The Backside of God

Sam Gill
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Let me begin with some thoughts on memory.

My granddaughter prides herself in her belief that she has what she terms a "photographic memory." While she is also an excellent reader I think I'll wait a few years before I introduce her to Borges's "Funes" and his prodigious memory. I am also aware of someone I've known for decades who has recently been diagnosed with Alzheimer's and is clearly suffering from memory loss, memory confusion, and the enormous range of physical effects of this disease. I talked with a woman I've taken step aerobics classes with the other day and she explained to me that she feels that diet is important to memory function and that despite her excellent diet she experiences some memory fuzziness now and then. Many of my age peers joke about their loss of memory and I find it quite amazing that so many simply embrace the cultural expectation that aging leads to memory loss. There is scientific evidence supposedly to support this belief … I'm not so sure it isn't simply a measure of how the culture is neurophysiologically embodying cultural explanations creating a self-fulfilling vicious cycle. And, of course, this being the century of neuroscience the brain in now a principal character in contemporary cultural fiction, opps I mean non-fiction, books and articles. Everything these days seems to be about the brain and clearly the major focus of the studies on the brain and the largest motivation for studying the brain is memory.

My father died four years ago at the age of 91. He did have a prodigious memory to the very end. In recalling events from his past he'd often include things like the bushel price of wheat at the time, perhaps 50 or more years earlier. Yet, he never recorded any of that information. For years before his death I thought frequently about the importance of getting him to record some of all that. I even asked him to do so, yet he never did. I remember thinking that upon his death this entire nearly century lifetime of memory would simply vanish forever.

When my mother was old, she'd often laugh when she told a story from her past. She'd explain that since she was the only one alive that experienced the story, she had considerable freedom in recounting her memory without risks to her credibility and authority.

Yet, let's think about this a moment. Merleau-Ponty and other have persuaded me that we don't possess anything like a digital camera (expanded to our many other sensory inputs) inside us recording sequences of images/sensory experiences that can then later be flipped through like a box of old photos when we remember something. I understand it is a much more interactive process and that memories are both fixed in some measure but that they are also plastic, thus subject to change. Memories in their plasticity are rather like dreams, as I read Gibbs, in that the mere act of remembering seems to alter the memories themselves. Furthermore, should we have those digital memory cards somewhere, we'd still need some integrative mechanism to reconstruct the images/experiences for our later reflection … something like an entire set of inner senses that would work on this inner memory landscape.

But absent some digital memory card in our brains I admit that the whole neurophysiological aspect of memory is simply baffling to me. We know that we have prodigious memories even if we are not Funes. Proust demonstrated this to us in spades. Yet, when Lehrer introduces us to the memory theory of Kausik Si as published in the journal *Cell* in 2003, I feel that I'm truly entering a cloud cuckoo land of prions. I'm not reassured by being told they are a class of proteins or that they are virtually indestructible. Lehrer sums it up: "Though the details remain mostly obscure, there seems to be a deep connection between prions and remembrance." (p. 94) "And though our memory remains inscrutable, the CPEB molecule (of the theory is true) is the synaptic detail that persists outside time. . . . It [i.e., Si's theory] is a molecular theory of explicit memory that *feels* true." (95) And Lehrer waxes eloquent … well what else can one do at this point … in concluding, "the past is never past. As long as we are alive, our memories remain wonderfully volatile. In their mercurial mirror, we see ourselves." Sorry, but I still don't get it … memory.

Near the end of Werner Herzog's wonderful documentary film on Antarctica "Encounters at the End of the World" (2007) he interviews Peter Gorham, a physicist at the University of Hawaii, who is preparing a balloon experiment designed to detect, for the first time, physical evidence of neutrinos. Gorham describes neutrinos as

> The most ridiculous particle you can imagine … they pass through all of the matter around us continuously in a huge blast of particles that does nothing at all. They almost exist in a separate universe, but we can measure them, we can make precision measurements and predictions. They exist, but we can't get our hands on them because they seem to exist in another place and yet without neutrinos the beginning of the universe would not have worked. We would not have the matter that we have today because you couldn't create the elements without the neutrinos. … They actually determined much of the kinetics of the production of the elements we know so the universe can't exist without the neutrinos, but they seem to be in their own separate reality and we are trying to make contact with that universe of neutrinos. … It hits me in the gut that there is something here around me, surrounding me, almost like some kind of spirit or god that I can't touch.[1]

Neutrinos are primitive particles that underlie and make possible all elements and thus all the matter and energy in the universe. They are paired and oscillate and move at the speed of light. They lack an electric charge; they pass through ordinary matter. Fifty trillion pass through the human body every second. They have nonzero mass, and each is paired with an antineutrino made of antimatter. Gorham describes his project as "like measuring the spirit world." Neutrinos seem a great candidate as the poster particle for what we have done in this course. They remind me of pure depth, of flesh, of seduction and the many other homologous primitives that we know and can experience, yet are not actually graspable by our efforts.

The human body, we have learned, is the locus for a great many systems that operate at lightning speed based on physical processes so complicated and so remarkable that we can only share Professor

[1] Transcribed from the film.

Gorham's analogy of being humbled by the task of trying to measure or comprehend them. Recall the descriptions of the complexity of the brain. The brain is composed of neurons or nerve cells, which are the nervous system's basic functional units. We are born with over one hundred billion neurons. Each neuron has a cell body and tens of thousands of branches called dendrites which receive information from other neurons. Each neuron also has a primary axon that can travel long distances in the brain that sends data out of the cell to communicate with other cells. When neurons communicate with other neurons the points of contact are called synapses. Each neuron makes up to ten thousand synapses with other neurons. Ramachandran wrote, you'll recall, "A piece of your brain the size of a grain of sand would contain one hundred thousand neurons, two million axons and one billion synapses, all 'talking to' each other."[2] Try to comprehend the billions of synapses that are constantly fired just to keep our bodies in quotidian operation. Now consider how many more are involved in the simplest thought or memory or feeling. Remember the proprioceptive system where measurable interoceptors in the muscles and joints communicate and translate in feedback and feed-forward loops impossible amounts of information all essential to accomplish basic human movement. Recall Candice Pert's discussion of the chemistry of emotion and how our simplest feelings are based on vast chemical processes where ligands, a variety of small molecules, bind to cellular receptors conveying information to the cell resulting in our feeling emotion. These ligands travel and connect over great distances at blinding speeds. Higher operations like the way we think through blending processes, metaphor construction and use, hypothetic inference, and the intricacies of language use all require systems of trillions of elements operating and functioning at blinding speeds. The entire system of perception we have learned is not a simple unidirectional data collection operation, as impressive as even that would be. Rather we understand perception as an amazingly interactive process created through sensorimotor patterns, basic body neurobiology, and proprioceptive dispositions that we arrive within the world. And, were this catalog of processes not enough to awe us, we must recognize that these are not parallel systems each operating independently. Rather they are all in communication and coordination with one another to support us as human beings in a remarkably smooth way.

All of these processes are known to us, measurable, detectable. We have read so many studies to support this. Yet, we seem to be built so that we cannot be aware of all these processes in ourselves. To account for what we know, yet cannot grasp, we have invented images and schemas that capture traces that inspire us to imagine; beyond that we share Gorham's acknowledgement that what we are about is "like measuring the spirit world."

I have been frankly surprised that movement has emerged as fundamental in our every consideration. I can't get out of my mind the image of the kitties pulling other kitties around in carts. Without the experience of self-actuated movement experiences, the riding kittens were functionally blind. So too with us across the full range of what distinguishes us as human beings. We are moving creatures and our sense of self and other, of perception and depth, and feeling and form all arise through the bumbling explorations of our self-actuated moving bodies. The implications of this awareness and

[2] V. S. Ramachandran and Sandra Blakeslee, *Phantoms in the Brain* (New York: Quill, 1999), p. 6.

appreciation have, for me, come to two primary focal concerns: academic lifestyles and the role of dancing in human development and culture.

While I have long reflected on what I have believed to be the deleterious impact of a sedentary occupational lifestyle on academic work, and particularly the habituation of our primarily Christian forefathers, I still avoided saying anything about it. However, with increased appreciation of the enormous role movement plays in every aspect of our thinking, imagining, acting, and knowing, I am finally finding it necessary to explore the likely limitations of the profession and field we represent. It no longer can sound silly to beseech you, the oncoming generation, to reinvent the academy in terms of movement. I am not at all sure what that will look like, but I firmly believe that the impact of this revolution will be the complete reinvention of what we study and how we go about it; that the resulting studies will be more engaging and relevant and connected with the full spectrum of religious life. And I firmly believe that without this revolution our studies, and perhaps the academy itself, will not survive.

Then too I have been a long-time student of dancing. Since dancing plays such a minor, even negative, role in our society, I have been hesitant to actually tout dancing despite all that I have come to appreciate about it. Again, my time of silence has come to an end. Dancing, as I am coming to understand it, holds an exemplary place in our many discussions. Dancing, as a quotidian and near universal human experience, holds immense potential for enhancing and exploring many topics: flesh, metaphor, seduction, aura, body/brain. Dancing in most cultures is nearly synonymous with religion and culture. I now feel a responsibility to realize and articulate this potential as fully as I can.

One of the most powerful moments for me during our studies is a fuller grasping of the notion of "pure depth" and this increase in insight supported a better understanding of flesh, reversibility, chiasm, seduction and so on. Recall that depth involves that dimension by which we see something from "here" that is at its place "there." The "here" and "there" are contemporary in our experience. They are joined in time through their visibility and this is "depth," a space of copresent implication. Depth is that dimension that contemporaneously unites and separates. It is "a thick view of time," the "most existential dimension."[3] We came to understand the dimension depth itself in terms of "pure depth," a depth without distance from here, a primordial that does not yet operate between objects. Merleau-Ponty used Eugene Minkowski's "dark space" to give some sense of the experience of "pure depth." Pure depth is without foreground or background, without surfaces and without any distances separating it from me. Pure depth is always already there as "the formative medium of the subject and object," as the "inauguration of the where and when." The moving body is fundamental to flesh, because through movement flesh begins to understand itself or become aware of itself. When I experienced Peter Gorham's efforts to even describe neutrinos, I caught reflections of "pure depth." Neutrinos were already there in the beginning, necessary for the kinetic construction of the elements. Thus they are pre-elemental. They continue to persist, virtually undetectable by us, as ambient to the universe. They oscillate, they are paired. Seductively, they do nothing, yet they make everything possible. They may well share the same descriptors given pure depth: "the depth of our being" and "the true source of our life," yet framed at once by subatomic and cosmic processes. While Merleau-Ponty understood flesh as

[3] Depth, although a development of Merleau-Ponty, was insightfully presented by Cataldi.

the ultimate truth, this statement gains depth for me in grasping the homology with a subatomic counterpart, neutrinos, which we might see as comprising the flesh of the cosmos. The universe within echoes the universe without.

Many years ago I wrote a paper titled "Go Up Into the Gaps: The Play of Native American Religions." I don't think I ever got round to publishing it.[4] I do recall giving it as a lecture in Canada at my friend Thom Parkhill's invitation. It was about my experiences studying Native American religions. I used Frederich Schiller's understanding of play as presented in his book *On the Aesthetic Education of Man* published in 1793, to develop our understanding of masking and ritual in Zuni and Navajo and Yaqui examples. Schiller understood play as arising from the reciprocal interaction between two interdependent, yet separate, drives. He argued that when these two drives interact in concert in an oscillating manner, a third drive arises. He called this third drive play and identified it with beauty. Surely this is an early articulation of the structurality that we have been exploring in so many arenas this semester. Play occurs in the gaps between structural elements. I considered Native American examples, particularly masking, the interplay between mask and masker, in terms of Schiller's understanding of play.

A quick aside: Charles Sanders Peirce, the father of pragmatism, had a common structure to the many explorations throughout his life's work. This too focused on the identification of a "third thing" when we consider the effect of two interacting, interdependent, paired "things." The third thing was invariably the energetic driving fueling force behind the other two, the structurality that precedes and is essential for the existence of the other two, the two more readily recognized by us than the "hidden third thing." For example, we all know the pairing of induction and deduction as the principal inferential methods of science. But Peirce proposed a third "hidden" thing he termed "abduction." Abduction is that oscillatory iterative process initiated by the feelings of surprise that is based in reason (he argues) that leads to an almost instant "best guess" which we then identify as a "hypothesis." Familiarly we all experience this process, yet the actual awareness of the process in action is hidden from us. Peirce spent several months as a teenager carefully studying Schiller's *On the Aesthetic Education of Man*. Peirce celebrated the gaps, as did Schiller.

Throughout this course I've been thinking of the gaps that are fundamental to our existence. There is the synaptic gap between neurons. The entire operation of our brains takes place in these gaps. How remarkable that we speak so casually of synaptic firings, of brain wiring, of brain functioning when it all takes place, rather mysteriously, in the synaptic gaps, in the spaces between. While we have attempted to grasp Merleau-Ponty's flesh ontology, perhaps the most important points for me in catching a glimpse of this ontology are the notions of chiasm and incomplete reversibility. Chiasm is a crossing place, that hidden dark space where reversibility occurs, a space free of structures, a space without objects, a gap. Reversibility is the interconnection between things, yet complete reversibility would

[4] Although I do have a note that indicates otherwise that I'll need to check. Published as "Religion in America in 1492," The Newberry Library, D'Arcy McNickle Center for the History of the American Indian. Occasional Papers in Curriculum Series, Number 15, *American in 1492, Selected Lectures from the Quincentenary Program* (1992), pp. 28-62.

indicate the identity between paired elements. In such an interrelationship, there is no life, no movement, no action, no meaning, because there is no difference to fuel the oscillation. The life of reversibility, its potential to create meaning is then the "not" in the interrelationship, that condition that wedges space between the pairing. This "not" is what creates the gap of play. It is in the gap, the chiasm, that reversibility becomes vitality.

I have been meaning to include in the context of my thinking about gaps that Michelangelo painting on the ceiling of the Sistine Chapel painted around 1511 known as "The Creation of Adam." You'll recall this depicts God reaching down to Adam with a forefinger as Adam reaches up towards God with an extended forefinger. What is most interesting to me is that their fingers do not touch. It is in this gap, in the separation from God, that Adam and humankind come to exist.

Then there is metaphor. Because I have become a believer in the powers of gaps, I can't accept the established understanding of metaphor as comprised of unidirectional mapping from the concrete to the abstract. There is no play, no seduction, in this structure. I proposed that we must see metaphor as an incomplete reversibility, as knowing something in terms of something else *which it is not*. Following this proposal, we find metaphor as other than a process terminating in moving from one known thing to an unknown, but rather as a resident oscillating structurality, much like perception, that functions to give us a program to embrace and comprehend our thoroughly bodied experience.

In the paper "Go Up Into the Gaps" I quoted a passage from Annie Dillard's book *Tinker at Pilgrim Creek*. It had been the inspiration for my title. I'm pleasantly surprised these many years later that I am still contemplating the gaps. Here is what Dillard wrote:

> Ezekiel excoriates false prophets as those who have "not gone up into the gaps." The gaps are the thing. The gaps are the spirit's one home, the altitudes and latitudes so dazzlingly spare and clean that the spirit can discover itself for the first time like a once-blind man unbound. The gaps are the clefts in the rock where you cower to see the back parts of God; they are the fissures between mountains and cells the wind lances through, the icy narrowing fiords splitting the cliffs of mystery. Go up into the gaps. If you can find them; they shift and vanish too. Stalk the gaps. Squeak into a gap in the soil, turn, and unlock—more than a maple—a universe. This is how you spend this afternoon, and tomorrow morning, and tomorrow afternoon. *Spend* the afternoon. You can't take it with you.[5]

Were I a theologian, my theology would surely be shaped in the beautiful and provocative poetic terms of Dillard and Gorham. God is to be found when we go up into the gaps, the gaps of synapse, of play, of hidden "nots" and "nos,"of chiasm, of seduction, of metaphor, of blending, and flesh, and dancing. The gaps demand the movement of life, of the pursuit of meaning, of the birth of consciousness and identity and vitality. God is to be found herding neutrinos. Life is a pilgrimage up into the gaps whether we like it or not.

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[5]Annie Dillard, *Pilgrim at Tinker Creek* (New York: Bantam Books, 1974), pp. 268-9.