CODE DRIFT

Illuminated Darkness:

Nightmares, Blind Spots and Biofeedback

Ted Hiebert

This exploration would be best seen as the beginning of a story, a somewhat tenuous account of what might be called a manifest imagination. This is the story of how we are all already imaginary beings, entities not governed by the rules of science or truth or reason, but at least always in part governed by our imaginary participation in the formation of the world.

This is also the story of a digital imaginary: minds caught in the dynamic of user-generated content, bound by worldly context to something that would never have appeared to an analog mind -- namely, the observation that reflection is no longer the governing sign of knowledge or understanding. We have passed through the mirror to the other side, and, on the other side, what we find is that the rules of the game have changed -- bodies and minds flipped from side to side. The frame which housed reflections has disappeared, absorbed into the world of screen-based living.

Imaginary Beings

We have become imaginary technological beings, a situation that has been described by many, from Paul Virilio's assertion that technology makes phantom limbs of bodies and minds, to Arthur Kroker's insistence that technological citizens are "possessed individuals," to Marshall McLuhan's suggestion that technological bodies are literally turned inside out. But there is another story that frames the situation more directly, "Fauna of Mirrors" Jorge Luis Borges. In this story, the mirror people, once citizens of the same world as us, are banished to the other side of the mirror -- the side without a frame, the side where the mirror lacks its reflective power, a one-way mirror that is also a screen.[1] Who jumps first, the mirror or its reflection? We give agency to ourselves but what if we, too, crossed to this other side? Wouldn't it be just the opposite? On the other side of the mirror we would no longer see ourselves in imitative gesture. Instead, we would see a self that mocks us, a master self staring vainly in our direction, definitely not staring back, not responding in passive obedience but compelling mimetic response.

In the land of the screen we jump second, our appearances always ahead of us at the speed of the half-distance traveled, the speed of light that only has to go half as far -- the space of the light-beam **before it is reflected back**. This is a place of light caught in mid-stride between illumination and appearance -- light in transit, not illumination proper but its unrealized potential. It is a distinction between reflected light and what photographers call **incident light**, direct light (such as that from the sun or a light bulb), light from which one measures fall-out -- a location in space rather than an image, assessing in this instance the level of general illumination present. Incident light is light on its way to an object, the light of vectors rather than positions: light on its way somewhere, but not yet reflected back into the realm of appearances, not yet bound to the story of light but only to that of illuminated darkness.

And, just like in Borges story, the mirror people, having understood their debt to the incident rather than reflection, have now slowly begun to re-infiltrate the world of flesh, threatening to reclaim in some way the imaginary agency stripped from them on the other side, re-emerging from the screen and re-infusing the material world with imaginary presences.

In this spirit, the story that I want to tell grows out of a meditation on the relationship between incident light and the lights of the imaginary: both are lights that do not reflect but project their images outwards, casting shadows, terrorizing established standards of illumination and exposure, morphing and deforming existent relationships that we thought were representational, and, in so doing, burning their way with blinding intensity into real-world manifestation. This is a story of light that re-enters the world from the darkness and a story of three incidents: nightmares, blind spots, and biofeedback -- three cases of the body as technological generator of illuminated darkness.

First Incident: The Case of Nightmares

A story such as this is only appropriately begun with a nightmare, a defiance of the impossibilities of daily living that forcibly infiltrates the minds of the dreamer. Spoken in a language that allows no denial, nightmares can be so terrifying only because they allow for no reciprocal engagement. Yet in this, in a strange and not-so-subtle way, one might conjecture that nightmares are proof of the power of imaginary being: night-time thoughts or fears that manifest with real world impact. And, because of this short-circuit of the question of volitional engagement, one might go further and propose that nightmares can be seen as a shortcut to the possibilities of the imagination, a shortcut because nightmares cut out the question of intentionality in favour of subjection: no reflection, only unwanted exposure. Nightmares are a familiar (if less than desirable) manifestation of that which is beyond rational control, but which nevertheless seems to happen. Whether we believe the medieval stories of Incubus possession, the psychoanalytic stories of unresolved life experience, or the scientific stories of random synaptic firing is not irrelevant, but does not effect the argument. Nightmares, even when dismissed as unimportant, have measurably real physiological effects.[2] Seen technologically, the effects are even more real than the nightmare -- measurable and machine verifiable, even if their causality remains in the darkness of uncertainty. The effects of nightmares might be as simple as increased heart and respiration rates or as complex as waking with a bloody nose, screaming or in continued panic because, even though we realize we are already awake, we are never quite convinced that the imaginary hasn't somehow followed us back into the waking world. By most accounts a large majority of us have had a nightmare or few of this sort -- those dreams that plague the waking day, that refuse to relinquish their nighttime hold over a day that is no less real for its irrational contingent.[3]

Thought as Incantation

It is important to note this dark side, this relationship of the nightmare to both the literal darkness of dreams and the figurative darkness of cognitive anxiety, if for no other reason than to immediately insist that an imagination of this sort can have real effects, and not always of the happy creative type. There is an important connection to be made here between the nightmare as a cognitive and physiological manifestation and the type of metaphysical thinking described by Antonin Artaud as "active metaphysics," thinking that insults itself,[4] that situates itself "in between gesture and thought," "between dreams and events," as a literal form of incantation.[5] The notion of thought as incantation is nothing if not a most literal description of nightmares, imagined encounters that nevertheless do not obey the boundaries between dreams and reality. This is to say not only that nightmares may have metaphysical importance, but also that they might provide an **access point** to the imagination through the power of metaphysical manifestation. In this spirit of Artaud's "active metaphysics," one might call nightmares a form of thinking in reverse, a metaphysical reverse-engineering whose end-game is a flip of Nietzsche's declaration that we only remember what hurts [6], transformed into a mnemonic device, a nihilist pedagogy of one sort or another.

Artaud understood as well as anyone that the powers of incantation and dream are neither reflective nor even yet relational, and that the idea of allowing ourselves to be injured in a certain direction, as metaphysical strategy, ceases to lose its significance if such willful cooperation also dulls the effect. This task of understanding, in other words, is not by any means one whose aim is a domestication of nightmares, but, rather more strangely, a simple awareness of the unwilled immediacy of encounter -- what Peter Sloterdijk calls a "critical proximity" as opposed to a critical distance from the question.[7] And, one might suggest, this proximity is exactly half the distance between criticality and its reflective self-awareness -- an incident that manifests in the tongue-speak of nighttime incantation, actively preventing reflective distance through a demand for immediate encounter.

Forced Suspension of Disbelief

Notably, this same strategy has a long history, albeit in a slightly different form: a form requested rather than demanded; a form in which proximity is a function of desire rather than forced encounter -- the history of aesthetic discourse in which experiential proximity is the coveted modality of engagement. Whether the formulation is that of Aristotle's "plausible impossibilities," Kant's "disinterested interest," or Samuel Taylor Coleridge's "suspended disbelief," what each has in common is precisely not a distancing tactic but a willful encounter grounded in the immediacy of imaginary engagement, without necessary regard to the reality or un-reality of the situation (which is not necessarily to say without critical awareness of the state of affairs). For each of these thinkers, Sloterdijk's "critical proximity" is central not only to the aesthetic experience, but builds on what Northrope Frye eloquently calls an "educated imagination," a cultivated integration of the hybrid experience of reality and the imaginative.[8] Importantly, such integration begins not with sophisticated knowledge machines but always with a language of encounter in its most basic form: for literature, poetry; for science, mathematics; and, one might extrapolate, for dreams, nightmares -- a proposition with which even some dream researchers concur.[9]

I raise these affinities to reinforce not only the manifest powers of nightmare encounter, but also to firmly connect nightmares with a history of imaginative engagement, and to connect

aesthetics to a metaphysics of nightmares. The nightmare might even be seen as a form of meta-aesthetic, taking aesthetic strategy one step further into a suspension of reality, a form of the imaginary that dictates material proximity -- in other words, **an unwilled aesthetic encounter**. This makes sense because nightmares do not respect the boundaries of possibility, reality, or sense, but nevertheless impact upon the lived world. The nightmare's relationship to the suspension of disbelief is one that is explicitly forced -- a forced suspension to which one might even attribute a sort of perverse yet living poetic. Consider some of the most common nightmares: those in which we are being hunted or chased but cannot escape; those in which we fall towards the ground on a crash course to daytime; those in which our teeth fall out of our mouths, one by one, sometimes in mid-speech.[10] Might these all not be seen as strangely aesthetic renderings -- a poetic return to our own transgressed agency paradoxically spoken through the very rupture of will into lingering real world manifestation? One might not quite call this mind over matter, for it is difficult to assign the agency of such encounters to ourselves, but there is definitely a dynamic in play -- a manifest context that cannot be ignored, burning awareness into experience, emerging from the screen of the imaginary backwards into the world of flesh.

Nightmares as imagination burns: a first instance of illuminated darkness.

Second Incident: The Case of Blind Spots

The grounding of this exposition in a cultivation of nightmares serves two purposes: first, it reinforces the proximity of encounter, frustrating the attempt to establish a rhetorical or critical distance; second, it provides a preliminary instance of our relationship to the manifest imaginary. The case of nightmares suggests that such a relationship is less something to develop (since it already exists) and more simply an imaginary fact of life -- the problem being that the associated manifestations are typically imposed upon us unwillingly, according to a schedule not of our making.

Fortunately, a more accessible version of the phenomenon exists, a daytime nightmare of sorts that can go unnoticed because it also goes precisely **unseen**. Here, as a second instance of encounter, we might look at the blind spots of vision as a case of the manifest imaginary intruding explicitly on the appearance of the world around us: a similar case of illuminated darkness but one that offers different critical possibilities because of both the perpetuity and pervasiveness of these visual ruptures. In the simplest explicative iteration, blind spots are those areas of the eye where the optic nerve penetrates the retina, areas in the eye where there is exactly no sight present. But these blind spots do not manifest as such. Interestingly, in those areas where we are deprived of sight, we nevertheless experience visual stimuli. The blindness is sutured, the void is imagined-in, the gap is filled. In some instances this is simple cross-pollination from one eye to the next, but even in instances where we see with only one eye, the mind refuses to leave that spot of sight un-filled. What would be darkness is lit up by the power of consciousness alone.

Blind spots, in other words, are areas of illuminated darkness, in a literal way: proof that part of what we see as real is explicitly made up, hallucinated into being. One might even say that the blind spot is not so much simply a physiological exception or defect as it is an **orifice** -- that from which the imaginary is excreted into the world at large, preserving a seamless vision of reality by masking the fractured reality of vision. Suddenly, out the window goes the reliable basis of knowledge as that which can be observed and through observation verified and in its place remain only those fictions which reciprocally fade into appearance as the "false lights" of

imaginary presence. It is not quite quixotic, not as simple as a completely delusional world at large. It is, instead, deceptively Cheshire: a blind spot grin smiling back at us from every angle, a ubiquitous aesthetic protrusion with such proximity as to render itself invisible to the human gaze.

Useless Functions

The irony of this formulation is that, technologically, the blind spot reveals that eyes have only ever been **partly** about seeing. This can be made clear with a simple reference to Paul Virilio's concept of the "vision machine," which makes the compelling case that eyes have been rendered technologically redundant, replaced by a digital gaze that sees more, better, and faster.[11] And this is also the eye rendered as what Jean Baudrillard calls the "useless function," an eye replaced by its technological double that now forms the horizon of legitimate vision -- human vision relegated to the status of second-class organic. In Baudrillard's words, "When the world, or reality, finds its artificial equivalent in the virtual, it becomes useless,"[12] a prophecy that fulfills Virilio's promise of machinic vision.

And yet, there are ghosts in this machine -- that which remains to take aesthetic revenge when the full spectrum illumination of a digital gaze mistakes the world for a seamless visual entity. The eye seen technologically emphasizes the simple fact that what technology does not (and perhaps cannot) replace are exactly the defects of sight: those aspects of vision that have always been there but which we are only just beginning to see -- in short, the part of the eye that is physiologically responsible not for the reflective rendering of an apparent and verifiable world, but for the guardianship of imaginary protrusion. Technology may render the eyes blind, but if so we are left with what amounts to a blind spot imperative of sight turned useless: the assertion that vision has always been a guardian of this imaginary function of useless practice. Interestingly, the eye seen technologically reclaims its physiological importance by exactly embracing a nightmare of blindness.

Cognitive Blind Spots

This is obviously, in part, a conceptual abstraction, but I want to abstract one step further. This dynamic is not limited to the eye but also has a cognitive equivalent. "Useless functions" are also those that, in Baudrillard's words, have somehow forgotten to die, left to aesthetically roam the world with a value added suspension of science and truth, returning to wreak an imaginary revenge on the world and its appearance. "The Real effaced by its double is a potentially dangerous ghost," says Baudrillard, and under the sign of the useless function, the directionality of the blind spot begins to reverse -- not merely a suturing of reality, nor simply an imaginary visions that fills in sight where there was none before, but, strangely, one that also begins to replace certain aspects of apparent reality itself.[13] It's not as strange as it sounds. In a recent issue of *Scientific American*, neuro-psychologist V.S. Ramachandran speaks of a phenomenon called "inattentional blindness," a case of not seeing things that are actually right in front of one's eyes. Ramachandran describes the study like this:

> Pretend you are the member of an audience watching several people dribbling and passing a basketball among themselves. Your job is to count the number of times each player makes a pass to another person during a 60-second period. You find you need to concentrate, because the ball is flying so quickly. Then, someone dressed in a gorilla suit ambles across the floor. He walks through the players, turns

to face the viewers, thumps his chest and leaves. Astonishingly... 50 percent of people fail to notice the gorilla.[14]

Interestingly, under conditions such as these it seems that the blind spot returns with a strange reversibility, not filling in a vacant spot of vision but explicitly **imagining away** the disruption -- not the technological disabling of vision but the cognitive augmentation of appearances, a strategic displacement of reality **into** the blind spots of vision and cognition. This epiphany is, of course, an apophany, a false versioning of reality that is nevertheless faithful to the **human** tropes of vision, an imaginary particle stuck in the eye of the vision machine. And if there was any doubt that the blind spot might be seen as an orifice for the protrusion of the imaginary, this should at least cast some illuminated doubt on the question.

Blind spots as an orifice of the imaginary: a second instance of illuminated darkness.

Third Incident: The Case of Biofeedback

At the midway point between nightmares and blind spots, in the dialogic space between imagination burns and the revenge of the imaginary on the world of technological vision, a fissure begins to appear, one that speaks of feedback possibilities for a world imagined differently. It's a place where Pavlov's dog begins to chase the Cheshire Cat, a place of potential promises for imaginary conditions and imaginary conditioning. The game is one of cultivating nightmares and putting things in the blind spots of cognition -- not idly but as a strategic response to the aesthetic proximity of the world.

The simple version of this third incident, the case of biofeedback, refers back to the technological status of contemporary bodies -- what Virilio describes as phantom limbs of a world gone virtual.[15] At stake in this formulation is, first and foremost, its use of nightmare terminology to describe a human state: the traumatic immediacy of amputated bodies held out as the version of how we should all now self-conceive. And while there may be an injustice done to the question of real pain and violence in such a description, we might nevertheless conjecture that Virilio means this quite seriously as the current state of technological living -- a system in which sensation is an artificial dry-heave of bodies rendered useless.

Phantom Sensation

Strangely, however, we are still compelled to reconcile this state of phantom sensation: physical or technological or both -- registrations of injury in parts of our bodies that are simply no longer effectively present. No more eyes, now only the hallucinations of phantom vision; no more hands, now only the paradoxes of phantom touch; no more minds, now only the delirium of phantom logic. If we have become the phantom prostheses of a virtual world, what do we do with our residual phantom sensations? If we follow the model of the nightmare, we might begin by insisting that even though these sensations no longer belong to a phenomenal reality, they nevertheless continue to have phenomenal effects. If we follow the model of the blind spot, we might continue and ask whether such sensations are not themselves symptoms of imaginary extrusion, suggesting not simply the ghostly lingering of bodies rendered useless, but the concomitant presence of a manifest imaginary of one sort or another.

Interestingly, the clinical assessment of phantom limbs corresponds very closely to both of these assertions, particularly in an experiment conducted by V.S. Ramachandran. According to Ramachandran, "after amputation of an arm, the vast majority of patients continue to feel vividly

the presence of the missing arm," a condition that sometimes includes feelings of phantom pain. To treat this pain, mirrors are used to present the image of a limb where there is none, effectively fooling the eye (and through the eye, fooling the mind as well) into a sympathetic response. It doesn't matter that the patient knows he or she is being fooled, the visual stimulus is sufficient in most cases to alleviate the pain, at least temporarily. In Ramachandran's words, "if information from vision and touch are incompatible, visual dominance may cause us to actually feel things differently than if we relied only on touch," a sensory hierarchy that his experiments exploit for medical and psychological purposes.[16]

Imaginary Solutions

I want to suggest that this system is one of imaginary solutions, a term coined by Alfred Jarry when describing the science of "pataphysics."[17] I want to make this attribution because what Ramachandran refers to as a process of tricking the mind into accepting the truth of the situation might just as easily be excerpted from this system of truth and looked at as a more general process for the reconfiguration of subjective awareness. In this instance, what I am suggesting is that outside of its clinical application, in which the process has a direct and articulated objective, there is a more general rule to be learned about refashioning cognition and the imaginary. Within the frame of this more general view, there is no good reason why the structure shouldn't also be reversible.

An important rhetorical question emerges: if we didn't have phantom sensations, could we make some up? Could we perhaps begin to imagine sensation itself into existence? Could we imagine pains and wonders and tragedy and drama when none of them existed before? By all accounts we may already do exactly this, if the cases of nightmares and blind spots are any indication or if Virilio's technological assertions are correct. And even if not, there are no shortage of other imaginary dramas in the world at large, whether it be reality TV or high-school cliques or mid-life crises. There are also more dangerous examples -- from psychosomatic diseases, imagined into existence, to psychosomatic cures, sometimes placebo-induced, sometimes credited to the pure power of will. What are we to gain from this if not an indication that the manifest imaginary is potentially malleable in certain directions, or within certain parameters? The question, consequently, is not so much if one can cultivate such response, but how; this is where the field of biofeedback offers some interesting possibilities -- phantom sensations conditioned into manifest reality.

Imagine, for instance, that thinking warm thoughts on a cold day might actually serve to improve finger and hand performance as you work outdoors. It's a benign example -- not exactly a phantom limb, but a phantom glove on a limb that's already there, an imaginary overlay to an otherwise frigid reality. It's also a biofeedback conditioning study (one of many that might serve as further instances to explore) conducted by psychologist Allan Hayduk in the 1980s. In Hayduk's study, participants were placed in a sub-zero environment and asked to imagine themselves warmer. With practice, some classical Pavlovian-style conditioning, and a bit of studied instruction, participants were able to increase the temperature of their hands by up to 16% -- a Cheshire difference, if not quite a full-blown incantation.[18] This is important not because it optimizes cold-weather performance but because it is symptomatic of an imaginary impact on real-world physiology -- a daytime nightmare in which the physical sensation of coldness is strategically placed into the blind spot of cognition (and, ironically, into the blind spot of the measuring machines as well). In Hayduk's study, the real-world cold is conditioned out of manifestation, supplanted by the imagined version of warmer weather activity -- visualized into verifiable existence.

It is important that in Hayduk's study the imaginary begins to defy even the technological gaze, supplanting the technological solution with an imaginary reality -- one that might be called delusional except that it plays explicitly by the rules of the technological game. This is an imagination machine -- one perhaps still in its infancy, but one with the potential for a human hacking of the codes of reality. Even if we bide by the rules of a measured study such as this, we have the potential to be at least 16% imaginary, if not more once further conditioning is involved. In this imaginary percentile, one might wonder, what it is that the machines are actually measuring? It is certainly not reality any more, but its defiance -- as if to suggest that in the end technology must side not with the real at all, but with imaginary practices (with nightmares and blind spots and a 16% biofeedback lifestyle) in whatever quixotic ways they can be cultivated.

Biofeedback as a cultivation of imaginary solutions: a third instance of illuminated darkness.

Conclusion

In the end, if we are to take the imagination seriously, it seems in fact that each of us lives no longer even in the story of Borges' mirror, but in that of another Argentinean writer, Adolfo Bioy Casares, whose story *The Invention of Morel* takes the tale of the mirror one step further. This is the story of a reality machine in which the central character confronts precisely a world of the same kind as that in which we live: a world in which machinic simulations walk and talk and set the dominant narratives of the everyday; a world in which the simulation dictates reality and any attempt to hold onto the paradox of a real simulation simply means confrontation with walls that were not there two minutes ago; and a world in which the imagination bleeds -- not because of a sympathetic affect-response, but because it is made of flesh and blood, because it gets lonely when not engaged. Rather than be ignored, Casares' protagonist embarks on an elaborate scheme to insert himself **into** the simulation -- to be archived while still alive, his biologies fed-back to the imaginary systems that surround them.[19] In short, here in the shadows of Morel's invention, we find ourselves as generators of imagined realities that are strangely no less real for their imaginary debt.

For those who would pretend that the imagination serves reality, it must be insisted that, in reality, it is exactly the other way around. As with each of the examples invoked here, there is a more general rule that begins to congeal -- a reversibility of terms that suggests that imaginary solutions are not bound in any necessary way to performance deliverables but only to the proximity of practiced interaction. The imagination is that which manifests -- as nightmares and "thought as incantation;" as blind spots and "useless functions;" as biofeedback and "imaginary solutions." And whatever one calls it, the imagination is not quite under our control, though it is not exempt from influence either. It is instead, in some ambiguous but potentially realizable way, relational: defying will but responding to a proximity of encounter; defying reflection but responding to incidents; defying the light of technological day but responding to engagement with illuminated darkness.

Notes
----

[1] Jorge Luis Borges, "Fauna of Mirrors," in *The Book of Imaginary Beings*, Translated by Norman Thomas di Giovanni, (London: Vintage, 2002), 67-68.

[2] Ernest Jones, *On the Nightmare*. (New York: Liveright Publishing, 1931), 14-15.

[3] Robert Macnish, *The Philosophy of Sleep*. As cited in Jones, 74.

[4] Antonin Artaud, "An Actor You Can See," in *Artaud Anthology*, edited by Jack Hirshman (San Francisco: City Lights Books, 1965), 34.

[5] See Antonin Artaud, *The Theatre and Its Double*, Translated by Victor Corti, (London: Calder Publications, 1970), 35-71.

[6] Friedrich Nietzsche, *On the Genealogy of Morals*, Translated by Walter Kaufmann and R.J. Hollingdale, (New York: Vintage, 1989), 61.

[7] Peter Sloterdijk, *Critique of Cynical Reason*, Michael Eldred, trans., (Minneapolis: University of Minnesota Press, 1987), xxxiii.

[8] See Northrope Frye, *The Educated Imagination*, (Toronto: House of Anansi Press, 1963).

[9] See Joanne Davis, *Treating Post-Trauma Nightmares: A Cognitive-Behavioral Approach*, (New York: Springer Publishing, 2009). Chapter 2, "Characterizing Nightmares," is especially useful for its discussion of dominant and popular theories.

[10] See, for example, Charlotte Harding, "Five common nightmares and what they mean," *Mail Online*, Available at: http://www.dailymail.co.uk/health/article-52177/Five-common-nightmares--mean.html (Accessed September 5, 2009).

[11] See Paul Virilio, *The Vision Machine*, Translated by Julie Rose, (Indianapolis: Indiana University Press, 1994)

[12] Jean Baudrillard, *Impossible Exchange*, Translated by Chris Turner, (London: Verso, 2001), 40.

[13] Baudrillard, 44.

[14] Vilayanur S. Ramachandran and Siane Rogers-Ramachandran, "How Blind Are We?: We have eyes, yet we do not see," in *Scientific American Reports*, Vol. 18 No. 2 (2008): 16.

[15] See Paul Virilio, *Politics of the Very Worst: An Interview by Phillippe Petit*, Translated by Michale Cavaliere, (New York: Semiotext(e), 1999), 39-68.

[16] Vilayanur S. Ramachandran and Siane Rogers-Ramachandran, "Touching Illusions: Startling deceptions demonstrate how tactile information is processed in the brain," in *Scientific American Reports*, Vol. 18 No. 2 (2008): 60.

[17] Alfred Jarry, *Exploits & Opinions of Dr. Faustroll, Pataphysician*, Translated by Simon Watson Taylor, (Boston: Exact Change, 1996), 22.

[18] Allan Hayduk, "Increasing Hand Efficiency at Cold Temperatures by Training Hand Vasodilation with a Classical Conditioning-Biofeedback Overlap Design," *Biofeedback and Self-Regulation*, Vol. 5 No. 3 (1980), 307-326.

[19] Adolfo Bioy Casares, *The Invention of Morel*, Translated by Ruth Simms (New York: NYRB, 1992).

Ted Hiebert is a Canadian visual artist and theorist. His large-scale photographic works have been exhibited across Canada in public galleries and artist-run centres and in group exhibitions internationally. His writings on image culture and the imagination have appeared in journals such as CTheory, Technoetic Arts, Performance Research and the Psychoanalytic Review, as well as in exhibition catalogues and monographs. Hiebert is a founding member of the Noxious Sector Arts Collective that engages projects at the interface of speculative and imaginary practices, most notably the annual World Telekinesis Competition. He is Assistant Professor in the Department of Interdisciplinary Arts and Sciences at the University of Washington Bothell. http://www.tedhiebert.net