braidotti, R. (2006) ‘Posthuman, All too Human: Towards a New Process Ontology’, *Theory Culture & Society* 23.7-8: 197-208.

Damasio, A. (1994) *Descartes’ Error*. New York: Penguin Books.

Deleuze, G. (1989) *Cinema 2: The Time-Image*. Trans. H. Tomlinson & R. Galeta. Minneapolis: University of Minnesota Press.

Elcott, N. M. (2016) *Artificial Darkness: An Obscure History of Modern Art and Media*. Chicago: University of Chicago Press.

Haraway, D. (1991) ‘A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century’ in D. Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge. 149-181.

Haraway, D. (1988) ‘Situated Knowledges: The Science Question in Feminism and the Privilege of a Partial Perspective’, *Feminist Studies* 14.3: 575-599.

Haraway, D. (2008) *When Species Meet*. Minneapolis: University of Minnesota Press.

Heyd, T. (2000) 'The Real and the Hyperreal: Dance and Simulacra', *The Journal of Aesthetic Education* 34.2: 15-26.

Langer, S. K. (1953) *Feeling and Form: A Theory of Art*. New York: Charles Scribner's Sons.

Marks, L. U. (2000) *The Skin of the Film: Intercultural Cinema, Embodiment and the Senses*. London: Duke University Press.

Massumi, B. (2011) *Semblance and Event: Activist Philosophy and the Occurrent Arts*. Cambridge: MIT Press.

McCarren, F. (2003) *Dancing Machines: Choreographies in the Age of Mechanical Reproduction*. California: Stanford University Press.

Merlau-Ponty, M. (2002) *Phenomenology of Perception*. Trans. C. Smith. New York: Routledge.

Mulvey, L. (2006) *Death 24X a Second: Stillness and the Moving Image*. London: Reaktion Books Ltd.

ORA Press Kit, National Film Board of Canada, <http://onfnfb.gc.ca/medias/mediakit/orapresskit.pdf> (Accessed February 25, 2019).

Rogalski, A. (2012) 'History of Infrared Detectors', *Opto-Electronics Review*, 20.3: 279-308.

Rosenberg, D. (2012) *Screendance: Inscribing the Ephemeral Image*. Oxford: Oxford University Press.

Tsing, A. (2015) *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. New Jersey: Princeton University Press.