

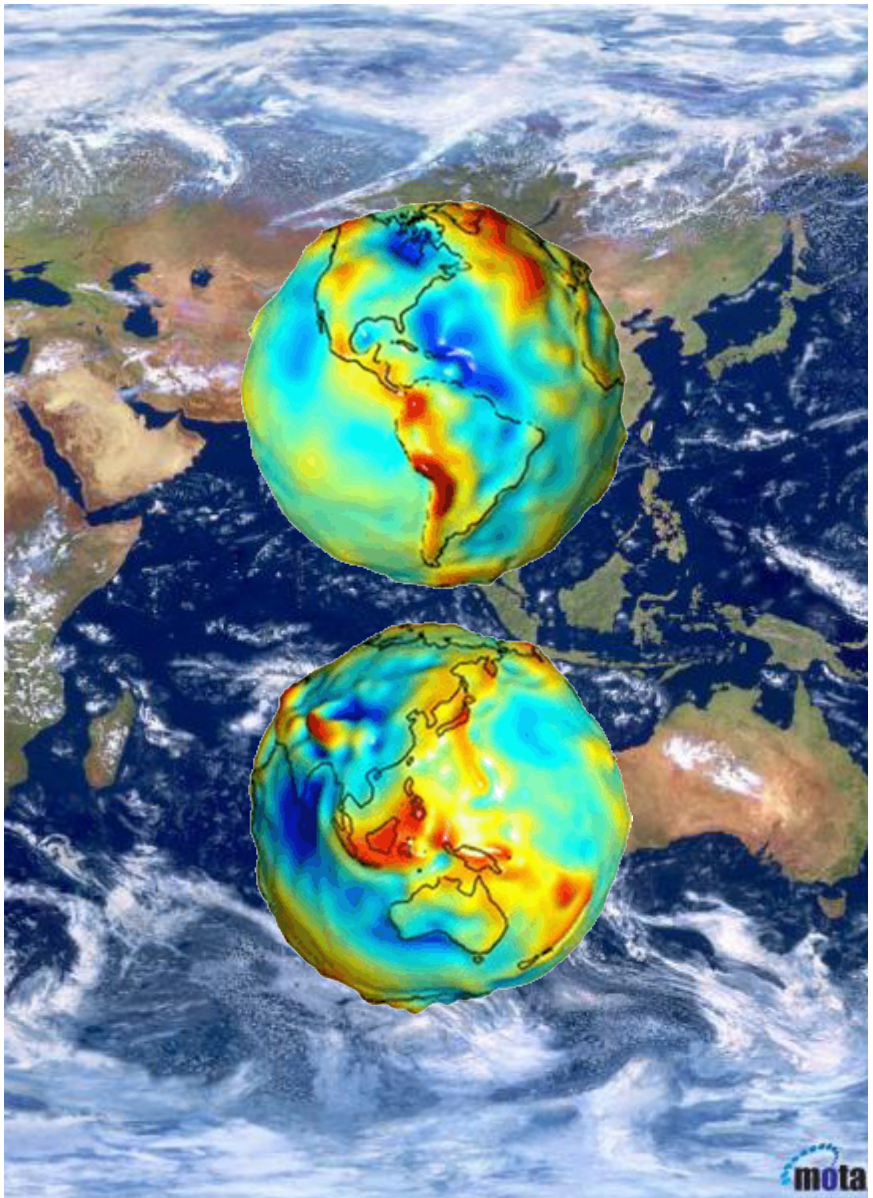


# *PREFACE:*

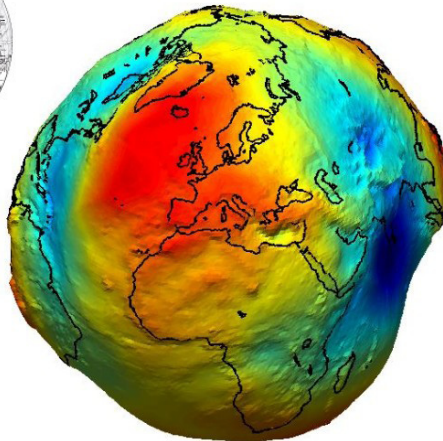
I wrote this text and pursued these ideas because I have questions about what's happening around me that drive me crazy. I often feel that I'm groping in the dark, enveloped in an incomprehensibly complex vastness. I'm conscious enough to recognize how little consciousness I have. I am complete enough to see my own incompleteness, and where my body ends, the world begins. Subjectivity, is really what I'm talking about, but I hope to push away from the melodrama, nihilism, cynacism, and post modern rejection of meaning that discussions of subjectivity can so readily collapse into. I hope that for anyone who reads this text, there is an excitement and explorative energy that percolates through. Throughout the text, I note the problematic nature of linear thinking. Linear modes of thought lead to linear modes of production and action that are incongruent with the cyclical networked systems we are embedded within. Because of this, undesired side effects are produced by interactions between our consciously designed environments and pre-existing or "natural" ones.

Discussing the problem of linear thinking within the linear format of a book seemed at first counterintuitive and contradictory. After working for some time with this conflict in the back of my mind, I now feel that I'm not interested in eliminating linear thinking, nor do I think it's possible to do so, considering the constraints of our biology. It's innate to the way we learn, grouping, categorizing, nesting, forming narratives: these are cognitive tools that enable us to engage complexity with the limited mental resources we are afforded. Attention, working/short term memory, the speed at which an action potential travels through a neuron; these are all physical properties of the system of the brain which delimit our comprehension of and involvement in the world. Since I don't believe in transcendence, it's important to me to recognize our limitations and work within them. What I want is not an elimination of linear thinking, but a recognition of its limits. An understanding that could allow us to design our external systems to account for what our innate abilities cannot.

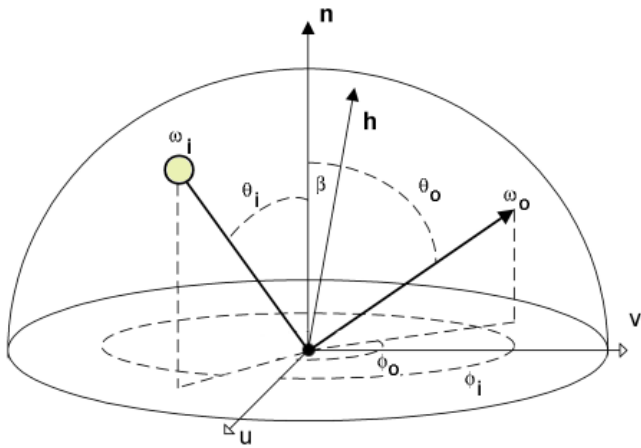




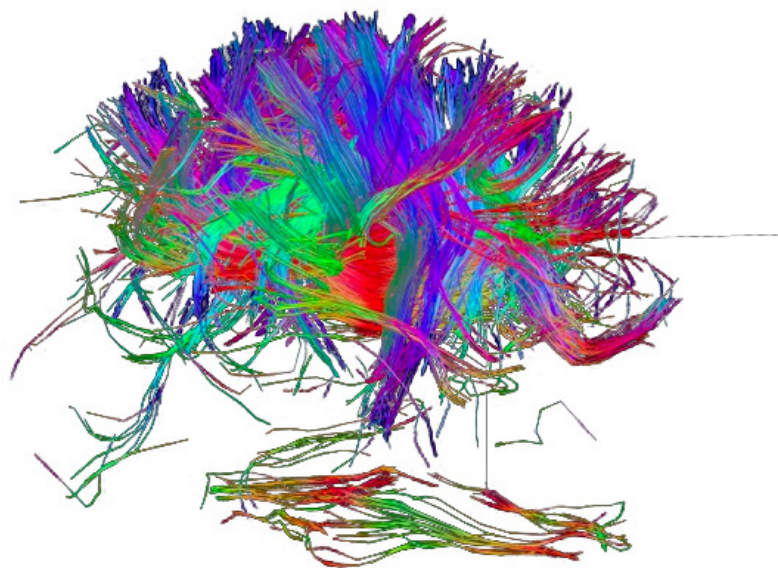
"The preanalytic vision of science is changing from the 'logical positivist' view (which holds that science can discover 'ultimate truth' by falsification of hypothesis) to a more pragmatic view that recognizes that we do not have access to any ultimate, universal truths, but only to useful abstract representations (models) of the world."  
(Robert Costanza)<sup>1</sup>







"All models are wrong, but some models are useful."  
(William Deming)<sup>2</sup>





A revolution in the brain sciences – behavioral psychology, cognitive neuroscience, evolutionary psychology, and systems theory is changing the way we understand the nature of the human self. The model of self established by these disciplines is one in which a person cannot be separated from their surroundings resulting in a dissolution of the subject-object duality. This conception of being opposes the American idea of individualism, free will, and autonomy – the liberal humanist beliefs upon which our country was founded, and our institutions have been structured. Viewed from a neuroscientific vantage point, these western world views are flawed, and the consequences of our actions under these presumptions of being can be seen in the ecological crisis we are faced with today. Because the interface between our flesh and our environment is seamless, the crisis is manifest both inside, and outside our bodies.

# I

## *Mind and Behavior*

From the aforementioned scientific perspectives, we are emergent systems. The products of complex material interactions; the re-organized surface of the earth as it is energized by the constant surge of photons from the sun. We are immersed in an ecosystem whose parts are incapable of acting independent of each other.<sup>(A)</sup> In ignoring this, we can collectively engage in suicidal behaviors under the guise of progress and growth. In accepting it we can work within the limitations of physicality to find freedom and potentiality.<sup>(B)</sup> Our separation from the natural world is a myth, contiguous with the myth of a free person: an independent agency determining its' own movement though the world. A flood of cognitive behavioral research is now revealing the role our environment plays in the creation of the phenomena we call human consciousness. This growing body of knowledge suggests that we are largely autonomic and unconscious beings. We form basic heuristics, or generalized computational rules with which to navigate our reality, and operate in a mechanical or habitual way for most of our lives. Our decisions are based largely on unconsciously perceived environmental factors: the temperature around us, slight air pressure fluctuations, subtle differences in light coloration, what we ate for lunch, etc. A study done at the University of Colorado found that people whose hands had been exposed to physical warmth (momentarily holding a hot cup of coffee) judged a stranger to be kind and congenial while those exposed to the sensation of cold (momentarily holding a cup of iced coffee) rated the same stranger negatively.<sup>3</sup> This effect is called priming. Many studies have recreated it and expanded its' implications. In 2010 Nocera Ackerman found that job applicants whose resumes were placed on heavier clipboards were considered better qualified for a job. He also found that when people completed a jigsaw puzzle with jagged angular edges as op-

## { A }

The separation of a whole into parts is a convenience of perception — of modeling, which in its essence is the act of reducing a large amount of data to fit in a small container. Because we could not reasonably try to fit the entire world in its exactitude into the matter comprising a human brain, we must extract a very small amount — what is most relevant — and ignore the rest. When you look at something, its image is mirrored within you. The light energy reflecting off of its surface enters your eye, activating cells in your retina which transmit the energy through your optic nerve towards the back of your brain. A map — a set of relationships isomorphic to those held within the thing — is constructed inside you. This map represents what you're observing and *knows* something about its most basic structure. This is a crude sense of knowing, it is barely knowing at all, but with one glance we might think that we understand. The feeling of knowing, and the actuality of knowing are very different things.

## { B }

"...thought that is exclusively systematic overestimates its potential: 'wisdom is thought conditioned by an awareness of limits to the systematically provable, articulable, or demonstrable.' The lack of such awareness is what Theodor Adorno calls a rationality so extreme that it becomes irrational."<sup>4</sup> Science, by recognizing the limitations of its methods of representation, has begun to transition away from the pursuit of universal truth, instead seeking useful models. By recognizing that we can only model and are incapable of knowing with exactitude, science is becoming wise.



posed to smooth curved edges they were more likely to judge a social interaction as awkward or uncomfortable. Other observed effects include an increased tendency to condemn sexual acts as immoral when in close proximity to a container of hand sanitizer, and increased intent to wear a condom during sex if asked while sitting in a foul smelling room.<sup>5</sup> There are hundreds of studies demonstrating how we are constantly making decisions based on unconscious factors. Studies correlating the number of paroles a judge gives with how long it's been since he last ate,<sup>6</sup> or correlating air pressure changes in cognitive performance.<sup>7</sup> Several of these studies have indicated that the logical explanations as to why we make the decisions we do are generated as afterthoughts; the reaction of our rational mind as it recognizes that an action has been initiated in the body.

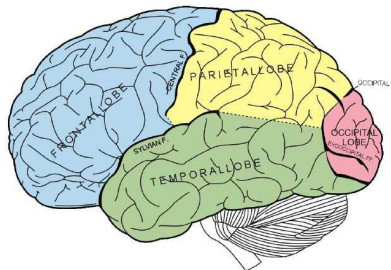
The human body is an amazing sensor for energy fluctuations. Heat energy, kinetic energy, magnetic fields, light waves, pressure waves, gravity waves, etc. Many of the mechanisms that detect this information are not in direct communication with the evolutionarily newer pre-frontal cortex, significant to our conscious experience. The conscious recognition of perceptions, involving the mobilization of attention and the use of short term memory requires metabolic energy. Because of this, the amount of information carried to consciousness from primary perceptual processing areas of the nervous system is kept at a minimum, i.e. we can really only "pay attention" to one thing at a time.<sup>(C)</sup> Although the brain accounts for only 2% of the body's mass, it requires, "15% of the cardiac output, 20% of total body oxygen consumption, and 25% of total body glucose utilization."<sup>8</sup> For an organism that evolved in an environment with limited energy available, the efficiency of such a demanding organ is integral to it's survival. This means that we are now left with the limits engendered by a prehistoric environment very different from our current post industrial setting; a set of operational rules that often impedes our ability to navigate and thrive in a very new and different landscape that necessitates different rules. A study carried out by

## { C }

The brain is a parallel processing unit. Reality is massively more complex than the linear model of action and reaction that is constructed by the conscious mind; a series of moments viewed through the window of attention, and stitched together. It is up to the unconsciously functioning parts of our brain to account for the chaotic simultaneity of reality. The body continuously absorbs an immense amount of sensory information that is minimally processed by various brain areas that act as our unconscious secretaries, deciding what is **salient** enough to bring to our attention and what is unimportant. In neuroscience there is what is called top down control and bottom up control. Bottom up control occurs when a brain area decides that something is deserving of conscious attention or analysis, and your attention is directed towards it.

## { salient }

"The salience of an item (be it an object, a person, a pixel, etc) is the state or quality by which it stands out relative to its neighbours. Saliency detection is considered to be a key attentional mechanism that facilitates learning and survival by enabling organisms to focus their limited perceptual and cognitive resources on the most pertinent subset of the available sensory data."<sup>9</sup> [http://en.wikipedia.org/wiki/Saliency\\_\(neuroscience\)](http://en.wikipedia.org/wiki/Saliency_(neuroscience))



Daniel J Simons at Harvard University elegantly demonstrated the way our predisposition towards efficiency affects perception and consciousness. Subjects of the experiment exhibited an inability to recognize significant visual changes during real-world interactions. The experiment was carried out as follows: Experimenter A approaches a pedestrian on the street to ask for directions to a nearby building. In the middle of the conversation experimenters B and C, who are carrying a large door, pass between experimenter A and the subject. At the moment that the door occludes the subject's view of experimenter A, experimenters A and B swap. This motion is completed smoothly so that the door continues on its original course now carried by experimenters A and C. The subject is left facing experimenter B and although experimenters A and B are wearing differently colored clothing, only 30% of the subjects recognized that standing in front of them was a completely different person.<sup>10</sup> Studies like this seem to suggest that we are operating unconsciously throughout the majority of our daily lives. It has been estimated that visual perception is more than 90% memory and less than 10% sensory nerve signals.<sup>11</sup> The human brain is continuously building a virtual model of reality by making predictions based on the smallest possible amount of sensory data. Perceived reality is a composite of sensory data and past experiences; experiences of our own, those of our ancestors (encoded in the epigenome discussed in section III), those of the constructed characters we embody when reading or watching television, etc. This dense conceptual construct of the world is intermittently punctured by moments of awareness in which we locate ourselves and realign our predictive models with what is. It is in moments when the world "breaks down," when reality doesn't align with our predictive models that we are most conscious and most alive. When our routines are broken and things don't function in the way they're expected to, we are woken to look out at the world. At these times we are pulled into total awareness by necessity, in order to deal with the consequences of having acted under false impressions. It's important to note that we're not incapable of sustain-



Images from Daniel J. Simons paper *Failure to Detect Changes to People During Real World Interactions*



Change Blindness / Selective Attention test from Daniel J. Simons, available at:  
[http://www.youtube.com/watch?v=vJG698U2Mvo&feature=player\\_embedded](http://www.youtube.com/watch?v=vJG698U2Mvo&feature=player_embedded)



ing a more consistent and direct connection to reality. The described way of navigating the world is not for an ultimate limit to our physicality, or a total inability to change. Rather we strive towards the most efficient mode of being, a default state for our minds, and to diverge from this norm takes effort. Awareness and focused attention require increased metabolic activity to breakdown sugar molecules for energy. Energy to power increased neuronal firing as well as increased circulatory and respiratory activity as the body works to satiate the brains increased O<sub>2</sub> consumption. The experience of this effort is uncomfortable, and unless there is value placed on doing so, the feeling of discomfort will be avoided.

## // *Feedback Loops*

The complexity of our mental lives cannot be reduced to either conscious or unconscious, controlling or controlled. A more useful understanding of our selves will require room for expansion between extremes. We are composed of and composing the world simultaneously. Rather than attempt to attribute the generation of activity or synthesis to a specific entity or moment I propose we reconcile with the fact that there is no position in time and space from which any thing originates or can be attributed, as causality can be followed to infinity. Functioning with this attitude requires a more expansive spacial understanding of phenomena; an understanding of systems, and complex relationships between parts that are less easily reduced to **language**.<sup>(D)</sup> The conceptual structures through which we predict the world shape how we design our buildings, our tools, and our food systems, which in-turn reshape our bodies and minds. With a more accurate understanding of how we function in the world, we can design our environment to enhance our ability to connect with reality and set up positive feedback **loops**.<sup>(E)</sup> To borrow



a soldier in Mushirij, Southern Iraq 2003



a still from the Katy Perry music video, "Part of Me"

from the principals of permaculture, we can design systems that replenish and grow diversity, resilience, and resources, rather than deplete.<sup>(F)</sup>

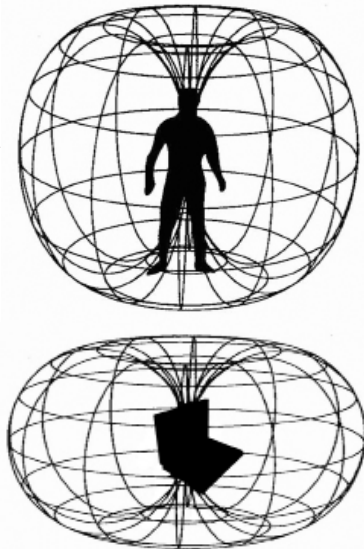
The post humanist writer and critic Katherine Hayles describes the unfathomably complex dance between human activity and the world as a series of feedback loops, "...the idea of the feedback loop implies that the boundaries of the autonomous subject are up for grabs, since feedback loops can flow not only within the subject, but also between the subject and the environment."<sup>12</sup> One could zoom in on any aspect of modern life, the food system, the education system, the prison system, and find similar generative processes at work. The synthesis of human bodies from the raw materials produced by industrial agriculture, and the synthesis of workers and consumers through physical and mental training are powerful examples of how feedback loops are formative in our lives. The structures we impose on the world in turn impose themselves on us. Technologist Jaron Lanier discusses the problematic nature of a specific type of feedback phenomena he calls lock in. "The process of lock-in is like a wave gradually washing over the rulebook of life, culling the ambiguities of flexible thoughts as more and more thought structures are solidified into effectively permanent reality. We can compare lock-in to scientific method. The philosopher Karl Popper was correct when he claimed that science is a process that disqualifies thoughts as it proceeds—one can, for example, no longer reasonably believe in a flat Earth that sprang into being some thousands of years ago. Science removes ideas from play empirically, for good reason. Lock-in however, removes design options based on what is easiest to [create], what is politically feasible, what is fashionable, or what is created by chance. Lock-in... reduces the penumbra of meanings that distinguishes a word in natural language from a [single physical manifestation]... Lock in turns philosophy into reality."<sup>13</sup> Lanier is talking specifically about programming and personal computing devices, but his ideas are applicable to any human creation. The tools we build are physical manifestations of our ideas. Embedded within them are goals, desires, and the impressions of

# { D }

Spatial Intelligence is fundamental to being human and navigating through the physical world. The Parietal lobe is the locus of our spacial cognitive abilities, and a brain area which enables us to conceptualize new spaces and objects. By modeling abstract spaces, we are able to manipulate complex symbolic systems like math and language. As we spend more time in virtual environments, on the computer, playing video games, and watching videos, and as physical activity and play are taken out of schools, we are loosing our most basic intelligence; one which is foundational to our ability to conceptualize, and abstract. Studies have found that when the teaching of math concepts is paired with physical movments representative of how numbers spacially relate to eachother, math literacy rates drastically increase.

After the death of Albert Einstein in 1955, pathologist Thomas Stoltz Harvey illegally preserved his brain to be dissected and analyzed. Upon examining Einstein's brain, he discovered that a lobe normally positioned next to the parietal was missing, leaving a space that could accomidate Einstein's abnormally large Parietal Cortex (about 15% larger than average). It's believed that this was the root of his ability to visualize and articulate his theories about the universe, as well as perform the complex calculations needed to support them.<sup>14</sup>

representation of the electromagnetic field around a persons body



reality under which we conceive of them. We ask something of physicality, shape it to reflect our desires and goals. It then asks something of us, shaping us, constraining thoughts and actions, entrenching ideologies.

### III

## *Cells and Genetics*

While Genes were previously thought to be static and deterministic throughout a lifetime, we now know that they can be influenced by our actions and by environmental conditions. Genes are the instructional proteins that hold the blueprint for a person's physical characteristics, growth tendencies, and even behavioral tendencies or personality traits. Prior to the discovery of a cellular structure called the epigenome (a layer of proteins above the genome that determines how the genome is interpreted) genes were believed to give way to change only in instances of mutation or recombination during reproduction. The Epigenome enables genes to be turned on or off (or anywhere in-between) in the course of a lifetime by environmental conditions, and by a person's behaviors and habits. The foods we eat, the way we treat and perceive our bodies, sensory memories, and intense or prolonged emotions we experience, can all be encoded in our genes and passed on to our children. Researcher Lars Olov Bygren discovered one of the ways that the epigenome encodes and passes down experiences while studying families in Overkalix Sweden. His research shows that the way people eat as children effects the longevity of their children via epigenetic transmission. He mapped out the time-lines of 99 parents and their children, separating them into two distinct groups. The first group of parents, group A, had experienced one winter of overabundance in their childhood: a season of overeating. The second group, group B, had endured a season of poor harvest and scarcity. The children of the parents who survived

# { E }

In a forested area along the Jones Falls in Baltimore, MD, rocks jut out as tall as buildings piercing the ground from underneath. Inclines lead down to the creek valley, winding canyons cut into them by rainfall and debris. When I move through spaces like these I don't imagine they could be described by three dimensions, height, width, and depth. This is a space with infinite curved dimensions, a richness entirely separate from the cardinalized surfaces of the city and architectural environments. Our mental freedom is delimited by the diversity of these planes. As you walk, neurons are being activated according to the orientation of the planes or obstacles you encounter. In part of your brain, you have hundreds of thousands of neurons dedicated to representing trajectories in space, each one representing a different angle. The average of their voices as they are all activated to different degrees according to how close the experienced or desired spatial orientation is to each neuron's set angle allows for seemingly infinite variation. Walking down the path my body is stabilized and balanced while still being propelled forward by thousands of subtle synchronized muscle contractions. As my movements become repetitive and homogeneous in response to the flatness of the city paths – my thoughts too become repetitive and homogenized. As the same walking gate is repeated, the same neurons are activated, strengthening a small population and leaving others inactive susceptible to degradation. The range and possibility of my thought is physically constrained by the range of neurons maintained in my brain. As I noted earlier, the spatial abilities of the parietal cortex are integral to abstract thinking: our ability to imagine, visualize, and use symbolic systems like language and mathematics. One study that found people who walk on cobble stone or uneven paths as opposed to flat sidewalks have more resilience against degenerative brain diseases like dementia, alzheimers etc. How could city spaces be designed to stimulate the brain, activate it fully, and open up physically the trillions of pathways to allow thought to be free and expansive? It is a really beautiful image in my mind, thought as a mirror of the diversity and complexity of our physical environment — a feedback loop between.

I wonder too, what's happening to a free-runner's brain when they explore urban spaces with their entire bodies – recognizing paths through space apart from those designated. They generate novelty not by creating new objects, but by creating new interactions — new relationships.



scarcity lived on average, 6 years longer than the children of parents who overate. When adjusted for socioeconomic differences, the asymmetry inflated to an astonishing 25 years difference in lifespan.<sup>15</sup> The memory of these parents eating habits had been physically imprinted in their epigenomes and passed in molecular notation to their children. Environmental factors shown to effect genetic information aside from basic nutrients include heavy metals, tobacco smoke, pesticides, diesel exhaust, radioactivity, viruses, and bacteria. But the effects are not limited to chemical interactions between the subject and their environment. Work done by Tania Roth and colleagues at the University of Alabama suggests that genes are subject to change from relationships, behaviors, and experienced psychological states – which at their root are chemical interactions within the body. In animal studies, Roth found that when a mother rat put under stress was abusive to her pups, changes were made to a gene that produces a neurotransmitter called brain-derived neurotrophic factor, or BDNF for short. BDNF protects neurons, and promotes neurogenesis in the hippocampus and pre-frontal cortex. These two brain areas are central to learning and memory, and vital in warding off stress and depression. As the pups grew older and had pups themselves, they like their mother, displayed abusive tendencies and reinforced this genetic notation which perpetuates abusive / depressive behaviors.<sup>16</sup>

When considering a person on the cellular level, establishing boundaries for a self becomes even more futile. The average human body is composed of an incomprehensible number of cells, many of which are bacterial cells with genes and reproductive habits entirely distinct from your own. For every one cell that is genetically yours, there are ten bacterial cells living in your body that are integral to it's function. They have colonized the inner cavities of our bodies as well as the surface of our skin forming strong symbiotic relationships with our native cells. They are so integral to our biological processes that we would die without them. We are reliant on them to digest our food, to protect



## { F }

Permaculture is a method of designing food systems to be self-sustaining and to build nutrients and resources over time rather than deplete. Conventional Industrial agriculture attempts to mass produce one crop. Vast fields of monoculture necessitate the use of toxic pesticides, herbicides, and fungicides to kill off predators that would wipe out an entire crop in one fell swoop. The mono cultures and chemicals used to protect them deplete the soil of its nutrients and the organisms (bacteria, insects, and fungi) that support plant life, leaving a fine powdery substance not suitable for growing anything. To address this, the soil is amended with more chemicals, petroleum products that ultimately make industrial farming one of the least cost effective and least sustainable methods of growing food. Permaculture protects crops from pests, replenishes nutrients, and increases crop yields simply by setting up systems of mutually beneficial, symbiotic relationships between the organisms involved (including ourselves). In this way, Permaculture moves away from the linear system of industrial agriculture (raw materials in, product and waste materials out) to a more cyclical model, in which the term waste is irrelevant. William McDonough proposes in his book, *Cradle to Cradle* that all manufacturing processes function in a cyclical way so that the byproducts of one manufacturing process, are the raw materials for another process eliminating waste from our vocabulary. This type of cyclical process mirrors the complex food and waste exchanges that occur in a forest, or a stream, or any other ecosystem.

A recent design trend called Biomimicry looks to evolutionary design to find solutions for industrial manufacturing problems. The idea is that the design solutions implemented by the vast diversity of species on earth have been tested and tweaked for the past 3.8 billion years, and most importantly, tested and optimized within the system in which they operate. It would be absurd to not value and utilize this immense source of knowledge. The surface structure of moth eyes have been copied to increase solar cell efficiency, allowing panels to capture more sunlight and work at more extreme angles. Chemicals produced by mollusks to prevent calcium carbonate build up on their shells have been utilized to prevent the same chemical from building up in factory pipes that would otherwise need to be replaced frequently. Textures on desert dwelling beetle shells found to be hydrophilic have been mimicked to capture airborne water vapor in deserts and grow food in areas previously uninhabitable. There are abundant solutions to be found if we could be humble enough to learn from what's around us.

us from parasitic microbes, to regulate our emotions, and to generate the ATP molecules that power the activities of our native cells. Bacterial cultures that thrive in our intestines break down the food we eat enabling the nutrients to be absorbed into our blood stream. They also release neuro-chemicals into our blood stream which circulate, eventually reaching the brain and modulating various neural functions.<sup>17</sup> Bacteria called mitochondria have actually become permanent fixtures in our cells, converting sugars from the foods we eat into a form of energy that can be used by our cells. Just as microbes saturate the earth's soil colonizing root systems to enable plant growth, they saturate our flesh to maintain and support it: they are the foundations of our bodies. As some of the first forms of life on earth, bacteria broke the barren rocky surface apart, producing the chemical elements essential to the formation of life, generating soil, and oxygenating the earth's once caustic atmosphere. They initiated the process of capturing and utilizing the energy of the sun, and without them we would not exist.

### III *Being Human Now*

Our ideas about individualism and entitlement find affirmation in our consumption of goods, our disconnection from each other both physically and mentally, and the solipsism inherent in egalitarianism.<sup>15</sup> Conversely, our individuality is denied by the standardization of nearly all aspects of life, from birth to death. There is an absence of locational specificity, with the same businesses, architectural styles, and products occupying homes and towns across America; the United States now functions as a web of homogenized parts irreverent to the conditions and requirements of their own specific environments. Citizens in this landscape are left feeling powerless, engulfed in an environment imposed upon them that is seemingly too vast to understand or influ-



ence. Wolfgang Nowak notes in his forward to the book, *The Endless City*, that “We are experiencing a crisis of responsibility between citizens and government... Citizens experience their own powerlessness walking through their cities everyday, and interpret it as powerlessness on the part of the government.”<sup>18</sup> In a Post-Industrial Capitalist society, all aspects of life must become reduced to formulaic concepts – to be optimized for replication and distribution in the most efficient way. The body is denied agency, treated only as a vehicle to be manipulated and controlled in order to manifest the desires of a mind engulfed in a world of symbols. The body is excluded from the self in the erasure of physical differences between peoples under egalitarianism and multiculturalism.<sup>19</sup> Under a consumerist paradigm in which only the image of the body is attended to, the body is occluded by its prosthetics, by its surface. Cloths, jewelry, cell phones, hair pieces, mp3 players adorn and define us, as our mental and physical state is ravaged by processed foods and the toxic chemicals that pervade our constructed environments. In the absence of the body, the mind (as the container for these symbolic systems) is torn out of balance. A dualism between body and mind has long pervaded our culture; ideological in its origins, it is now a prime example of Jared Lanier’s “lock-in” phenomena. It is physically locked into reality through the design and production of prosthetics which enable or rather promote neglect and degeneration of the body. Cars, cell phones, laptops, and other such tools spatially//temporally extend and render the body obsolete in multiple ways. While these technologies afford us certain freedoms previously unfathomable, in many cases they contribute to the general erosion of our mental experience and freedom since our mental state is inexorably tied to the condition of our body. Trapped and Compounded in an incomprehensibly complex system of feedback loops, we must break through pattern and habit to see outside of and reshape what is at this point, one of many failed experiments (with many more to come).



VEVO

When we are continually exposed to images of power, excess, spectacle, and violence, they become mundane and imperceptible.



VEVO

Top: still from the music video, *Bad Girls* by M.I.A. Bottom: still from the music video, *Who Run the World* by Beyoncé

# V

## *Movement and Freedom*

In this climate, the awakening forces of play, mutation, randomness, and novelty become important to stimulate consciousness and change. Play as distinct from gaming (which is inherently goal oriented) is a way to break from our default operating mode, our mindless striving for efficiency. Allan Kaprow's intuitive understanding of play was in fact very insightful if a neuroscientific understanding of consciousness is applied to it. "Playing with everyday life often is just paying attention to what is conventionally hidden."<sup>20</sup> Tweaking the small repetitive moments of our daily lives pulls us into direct perception by rendering our virtual models of reality ineffectual under novel circumstances. I could eat my breakfast on the roof or on the sidewalk out front. I could look at someone's face without saying a thing. I'll look in their eyes as I consider their question, remaining locked in their view as I search for some words. I take note of an automated act, a twitch in my eye as I order a cup of coffee, the inflection of my voice when I say hi to my mom, the way I smile when I walk past an acquaintance. I notice it, and change it, to anything – to ten different things – or I don't do it at all. I notice my demeanor when I'm alone in a room, when I'm driving my car, or when passing through a place where nobody knows me. Borrowing these traits and moving them around, I separate my responses from their environmental triggers. Displaced into spaces and times in which they are novel, my automated self is opened and expanded. Betraying goal oriented action, betraying systems of value in any form will explode the barrier between thought and experience. Value systems are sets of syntactical rules that allow us to make snap judgements while navigating the world. Comprised of notions of Beauty and Aesthetics that constrain or direct our bodies, our voices, and motions; our ability to be in the world. Continually impressed





**Machine Therapy** — a series of events and modified objects organized by Kelly Dobson. She created situations to encourage people to explore the machines they're accustomed to living with in new ways. Rather than engaging their functionality, objects were experienced through their sensual properties, sounds, motions, and ways the human body can interact with them.



**Going in Circles** — These are images of Micheal Koliner running in around a motorized spinning video camera in the parking lot of a Home Depot in Baltimore, MD. Morally opposed to the materials and methods of working available to him; daunted by the task of finding ways to work outside the systems he takes issue with, he approached the commercial space of daily life with absurdity disrupting habitual behaviors and entrenched mental pathways. "I'm often finding myself wanting to build and add something meaningful to the world. However, in my pursuit I find myself in places that reduce me to a consumer. Frustrated by this status I went to this space and behaved tangential to regular practice."



upon by the world around me, it is in the extreme regimentation and homogenization of my reality that I've come to cherish the absurd, incoherence, randomness, and noise. I find it increasingly true that allowing these non-systematic properties of the universe to seep into my thinking produces insight and movement more fertile than that generated by any logical system alone. As evolution moves, so will I.

A set of absurd propositions // not true not false

there are two parts

**belief and reality**

belief determines what we will we will enact  
and effectively manifest as reality

there are two parts

**belief and reality**

reality constitutes the structures that allow belief to exist,  
determining what beliefs we may hold

there are two parts

**belief and reality**

they can equally influence eachother's trajectories,  
but they can never stop moving

there are two parts

**biological** and **cultural**

culture decides what biological drives will prevail,  
and what instincts will be suppressed

there are two parts

**genetically endowed** and **learned**

genetics manifests the structures that allow us to mirror the world  
determining through desire and instinct, what we will learn

there are two parts

**evolutionary design** and **conscious design**

they can equally influence each other's trajectories,  
but they can never stop moving without falling down

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**On Thu, May 13, 2010 at 3:23 PM, Ryan Hammond  
wrote:**

Hi, at the end of the last class period I remember that one student asked you to address the fact that the content covered in the last half of the course suggests that we are really not in control of our selves and are not conscious in the way we think (we don't really have free will) -- basically he was asking a question of where causality begins which in itself is kind of a religious or philosophical question about life -- and I thought you gave a really wonderful and interesting answer, but I was sad to see that the recording for that lecture was stopped before you answered questions. So I was hoping if you can remember any of the things you said - or if you have time, you could just react to this question in an email -- and if you know of any good writings that address this, that'd be great to know about.

Thanks,  
-Ryan Hammond

**On Fri, Dec 10, 2010 at 4:06 PM, Jonathan Flombaum wrote:**

Hi Ryan, Better late than never? I really am sorry for never responding to this. I saved it to find time to send a longer response, and I guess I never quite found the time. As I began organizing my materials for next semester, I found your note again, and felt you deserved at least some response. So here it is:.

I'd say that it is not that we have less control over what we do; it's that we don't have the kind of control that we thought we did. For me, the basic message of cognitive psychology is that we change ourselves from the outside in. Western culture is focused on the individual, on personal responsibility, on free will and freedom. The picture of human nature that we built up may have gotten a lot wrong. The individual is just a little guy sitting on top of an elephant (sometimes wearing a funny Batman costume). You can't control the elephant from on top. But you can control it by putting things in its way, teaching it new things over time, changing its motivations. If we get in control of worlds we get in control of ourselves, not the other way around. So I find it easy to believe that we are in charge, we just need to revise our notions of what kind of things to do to take charge. I also think that there is a potentially unexpected and to me beautiful fact hidden in this perspective. That is, that on the current view, to control ourselves, we need to understand ourselves first. Self-discovery really does become necessary for self control. But self-discovery is achieved not by looking from the inside out, but from the outside in.

Again, I really am sorry not to have responded sooner. I'm happy to talk about all this anytime.



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