

Anyone who carefully pays attention to the arc of western cultural thought and practice since the rise of modernity will discern a progressively intensifying and spreading pursuit of abstractions as the most trusted means of representing the realities of nature and accessing their truths. Modern science's rise out of the so-called "premodern age of Faith" was significantly propelled by epic acts of abstraction from the meaning-laden and quality-saturated medieval cosmos. By bidding farewell to the cozy and reassuring medieval cosmos\*\* and embracing the cold and abstract world picture of an infinite universe, rife with inert atoms in mechanical motion, the West acquired unprecedented capacities of explanation, prediction, and control of the vicissitudes of matter's ceaseless permutations.\*\* The increases in our power to intellectually grasp and materially control nature eventually brought with it stupendous gains in human *standards of living* for a good portion of Earth's growing population. Yet, in recent decades, it has dawned on many that these improvements in material *standards of living* came with an unanticipated price: *viz.*, a rather steep and almost unbearable reduction of the existential *meaningfulness of life*.

Interestingly, our contemporary response to this rising awareness of disenchantment is not to question the spirit of abstraction that has dominated the West since the rise of modernity, but rather to push modernity even further in the direction of abstraction and the quantitative. The idea seems to be that by further

intensifying these tendencies of modernity, we—through a judicious deployment of emerging technoscience—will gain ultimately the capacities to reenchant the world with qualities, values, and meanings of our *own* choosing. Enter the *hyper-*modern movement called “transhumanism” with its enticing promises not only of technologically upgrading our standard of living beyond all imagining, but also of engineering an incalculable increase of the quality and meaning of our lives!—more about this later.

Since the rise of information sciences in the 1940s, our fondness for abstractions has expressed itself most emphatically in a number of cultural domains: for example, our culture’s growing preference for **\*\*digitality** over analogue, for algorithm over observation, for informational effigies over empirical realities, and for data-structures over concrete physical presences. This obsession with bloodless abstractions finds its ideological epicenter today in a computational variant of functionalism that has dominated the cognitive sciences for the last four decades.**\*\*3** Quite generally, the cognitive sciences view the mind as essentially an information processing software running in, on, and through the brain’s neuronal connectivity, which both receives input from the hardware peripheries of the body’s senses and which also outputs commands to the body’s hardware motor peripheries. Computational functionalism provides the conceptual sub-structure upon which most articulations of transhumanism directly rely. But before we turn

to transhumanism, let's first take a closer look at a couple more manifestations of our abstractive impulse and data fetish.

### **EXAMPLES OF THE ABSTRACTIVE IMPULSE IN TODAY'S WESTERN CULTURE\*\***

There is a vast array of de-materializations progressively intensifying within our cultural horizons—a reality that cannot be separated from the ruling abstractive impulse that has biased the West's ontological assumptions and epistemic aspirations since its Copernican revolution in the 16<sup>th</sup> century. Perhaps the most obvious example of this abstractive impulse for us today is in the **social sphere\*\***.

**\*\*3**How many of you remember when “Face time” didn't mean enclosure\*\* in FB connectivity but meant real-time face-to-face embodied vulnerable and intimate I-Thouing in a common space with another in-the-flesh-person whose body you could see, hear, smell, taste, and touch. Some of you might even remember how space and time used to feel when, owing to the prohibitive cost of long-distance calling, you had to use paper and pen and physically travel to the all-too-material postal system to communicate to a distant loved one. In just the last few decades our social lives have become remarkably more and more digitally mediated and abstracted from real embodied presence.

Another example of recent steps toward abstract de-materialization in our culture can be found in its\*\* **economic** transactions. Long ago we used to barter

face-to-face relying heavily on body-language to determine our offers and counter offers, and we bartered for specific *material* objects bearing specific use and experiential values. Today, money has completely shed materiality and become abstract symbols, mere binary digits sent at the speed of light from financial institution to financial institution such that the difference between making a killing or a bust on the stock market\*\* is often determined by millisecond- perhaps even nano-second differences in information transfers\*\*.

Modern\*\* **warfare too** is abstracted from the actual field of battle, no longer conducted through person-to-person engagements on foreign territories where real blood is spilt in real presence. Now\*\* training, reconnaissance surveillance, and battle are conducted via virtual effigies that allow some of the most determinative aspects of warfare to take place on home turf in the safety of office cubicles, making war more like a video game than the bloody insanity it has always been.\*\*

Examples of this trajectory away from “It to Bit”, from real material presence to informationally de-materialized virtual effigies could be multiplied almost endlessly. But I want to offer only one more example of the abstractive impulse which I suspect is the remote prime mover behind the various de-materializations I just briefly surveyed.

Ironically enough, the momentum of **modern materialist science's** original abstractive moves of replacing geocentrism with heliocentrism, a stationary earth with an orbiting earth, a lifeworld of concrete meanings with impersonal physical forces, the qualitative experiences of our senses with technologically mediated quantitative measurements, etc., have all inclined the West toward the *de-materializations* upon which our so-called *Information Age* is built. Most recently, our sciences have become even more intensely beholden to abstractions and allergic to matter, positioned as they are not merely to represent concrete material realities with abstractions, but now to erase entirely the ontological barrier separating material reality from its virtual simulations.\*\*

An easy way to track this tendency's intensification over the past five centuries is simply to trace the ideas about matter and its place in early modern physics to the ideas operative in today's physics. **Descartes\*\*** sought to reduce matter to mere extension in order to make the world amenable to the abstractions of geometry, then came **Newton's\*\*** immaterialization of gravity with its action at a distance and his claim that material bodies are God-determined quantities of extension, then **Maxwell\*\*** helped replace hard massy atoms with ephemeral fields and waves, and more recently **Einstein's\*\*** mass-energy equivalence, **quantum physics\*\*** collapsing of wave-functions, high energy\*\* cosmology's **dark matter\*\***, and most recently **digital physics\*\*** with its computational paradigm

for cosmology which reduces matter to a “useful fiction”, positioning abstract informational patterns to replace matter as the ‘primary stuff’ of the world” (Dembski, 2014, xiv). And even Biology\*\*—the traditional paragon of concrete materiality--is flirting with the notion that “organisms are really algorithms” (Harari, 2015, p. ), pursuing theoretical advancement by working with digitally generated simulations of biological phenomena, experimenting *in silico* on these informational entities, and drawing empirical inferences from them.

In my own area of specialty,\*\* this prevailing drift away from matter toward abstraction is found in the currently regnant cognitivist theories of mind rooted in Putnam’s “functionalism”, Fodor’s “representationalism”, and Newell and Simon’s “physical symbol system hypothesis” and known for such gimmicky claims like\*\* “cognition and computation are species of the same genus [*viz.*, information processing]” (Pylyshyn, 1986, viii) and “the mind *is* software”. The philosopher and roboticist Hans Moravec represents the deep inroads abstract functionalism has made into philosophy of mind when he argues that “Pattern-identity ... defines the essence of a person”, and goes on to claim that his own consciousness and personal identity are found in the computational patterns of his brain—not connected at all to its bodily substrate\*\*: “If the process is preserved, I am preserved. The rest is just jelly” 1988, 117. Philosopher Nick Bostrom at Oxford goes so far as to claim that we all are probably unwitting computer simulations (avatars) programmed by

entities that exist outside our simulated space-time (**Philosophical Quarterly**, Vol. 53, No. 211 (2003): 243-255).\*\*

Having briefly surveyed some key examples of the de-materialization attendant upon the increasing primacy of abstractions, I don't want to say that this trajectory is in itself necessarily wrong or inherently evil because merely to use language is necessarily to traffic in abstractions, and I am more than ready to recognize the advances in knowledge that would not otherwise have been possible without this kind of idealization of phenomena.\*\* I do, however, think that formatting phenomena as abstract information patterns becomes tremendously problematic when it impoverishes our grasp of embodied personal realities and renders us incapable of taking our own personal agency seriously.\*\*2 These are impoverishments that are harder and harder to avoid as digital mediations have become normalized in our personal and social lives. When abstractive informational idealizations are no longer seen as useful socially-constructed heuristic devices but instead are pitched as the deeper realities underlying the personal and social epiphenomena of our human lifeworld, we have become victims of a colonizing ideology that ontologizes abstractions by privileging information above everything else.\*\* We must *not* read the abstractions required by our most successful scientific methodologies into our metaphysics. Speaking of

colonizing ideologies and impoverished capacities to encounter personal realities, we've finally arrived at a good place to introduce transhumanism itself.

## **INTRODUCTION TO A FEW GENERAL TENENTS OF TRANSHUMANISM**

**\*\*So what is transhumanism? Transhumanism may be justly described as an international and interdisciplinary techno-utopian movement\*\*** whose project is**\*\* to *transform* human nature through technological interventions so radical that *Homo sapiens*\*\* will ultimately *transition* (in the not too distant future) into a superior successor post-human species\*\*, one that *transcends* the fragilities and failures of our fleshly finitude. It is a strange attractor that draws around itself a motley array of scientists, technologists, philosophers, and theologians who share the goal of engineering humans into non-biodegradable forms of intelligence. Part science, part philosophy, but also part science-fiction, and I might add, part faith/religion, transhumanism is a strange brew of bits from Plato, Descartes, Bacon, Hobbes, Nietzsche, Ayn Rand, Phillip K. Dick, Arthur C. Clarke, William Gibson, Marvin Minsky, thrown into a rather thick broth of ideas deriving from Enlightenment liberal humanism and advanced consumerist and therapeutic capitalism.\*\***

Despite the repeated disavowal of religion by many of its devotees, the ultimate aim of transhumanism is nothing short of**\*\* delivering on the promises of**



religion: eliminating aging, illnesses, unchosen and unsatisfied desires, and even death itself. Transhumanists are acutely aware of the limitations imposed by the biological underpinning of our cognitive, emotional, perceptual, and social capacities. However, they believe our technological ingenuity has brought us to the place where we can now begin to break the evolutionary chain linking us to the ancient and *ad hoc* meanderings of the blind watchmaker that have shackled us to these dubious biological legacies.

Transhumanists are convinced that we have matured out of our evolutionary adolescence such that we are now poised finally to take control of our *own* evolution through our recently acquired technological prowess.\*\* We must decommission *Mother Nature* who has taken billions of years to produce *Homo sapiens*, a species of intelligent biological life bearing defective genetic codes which, if left alone, will condemn our species to a mortality that, from womb to tomb, will remain rife with malfunction, lethal genetic diseases, suffering, fundamental cognitive limitations, and powerful instinctual social antagonisms. We possess *or soon will possess* the techniques and technologies of powerful cyborgic augmentation and enhancement through psychopharmacology, genetic engineering, neurosurgery, and nano-engineered implantation devices to alter the flesh's exigencies and progressively to meld bytes and bodies. By harnessing intellectual resources of transdisciplinarity and the device output of convergent

technologies, we can begin to re-invent our own nature, freeing it from evolutionary jerry rigging and re-designing it to conduce more readily to our *own* ideals and conceptions of well-being. In other words, transhumanists believe we can technologically engineer ourselves into states of well-being that both religious rites and the old-fashioned “low-tech” humanistic tools of traditional medicine/therapy, self-discipline, hard-work, and patience aimed at but could never really deliver. Despite the usual incredulity that accompanies most peoples’ introduction to these fantastical tenets of transhumanism, it is sobering to recognize that a number of its most vocal advocates are widely recognized, highly credentialed, and deeply respected scientists and academicians, whose impressive pedigree has earned them immense funding from the U.S. Department of Defense and from billionaire venture capitalists.

Transhumanists interpret the civilized world’s warming toward technologies of human enhancement as setting the stage for the drama of **participatory evolution\*\*** they seek to enact, a drama in **which technology becomes evolution by other means** (Kurzweil, 2005, p. 47). Their vision of the future is inspired by (Gordon) Moore’s Law and the exponential development of technologies of computation it describes, and transhumanists are particularly encouraged by the relatively recent merging of bio- and info-technologies to create direct brain-computer interfaces (BCIs) in humans (*Science News*, May 10, 2018). Our growing

capacities of cyborgic coupling of mind and computer is a step in the right direction, for it will eventually create a self-stoking cycle of ever advancing artificially intelligent cyborgs who at some point in the not-too-distant future will bring about a threshold crossing where they will have become more AI than human intelligence and thus likely to be vastly more adept at designing new intelligent artifacts than we.\*\* Some Transhumanists refer to this near-future threshold crossing as the “Singularity.”\*\* Once we create something smarter than ourselves, any problems beyond that will not be ours to solve, as transhumanist Eliezer S. Yudkowsky famously put it (quoted in Kurzweil, 2005, p. 35).

As you have already likely noticed, transhumanists tend to be closet dualists of sorts who replace the more traditional material-body and immaterial-mind dualism with the more up-to-date and scientifically respectable dualism of biological hardware and informational software.\*\* Moreover, falling in line with a long religious tradition in dualistic thought and more recent scientific thought, transhumanism has been infected with a “fleshly dis-ease”. They clearly betray contempt for the biological body\*\*, viewing it (at best) as a temporary and expendable prosthesis, something it is better to be delivered from than to inhabit. For most transhumanists, human flesh is of little concern or use, teeming as it does with corrupted (DNA) codes that get transmitted across generations with “a lethal genetic disease [known as ageing]” (Cronopis, 2007) and other nasty Darwinian

legacies. Transhumanist are embarrassed by the painfully slow electro-chemical and neuronal information transmissions taking place within their bodies as compared to near speed of light information transfers within their computers. They are vexed by the small bandwidth of information uptake performed by their miserly five bodily senses (Kevin Warwick). Transhumanists want nothing to do with the corporeal vulnerabilities and inevitabilities of either natality or mortality.\*\* Instead of exploring the endless possibilities enabled by human flesh, they tend to be fixated on dreams of radical autonomy and extreme informational purification via relinquishing their bodies and uploading their software subjectivities into supercomputer's databases.

Despite its rather shocking features, I suspect we all can at least partially understand the transhumanist quest and maybe even feel its allure.\*\* Already our Stone Age brains are out of kilter with the pace and demands of our Information Age; we all feel the need to rely more and more on techno-mediations to compensate for the weaknesses of our flesh. And if you spend just a few minutes watching the evening news you too will be susceptible to believing that *Homo sapiens* is, at best, only in the early stages of development toward a higher form of life. After all, we are still killing each other and sometimes in the most heinous ways; our nations are still at war with each other; our cities and our highest levels of government are still filled with corruption and crime, and all the while our

bodies are still aging mercilessly, racked with diseases, dark depressions, psychoses, and profound anxieties.

It certainly does seem that **Mother** Nature has fallen down on the job and can't to get back up. Surely something drastic must be done and done soon. The transhumanists belief that it is morally imperative we take over Mother Nature's remit and engineer our species out of this *dead-end* is surely understandable.\*\* As David Pearce (co-founder of the World Transhumanist Association) claims: "*If we want to live in paradise, we will have to engineer it ourselves. If we want eternal life, then we'll need to rewrite our genetic code and become god-like ... only high-tech solutions can ever eradicate suffering from the living world. **Compassion alone is not enough***"\*\* (Bostrom and Pearce, 2007). Transhumanists believe high-tech investment in transforming human nature is our only hope of escaping extinction: we must technologically evolve or we will biologically dissolve!\*\*

Transhumanism is not a single doctrine, and I find it helpful to divide this movement into two primary schools of thought: its cyborgic and its bio-relinquishment schools.\*\* Cyborgic transhumanism pursues a life-extension program that will require *continuing* cyborgic interventions, augmentations, and transformations of our vulnerable and biodegradable protein-based platform. They look to a future of human-computer hybridity. The other school, bio-relinquishment transhumanism, aims at total divestment of the flesh by wholly

informationalizing human identities and safely saving these software selves in supercomputers' databases capable of merging them with "completely realistic virtual environments" (Kurzweil, 2005, p. 199), ensuring thereby that, as Kurzweil put it "[they] will gain power over [their] own fates. [Their] mortality will be in [their] own hands" (Kurzweil, 2005, p. 9). The bio-relinquishment transhumanists are partial to a flesh-free future, to checking the body at the door as it were; to them, the body is a dead-in-the-water platform.

If we can successfully reduce human minds to abstract and informationally formatted software effigies, bio-relinquishment transhumanists believe we'll have built a bridge from our biological present to an unending post-biological future. If, however, human identities cannot be reduced to abstractions, that is, to the CNS's patterns of information and information processing, there is little reason to expect their much vaunted posthuman fleshless future.

It is here that a turn to Michael Polanyi's thought might serve as a wakeup call to those of us who have come under the spell of transhumanism's thrilling speculations. If Polanyi's understanding of the body tracks the reality of the human condition, then, the mind uploads anticipated by bio-relinquishment transhumanism are more likely a very extravagant and expensive way to commit suicide—not a techno-ticket to immortality in a flesh-free future.

## **THE BODY, SUBSIDIARY AND FOCAL AWARENESSES, THE TACIT DIMENSION, AND POLANYI'S CHALLENGE TO TRANSHUMANISM\*\***

Polanyi's fundamental claim that there are "bodily roots [to] all thought" (Polanyi, 1983, p. 15; Grene, 1969, p. 147) calls into question the central cognitivist commitment upon which transhumanist fantasies rest, namely, the view that our minds are transferable algorithms and information processing patterns that are capable of multiple realization across any number of platforms/substrates. In Polanyi's view, however, one's body occupies an absolutely and irreducibly unique place in one's world and plays an utterly essential and entirely inexpugnable role in the rise of mentality and its subsequent expansion. To better appreciate the absolute centrality of the body in Polanyi's account of human mindfulness, we need to take a look at subsidiary and focal awarenesses\*\* and the roles he identifies them playing in the human way of being in the world. We will see that the body that modernity's obsession with abstractions effectively left behind, Polanyi brings back into the picture of the human mind.\*\*

Drawing on insights from the Gestalt psychologists and the work of Merleau-Ponty, Polanyi recognizes that perception and cognition are best understood in a performative idiom: as bodily *skills* that have a common "from-to"\*\*\* structure whereby a person attends **from** certain things (what Polanyi calls "subsidiary particulars") **to** other things (what Polanyi calls "comprehensive" or "focal" entities). Subsidiary awareness is the awareness we have of things we

attend *from*; it denotes our awareness of things that lack immediate or intrinsic interest and thus things that can serve unobtrusively to direct our attention toward what possesses our immediate interest, namely an intentional focal object.\*\*

Awareness is subsidiary according to how it functions, that is, how it subserves attention *to* a focus. His example\*\* of an individual using a hammer to pound in a nail clearly illustrates how these two awarenesses are ingredient to, and integrated in, human performances of intelligence. The individual seeking to drive a nail with a hammer attends to both the hammer and the nail, *but in different ways*. She is aware of the hammer only in terms of the effect it is having on the nail's position. When she swings down the hammer, she does not feel that the hammer's handle is striking the palm of her hand, but that the hammer's head is striking the nail—she senses the world *through* the hammer. As she relies on the hammer to drive the nail, her awareness of her body expands and comes to indwell the hammer as she becomes subsidiarily aware of the feelings in her palm and fingers holding the hammer *only as they tacitly bear on* and merge into her focal goal, i.e., sinking the nail (Polanyi, 1958, p. 55).

From this example, it is clear that subsidiary and focal awareness arise together: never one without the other.\*\* Neither stands on its own. Each arises in virtue of the other.\*\* They are what Owen Barfield would have called “polar contraries” (). Like the north and south poles of a bar magnet, to eliminate either



pole one would have to eliminate both. Even as one cannot have a magnet with only a south pole or only a north pole, one cannot have an awareness that is purely subsidiary or purely focal. Subsidiary awareness arises only in a relation of *support* to focal awareness, and focal awareness arises only in a relation of *dependency* on subsidiary awareness. These relations of support and dependency do not show up in their achievements as further focal entities; they remain in the background tacitly orchestrating all cognitive performances. Thus, disclosure and concealment are permanent and inseparable dimensions of human mentality, including consciousness and cognition.\*\* **If this** is true: 1.) we can never be focally or explicitly aware of all that our subsidiary awareness supports or that upon which our focal awareness depends, and 2.) it is therefore structurally impossible for human cognition, let alone consciousness, to eliminate its subsidiary underpinnings and level itself out entirely on the purely focal plane. Consequently, in every intelligent action, we will\*\* always be aware of and dependent upon more than we can focally identify or formalize. This *from-to* structural dynamic creates an ineradicable opacity right in the heart of both human cognition and human intentional consciousness—what Polanyi calls the **tacit dimension**\*\*.

The special character of our body lies in the fact that it is the originary matrix of subsidiary awareness that underwrites our focal knowledge (Polanyi, 1983, p. 15; Grene, 1969, p. 147). Your body is the aboriginal subsidiary base *from*

*which* you always attend to otherness. And yet, if our bodies did not naturally *disappear* in self-effacing experiential transparency as they tacitly *support* and direct our intentions world-ward, we would *self-enclose* in solipsistic isolation, losing all access to the world—e.g., if we tasted our taste buds, or saw our retinal cells, or smelled our olfactory epithelium, we wouldn't be able to taste, see, or smell the world itself. If this is so\*\*, then *it is through* our *bodies' self-effacing transparency* that our minds come to be-ing in the world. One's body is not just another object among other objects or just one potential mind-instantiating substrate among other potential mind-instantiating substrates. Rather *your* body is the condition of the possibility of *your* awareness of any object whatsoever: it is the medium and transitive center of *your* intentionality.\*\* Everything you encounter, including portions of your own body, you gain access to *from* your body. You *live* your body as the focally recessive but always-already-there source of *your* native subsidiary awareness that tacitly funds all your focal concerns. By focally *ignoring* your body, even while decisively *depending* on it, you are opened to the familiar *life*-world of focal otherness in which you live, and breath, do your sciences, write your abstract algorithms, and even perhaps formulate transhumanist fantasies of your body's disposability. Your body *somatically* grounds your personal identity while it *semantically* opens you to awareness and knowledge of the world. The body, therefore, “**comes all the way up**” by tacitly enabling,

conditioning, and ultimately semantically grounding even our highest order, language-borne thoughts.\*\*

Thus, there is an ineliminable tacit dimension that **both motivates and undermines** Transhumanism’s digital dualism. Let me explain.

On the one hand, the body’s self-effacing “tacitly” **motivates** the initial plausibility of transhumanism’s discarnate computational/informatic metaphysics of **bodiless** minds.\*\* Yet, on the other hand, the body’s self-effacing “tacitly” also **undermines** transhumanism’s quest to isolate in full formal “explicitly”, the subsidiary underpinnings through which human minds come to expression in the world.\*\* To capture these subsidiary underpinnings and prepare them for upload, transfer, and re-instantiation *in silico* (i.e., in a more efficient, durable and non-biodegradable computational substrate), they would have to be first identified, isolated, and finally abstractly represented as explicit data-structures in order to be amenable to computational subsumption, processing, and transference. But this is impossible if Polanyi is correct, because the subsidiary-focal “from-to” structure through which our bodies give presence to our minds will be missing, due to the digital formatting constraints of any computational substrate to which the explicit data might be transferred.<sup>1</sup> Hence, *the tacit dimension just does not compute.*\*\*

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<sup>1</sup> But would this really be “transference” or merely copying, with its attendant conundrums for preserving personal identity?

I'm afraid this is all I have time for in regard to mounting a Polanyian challenge to transhumanism.

## WHAT DOES JERUSALEM HAVE TO DO WITH SILICON VALLEY?

In the time that remains, I would like to look at a few Christian responses to transhumanism.\*\* Awareness of the transhumanist movement has settled into the mainstream culture of western civilization in the past few years, and predictably, some Christians have begun exploring their possibilities of relationship to it, especially to the branch of it I earlier labelled cyborgic transhumanism.

Unsurprisingly, most of the literature on transhumanism coming from the evangelical camp of Christianity has been categorically opposed to it. This evangelical opposition arises largely from their seeing transhumanism as guilty of an extreme form of “playing God”\*\*—a charge to which Craig Venter responds “who said anything about *playing*?” What might be perceived as the more progressive Christian responses recognize that “playing God” is just part of our high calling to be sub-creators or even created co-creators with God, yet, nonetheless, even this more progressive Christians find fault with transhumanism owing to its demeaning of the created material order: its neo-gnostic flight from incarnation.\*\* A few exceedingly sophisticated Christians have kept their distance from transhumanism because they see the goal of transcending *Homo sapiens* to become *Homo Deus* as an *incarnation in reverse*: instead of Godhead kenotically

descending into human flesh, transhumanism calls humans to shed their flesh in a self-centered effort to become deities themselves.\*\*

Despite this kind of blow back from Christians, there are an increasing number of scholars widely recognized as Christians finding common ground with a form of cyborgic transhumanism.\*\* One of the most outspoken of these scholars is Ronald Cole-Turner who argues that “Transhumanism is a Christian concept” pointing to Dante’s use of the word “tras-um-menah” *trasumanar* (*Paradiso*, canto 1, line 70) to depict graces’ transformations of humanity (Cole-Turner, “Going Beyond the Human: Christians and other Transhumanists”, *Dialog: A Journal of Theology*, Vol. 54, Number 1: Spring 2015, p. 20). Then there’s also Micah Redding, Executive Director of the Christian Transhumanist Association. He contends quite convincingly that when one considers carefully the Christian emphasis on human’s bearing the image of God, their call to self-transcendence and transformation, the promise of new spiritual bodies (I Cor. 15: 42ff “*soma pneumatikon*”), and a “new heaven and a new earth” (Rev. 21: 1), it is not much of a stretch to recognize Christianity as significantly convergent with transhumanism. He goes so far as to claim “Christianity *is* transhumanism” (<http://micahredding.com/blog/2012/04/25/christianity-transhumanism>).

In conclusion, I want to suggest that a Christian humanism committed to incarnational sacramentalism and transformative sanctification may be running on

parallel, if not converging, tracks with a form of cyborgic-transhumanism. With this rather scandalous/tantalizing suggestion, and by offering just a couple swift and superficial verbal riffs on Karl Rahner’s spectacularly evocative claim that Christians are “the most sublime of materialists”<sup>2</sup> to support it, I will bring this sprawling lecture on abstractions, de-materializations, Polanyi, the body, transhumanism, and Christianity to a close.

I think Rahner’s notion of a Christian “sublime materialism” points to the incarnational grain that deeply structures the sacramental tradition of Christianity—*viz.*, the unabashed affirmation of matter that walks through both testaments from creation to *Eschaton*.\*\* Just for starters consider: God created the human body; through a physical birth, God became one with the human body; Christians are instructed to seek sanctification of the body and to hope for the resurrection of the body; our savior was resurrected in a human body; our risen Lord took the human body into glory; we are promised a spiritual body; our central act of worship is all about the flesh and blood of our savior’s body; we all are the hands and feet of the body of our Lord. Our God, our self-understanding, our hope, our worship, and our Church are all so body-laden that little would be left of Christianity were its wagon to be hitched to the transhumanist metaphysic of dis-incarnation. James Keenan captures my sentiment well with his claim: “Where

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<sup>2</sup> Rahner, “The Festival of the Future World”, *Theological Investigations*, vol 7, p. 183

Transhumanists leave the body behind, they leave all Christians behind”\*\*

(“Embodiment and Relationality”, 162)

Although I see no hope of comradery between Christianity and bio-relinquishing transhumanism, a partnership with cyborgic-transhumanism seems plausible to me. After all, it does not seek to exit human nature altogether, but seeks *Homo sapiens*’ enhancement and life-extension through improvements to, not replacements of, our *flesh*. Moreover, in light of the fact that *Homo sapiens* has had a 200,000+ year evolutionary romance with artifacts and tools, we can hardly deny that our current way of being-in-the-world has come about, at least in part, as the result of a primordial coupling of flesh and tools. We are, as Andy Clark likes to say, “natural-born cyborgs” (2003).\*\* Our behaviors, thought, reason, and way of being sapient in the world emerged from eons of looping interactions between material brains, material bodies, material tools, and the cultural and technological environments they created. Thus, our bodies’ form and functionalities bear the indelible impress of the techno-mediations of our deep past, which also means (if Polanyi is correct) that our *embodied* minds and their concepts bear the birthmarks of those tools and technologies that helped evolve *Homos* into our present sapience.

So perhaps through a broadening of the Christian understanding of the sacraments, we might make common cause with cyborgic transhumanism by

recognizing technologies of enhancement as potential mediations of grace through which God redeems, sanctifies, and transhumanizes human beings (Ian Curran, Nov. 6, 2017)\*\*. The individualism and consumerism that infects and inflects the secular expressions of cyborgic transhumanism would however, have to be resisted and challenged by Christians seeking to share a common vision with this expression of transhumanism.\*\* That is, biotechnologies of human enhancement would have to be wrested away from ego-centric and consumerist agendas that serve primarily to consolidate, intensify, and maximize the bodily pleasures and social opportunities of the privileged few. A Christian alliance with cyborgic transhumanism must instead seek to bear the image of God by following Christ's example (*imitatio Christi*), in His quest to enhance the bodily and social welfare of others, seeking first to raise "the least of these" out of their material miseries (Matt. 25:40).\*\* Christian cyborgs must never forget that there are no (nor will there ever be) pills to be taken or apps to be downloaded for wisdom, real morality, or genuine Christian character. These cannot be bought.\*\* If they are ever realized, they arise through the blood, sweat, and tears of embodied, enacted, and embedded encounters with reality's resistances.\*\*