

The Cerebral Subject in Popular Culture and the 'End of Life'

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Cultural Figures of Self and Brain

In autumn of 2010, MIT's Media Lab attracted public attention in the United States when the opera it produced in collaboration with the American Repertory Theater, *Death and the Powers*, opened to critical acclaim in Monaco. What incited the attention and excitement of commentators was in part the opera's elaborate technical set, which expressed, through light and sound, the digitized voices and bodily movements of off-stage actors to tell its story. Robots, screens, lights, and props were not only intended to simulate a sense of human subjectivity in the stage itself, but sustain a persistent tension: if consciousness can be uploaded into machines, will we still be recognized as human? By materially enacting this tension, the opera introduced a late-modern twist (the sentience of computational machines) in an old operatic genre (existential crisis). At the same time, the opera captured for audiences the look and feel of a future with which they might nevertheless already be familiar: post-human life, enacted by the cognitive-computational symbiosis of the subject, animated by a promise of immortality.

Death and the Powers invites us to imagine a future when an essential condition of human life, death, has been overcome because a condition of western science and philosophy, the division of mind and body, has been resolved by technological ingenuity. Simon Powers, a man of considerable wealth and intellect, has devised a way to upload his consciousness into an elaborate system of computers and robots and thus to exist as a digital environment. Driven by a will to power, he dreams of living forever by returning to a material form light from which he claims to have originated in the first place. 'Light' is a sign whose meaning juxtaposes several entities: the electrical circuits that define the physicality of his being; a universal material phenomenon; and, in more aesthetic terms, expanded omnipresence and omnipotence. Light is, thereby, an index of being, one that Simon Powers feels himself to more authentically inhabit.

By transferring his 'self' into a new form of embodiment, Powers escapes the foregone conclusion of death and revels in an unrivaled mastery over life in *The System*. Expressing himself in mundane robotic devices, he convinces his wife and his physically

disfigured graduate assistant to transcend their organic incarnations and join him. “No matter the matter,” he repeats, “I did that.” A dramatic tension in these negotiations concerns whether, in fact, the matter does matter with respect to being recognizable as a human being. “I am the same,” Powers declares. But the same as what, and in what sense? Miranda Powers, Simon Powers’ only child, is reticent to abandon her organic, mortal coil for a presumably immortal silicon chip, and part of the dramatic tension in the opera is organized around her reticence: “The body of this death is who I am, it is my mind...” she offers in response to her father’s invitation to join the family in a “world of light.” “Who will I be?” she asks, “and what will I see when my body is gone?” Powers’ research assistant, disfigured and with a prosthetic arm, reassures Miranda that the Powers embodied in the System is self-same to the one who exists in a body. The relation of self to embodiment is a matter of degree and not kind. Thus, he claims the body we are embodied in is a possession, not a condition, of being: “my left arm is...mine, not me.”

The questions posed by *Death and the Powers* have a formidable history stretching across modernity. But what the opera captures so well in re-staging these questions are the ways in which conventional understandings of the distinctly human are being fundamentally refigured. It seems self-evident that the brain can stand in for the human, especially if life is understood primarily in computational, digital terms. And, indeed, the standard question endlessly repeated with respect to this reductive formulation is whether a thinking machine can be a sentient being? What is seldom asked and what *Death and the Powers* so cleverly poses is whether sentient beings are in fact nothing but thinking machines. Behind a digitized form of life lies a desire to refuse the material ontology one has been given, and assume a material ontology one has made. The refusal of the given, in favor of what is made, is a theme we shall return to later. Suffice to say now that the significance of this refusal sets up for the opera’s audience an assumption about not only what immortality can look like, but also what death means as a contemporary experience—death is something we can and must transcend through technical ingenuity. However, the means of doing so require transforming the infinitude of being into a technoscientific project. That is, death is something we can transcend if we transfer ourselves to a different material ontology we can engineer, thereby affirming we are nothing but thinking machines. Thus, it is not simply the silicon of computational devices that harbors the desire for immortality. Rather, it is the desire to reduce being to the technoscientific ingenuity of human thought.

One finds these themes elsewhere in contemporary literary fiction and popular culture. Consider by way of further illustration James Cameron’s 2009 science fiction film, *Avatar*. The setting of this film, briefly, is the rich, bio-diverse planet, Pandora, inhabited by the Na’vi, an ostensibly pantheistic community of humanoid aliens and curiously prehistoric life forms. Drawing on the same visual repertoire as *Death and the Powers*, the bioluminescence of Pandora’s native ecosystem defines a unique ontology.

Here, however, light signifies a biological substrate akin to nervous tissue. Its mysteries, the audience is informed early on, are interpretable by science, and over the course of the story a group of likable researchers translate the spiritual pantheism of the Na'vi into a familiar scientific register. Pandora, we discover, is a global information network of biological connections that not only distributes the energies of life (connecting all living things), but also functions as a cognitive entity (thereby connecting all living minds). The planet, in other words, is akin to a physical brain, stocked with cognitive functions, capable of sentience and, in a decisive moment, able to direct its fate by directing its animal life forms.

Like *Death and the Powers*, *Avatar* never explicitly articulates the underlying neuroscientific concepts that animate its concepts of life and death. The film simply asserts that life is coextensive with a physical embodiment of mind. Its resplendent visual repertoire and depiction of scientific prowess in unlocking the planet's secrets are together sufficient to suggest the idea that Pandora's physical world is in fact a recognizable 'being.' What matters here is the condition on which such a being is made recognizable as such. 'Nervous energy' is what imbues all of Pandora with life itself. The juxtaposition of science, a visual repertoire of neural circuitry, and the spirituality of a globally unified nature conveys the notion that in neuroscience's biology of the brain lays an ontology of being. Moreover, it reasserts the claim that the brain is a biological entity we can understand because it is a technical achievement we can engineer.

As the film presents it, the source of life that animates Pandora is put at risk by an American corporation whose efforts to extract profit from the planet's rich resources require the protection of mercenaries who must, in turn, subdue an indigenous population for whom the concept of profit is unknown. Indeed, much of the narrative of the film is propelled by an age-old formula that pits the profit-driven, instrumental imperatives of corporate capitalism—ill-equipped to recognize real wealth—against a balanced system of life where community and reciprocity are built into nature. As we gradually learn, the rich deposits that the corporation seeks to extract are part of the fundamental fabric of life. The energy that sustains all life forms (and forms of life) on Pandora is only 'borrowed'; what grants bodily life must, at the point of death, be returned and exchanged for an immortality that is achieved by merging, cognitively, with the planet. Nothing of the essence of living and being, therefore, escapes the closed material ontology of Pandora.

The visual staging of life and death in *Avatar* makes it possible for the film and the audience to imagine relationality as considerably more than an abstract religious imperative. A sentimental narrative of being as 'physical being-with' is pitched to the audience constantly through the language of empirical science. And what drives home the material 'givenness' of the relationality of life on Pandora is the commingling of neural fibers: every indigenous inhabitant on the planet is endowed with nervous fibers that are exposed at the end of a queue, a braid which extends from the back of the head. The

interweaving of neural fibers between creatures binds beings—that is, two cognitive systems—in a single, harmonic social and political whole. The recognition that one is a being, and that one belongs within a whole community, is achieved through the mastery of a physical condition of being-with, and being-within, Pandora’s interconnected living system. Thereby life-long bonds are formed, knowledge and shared memory is communicated, and a sense of oneself and one’s place in relation to a global community is secured.

It is against this specific backdrop of an ontology of life and economic-military conflict that the narrative arcs that drive *Avatar* unfold. When the film begins we are introduced to Jake Sully, a cynical, hardened marine paralyzed during combat. He is embarking on a voyage to Pandora to take the place of his dead twin brother, a scientist specializing in the biological life of Pandora. What gives *Avatar* its title is the fact that the scientists on Pandora, led by Dr. Grace Augustine, have been able to genetically engineer and inhabit hybrid Na’vi-human bodies in order to converse with the indigenous Na’vi. More importantly, the avatar body allows them to conduct scientific research in Pandora’s dangerous and otherwise inhospitable environment. But the military-industrial complex, which seeks to abort efforts to reach a diplomatic solution with respect to the mining of the planet’s rich resources, enlists Jake to gather information that might help the corporation advance its interests and sabotage the scientists’ effort to broker peace. In the end, however, his fate is bound-up with neither colonial faction; it is rather with the Na’vi. While on his first outing in his avatar, Sully is separated from his group and saved by Neytiri, heiress to the Na’vi tribe. Although correctly suspected of being a spy by the Na’vi, he remains with them, undergoing a series of trials and rituals that define the integration of the young Na’vi into the community. Having undergone these trials and rituals in his avatar and thus being fully integrated into the Na’vi community, Sully opts to permanently abandon his human form and be, as he puts it, “reborn.”

As was widely remarked in the press following its release, *Avatar* employs a conventional ‘going native’ narrative: a Western white man arrives at an exotic, spiritually connected society, falls in love with a native, learns to see the bountiful wealth of a simple life, and succeeds in stemming off the forces he once formally represented. And while the film does indeed employ such a narrative, also at work albeit more subtly so in Jake Sully’s transformation is his movement between two ontologies, a movement facilitated by the intersection of technoscience and nature. There are two modes of being in the film—becoming and being-with—and each mode requires Sully to make different choices. Will he, for example, accept the free spinal surgery on Earth in exchange for his loyalty to the military-industrial complex; or will he give up on this overly technical mode of life in favor of the fluid organicity of Pandora?

What mediates Sully’s choices is the avatar body. But what is this body and what does it represent? As becomes clear to the audience early in the film’s narrative, the journey into an avatar body is a journey onto a particular post-human moral, political, and

economic landscape. The journey into an avatar navigates around, and provides the escape from, corporate interests in reproducing scarcity and political interests in reproducing the need for security. In the opening sequence of the film, the avatar is referred to merely as an expensive transportation vehicle, a prosthesis, something that is ‘driven.’ The avatar facilitates the acquisition of scientific knowledge and is used as an instrument of corporate interests. As the film progresses, however, the distinction between which body is one’s own and which is merely a vehicle one drives; between who one is and is becoming; and between which world is real and which only visited, is progressively blurred. Sully realizes that he is, in fact, faced with a choice: to choose a body is to choose a social, moral, and political purpose. And what underlies this moral terrain is, once again, the figure of the brain as both the essence of the self (the seat of what cannot be instrumentalized) and yet also the locus of an activity (consciousness) that can travel from one cognitive embodiment to another. It is by permanently transferring his “self,”—his “mind” in a brain—that Sully effects a material, and thereby spiritual and political, conversion. Only within a certain set of assumptions about life and science’s capacity to harness it can this moral choice appear as a real choice. As a majestic world of beauty and serenity, Pandora incites this choice by fostering a desire to retrieve an authentic self. Submitting to its ontology is the condition on which one can embody the sentimental narratives of a boundless ‘being with,’ something akin to Freud’s desire for ‘oceanic merging.’ For material life on Pandora imbues a cognitive being with a unique property: one is never dead, but is rather always being reborn.

The Technoscience of Consciousness

To tell their stories, both *Avatar* and *Death and the Powers* rely on a set of assumptions that the mind is physically embodied in the neural networks of our brain. To be sure, the notion that we “are our brain” is not new (Vidal, 2009). What is specific, however, to both of these artifacts and their ideology of “brainhood” is a scientific notion of mind: such a notion holds that mental processes and structures are, in fact, physical processes and structures, and that science, therefore, can empirically study the mind by studying brains and other thinking machines. This scientific view—that our minds are reducible to physical mechanisms—has grown far beyond neuroscience or cognitive science. The implications of a physicalist ontology of mind are now discussed in the humanities and social sciences as part of what is called the neural turn. To be sure, there are many different versions of this new science of the mind, each with their own philosophical commitments about how the mind emerges from matter. And, as has been widely noted by many critics, the promises that neuroscience and cognitive science have made about what it can know with respect to how the mind works (that is, everything) far exceed any research results. Nevertheless, it is clear from the cultural artifacts we have considered

(and everyday observations about brainhood in popular culture more broadly) that the influence and practical consequences of a physicalist theory of mind have dramatically outrun its, to date, more modest scientific conclusions.

The physicalist, scientific account of mind that informs *Avatar* and *Death and the Powers* is specific to a branch of cognitive neuroscience that has its philosophical roots in cybernetics. Cognitive neuroscience argues that the physical foundation of mind is computational. What we call a mental process, for example, is for cognitive neuroscience a logical algorithm or computational model. Because it can be physically implemented (for instance in the silicon chips that drive a computer), and because it represents models of thought and representation, computation is thought to mediate and resolve the presumed separation between materiality and mentality. These theoretical commitments about an empirical science of mind allow two modes of inquiry. First, by treating the brain as a computer, neuroscientists claim they can reverse engineer the brain as a machine through various experimental methods that isolate cognitive functions as computational processes. The most dominant and commonplace expression of this form of experimentation today is functional magnetic resonance imaging (fMRI). Second, cognitive scientists, for their part, attempt to build computer models of mind in computational devices, and often embed those models of mind in robots. The assumptions that both of these modes of science are possible inform *Avatar* and *Death and the Powers*: the mind is not only a physical entity, it is a computational entity that can be engineered and instrumentalized. Thus, the particular science of the mind at play here is, in fact, a technoscience, a term that is intended to indicate the inseparability of technical engineering and scientific empiricism.

In the last few decades, cognitive neuroscience has focused on a particular problem of mind: to wit, consciousness. The general idea is that there is now a sufficient degree of understanding of mind and brain to discover how neural activations allow one to experience something consciously. And here, the Holy Grail is a particular conscious experience: the experience of the self as a self. Again, 'progress' on the consciousness question advances on two fronts. The first front is the purely computational side, where the challenge has been to describe and build the mechanical models of thought necessary to grasp oneself as a thinking subject (Hofstadter and Dennett, 1981; Hofstadter, 2007). As John Searle has observed, however, a purely computational approach denies that consciousness, as the experience of a subject, exists (Searle, 1997). According to Searle, the project of a purely computational approach is instead to demonstrate that we've been mistaken all along: there is rarely a 'consciousness of' something, only a set of mechanical adaptations describable at the level of computation. Jean-Pierre Dupuy, in a similar vein, concludes that the computational commitments of cognitive science represent a de-humanizing move in the science of the mind. In the name of science, he argues, cognitive science reduces the depth of human experience to nothing other than the

epistemic techniques of a complex system. Neuroscience, which is actively mapping the brain for the “neural correlates of consciousness,” (Metzinger, 2000) perhaps best expresses this argument by Dupuy: it tries to translate conscious experience into quantifiable, verifiable processes of the brain—processes that, because they are physical, are deterministic and causal.

We are now perhaps in a better position to understand the significance of Simon Powers and Jakes Sully as contemporary cultural signifiers. They are not only individuals whose journeys are mediated by a science of the mind. Their journeys are possible on the condition that each ‘self’ becomes a technoscientific object, an object of engineering. This is expressed by the mobility of consciousness in both films: Powers’ mind is transferred into silicon while Sully’s is transferred into a Na’vi body. By taking the essence of the ‘self’ to be consciousness, both stories stage their characters within broader dramatic arcs of self-discovery, omnipotence, moral choice, ethical care, love, spiritual unity, meaning, purpose, and immortality. That is, they stage as a question of ‘seeing’ and ‘being seen by’ others, the moral, political, and social dilemmas of ‘being a physical brain.’ This staging, moreover, functions to imbue a deep, sentimental significance to a science of mind. To submit one’s mind to the technoscience of cognitive neuroscience represents a decision to undergo a liberating, possibly emancipatory transformation.

But how do we begin to evaluate the contemporary significance of the scientific ontology of mind and consciousness that grounds *Avatar* and *Death and the Powers*? Powers is a human-computer symbiosis of mind; Sully is reborn by digitally transferring his mind to a genetically modified human-alien body. Each cuts the figure of a ‘post-human’ self no longer contained in the impenetrable body (Hayles, 1999). Are Powers and Sully, then, cheerleading the arrival of our post-human future (Kurzweil, 2006)?

In our view, the answers lie elsewhere. The science of consciousness in *Avatar* and *Death and the Powers* stages dilemmas of ‘seeing’ and ‘being seen’ in ways not possible from within a human, mortal body. They are not parables about whether or not machines can experience consciousness. They are, rather, parables about the crisis of determining what is ‘human.’ They turn on the notion that the crisis that exists at the heart of social, economic, political, and ethical life is not one of resources, money, profit, power, or wealth. The crisis that exists is rather a crisis of recognition, of seeing and being seen by others, when it is taken for granted that human beings are nothing but machines. In this respect, these stories invoke a set of late-modern plot lines (capitalism vs. reciprocity in the evaluation of wealth; a military-industrial apparatus of control versus a community of equal partners) and incite a corresponding range of fear and desire. Amid a set of recognizable social, political, and economic struggles, Sully and Powers represent figures that undergo liberation by assuming a different material form of being. But notice: the both obvious and obscured condition of their liberation is that each submits his ‘self’ to the instrumental rationality of science.

This point is crucial when considering the practical consequences of the sciences of the mind in medicine and psychology. For the integration of neuroscience in these areas of thought and practice has required and engendered a re-framing of the human subject per se. Indeed, as Ehrenberg (2004) has argued, neuroscientific psychology has not only legitimated and expanded a new scientific understanding of mental pathology; it has also reframed the very categories of social behavior. Consider for a moment the broad attention today given to autism, Alzheimer's disease, or schizophrenia not only as theoretical and practical problems in psychology, but also as social and political configurations of particular kinds of human thought and behavior. Cognitive neuroscience is broadly reshaping, enabling, or responding to new social, economic, and political circumstances by outlining a new kind of human subject—a new way of seeing the human being—which we might in fact call the cerebral subject (Pelaprat, 2010). But in what sense does the cerebral subject frame the human being as a social, economic, ethical, or political actor? And what do we make of the fact that the foundations of its being—a physicalism of mind—requires that the subject be transformed into an object of technoscience? That, in short, the infinitude of being is accounted for in purely mechanical, computational terms that can instrumentalize the self?

Consciousness and the Threshold of Life and Death

To better understand the import of these complexities, we need to take up one final theme, which we suggest links these cultural texts to a biology of consciousness: this theme concerns the threshold between life and death. At first glance, we can note that dying today is a prolonged, medical affair, due in large measure to bioscientific advances that enable bodily life to be supported and sustained beyond its own independent, physiological capacities. At the same time, dying has also come to be understood as a particular stage of life that is (or can be) economically expensive, ethically troublesome, and morally divisive. Endemic to the life of the population and a problem of economic, ethical, and legal import, we can note finally that dying is a matter of interest and regulation. The principle mode by which the state asserts its interest in the 'end of life' is to guarantee individual autonomy and choice—that is, freedom—with respect to the conditions of (one's own) death: how, when, and why we die are supposed to be matters over which individuals assert control. As a political, economic, medical, and ethical problem, therefore, dying is today configured through a double-logic: it is endemic to the economic, legal, and moral life of a society's population and, at the same time, it is a problem of individual liberty.

This double logic is important in defining death as a particular kind of individual struggle. To die likely means to progressively lose control and autonomy over one's body and mind (and the closer one gets to death, the greater the loss of control). Against this

technoscientific state of affairs, the logic of freedom asserts itself in the form of a series of concrete, practical questions: How do you make sense of what is possible or necessary to do as a dying patient, or as a person in relation to a dying patient, when it is in large measure a question of will, cost, and technical ingenuity that keeps you alive and prevents you from dying? How do you act for others if they are dying—that is, not dead, but incapacitated? What guides you in determining the best way to proceed in these cases?

The social-legal expansion of dying as a particular kind of problem of both the state and the individual first emerged in the late 1960s with the release of Harvard's Ad Hoc Committee Report on Brain Death. This document defined legal and medical death as the total cessation of electrical activity in the brain, by which it meant the cessation of the brain's capacity to produce consciousness. The need for a redefinition of death was precipitated largely by the new ability of physicians to control and reproduce bodily life with the use of life-sustaining machines. What is crucial, however, is that the Harvard committee introduced a physicalist theory of mind to replace the heart and lungs as the threshold of life and death. This was a practical definition and it was adopted quickly across medical contexts and accepted by the courts to define the boundaries of a new, recognizable legal actor. In the United States, the Quinlan (1974) and Cruzan (1990) legal cases are considered foundational decisions that build on the assumption that a cerebral subject can be enveloped by the law to account for the end of human life. It was only a matter of a few decades before care for the dying drastically expanded into the form we recognize today: as an expensive social entitlement that affects the whole of a population and draws individuals and the state into a relation of ethical regulation.

What thus buttresses the economic, political, and medical reality of dying and death today is not simply science, law, and/or the ethical policies of medical institutions. It is the fact that a new kind of social, legal, economic, and ethical actor—the individual in relation to his or her own death—has been produced on a radically new foundation of what counts as the beginning and end of human life: to wit, consciousness. The cerebral subject has become crystallized in law and medicine as the contours of a threshold and actor. To be sure, not all of dying is mediated through the cerebral subject, but it is a major point through which a rationality of dying has been extended.

Notwithstanding the institutionalization of a particular agreement about what constitutes death, there is on-going debate among physicians about which brain activities produce consciousness. This point is absolutely crucial: what constitutes the threshold of life and death today is not simply consciousness, but a physicalist and biological criteria of consciousness, which is to say a functional system in the brain that produces consciousness. The debate over these criteria has been organized largely by and around the neurological understanding of the persistent vegetative state and related “disorders of consciousness” (Monti et al., 2009; Laureys, 2005). Vegetative patients have brains that continue to partially function and bodily lives for the most part sustained by machines

(because they cannot chew, swallow, communicate, or perform any deliberate gesture). Their residual brain functions produce behaviors and regulate autonomic functions that make them appear conscious. Thus, because vegetative patients are the limit point, as it were, of consciousness, and of medical and legal death, they are the best cases by which to determine the biological foundations of consciousness.

For a long time, diagnosis of brain death or the vegetative state relied on interpreting the behavior of a patient that had been solicited by a physician (Jennett, 1976). But since the 1990s, physicians have eagerly turned to cognitive-neuroscientific criteria to determine if a brain is producing consciousness. This eagerness largely corresponds to the desire to substitute scientific certainty (which neuroscience presumably provides) for interpretation (which is seen to be subjective). Today, the internal nervous activity of the brain, understood as a cognitive-computation machine, is a primary criterion for diagnosing whether or not a brain is conscious of its experience. Thus, the trend in determining the end of life in vegetative (and other dying) patients has been toward submitting the essence of the self—the capacity to produce a conscious mind—to the language, techniques, and interpretations of cognitive neuroscience. This trend far exceeds the problem of dying, as is evidenced in the sprawling visual ecology of fMRI images in popular culture, legal debates, social science, and criminology.

Today, no discourse is more critical to the end of life than the neurosciences. By transforming the mind into an object of technoscience, the neurosciences simultaneously assert what the mind is even as they also take it as an object of engineering. The vast legal, ethical, medical, and economic problems of the end of life turn with ever-greater intensity on neuroscience's account of the brain as the material locus of the self. If we can detect consciousness in the brain of a vegetative body, can we interact with it? Can we ask this person's brain whether or not it wants to remain on life-support? If consciousness is detected, can a brain exercise a right on behalf of its 'self,' or must others exercise one on its behalf? Is it moral to let a science interpret brain activity as the utterances of a subject? Can moral decisions be made in such a way? These are just a few of the questions asked in medical settings because the cerebral subject grounds an understanding of our relation to dying. If neuroscience is to be believed, the answer to these questions is yes.

And yet, despite all of these profound questions, end of life discourse is best known by a slogan that is often repeated: end of life care must deliver on the "promise of a good death" (Emanuel and Emanuel, 1994). Generally, it is accepted that a good death entails responding ethically to the technical imperatives at work to compel dying patients and loved ones to sustain bodily life beyond its own physical limits. The image of the feeding tube, in this regard, is a crucial cultural signifier (Anderson, 2005). What 'the good death' has also come to signify is a certain kind of freedom: dying well means dying according to what one believes to be the good in dying; it is the right to die as one sought to live (Dworkin, 1993). It is remarkable how firmly accepted it is that dying falls within this

rubric of an emancipatory ethics. What is more remarkable still is how moral codes, procedures, and principles follow from this ethics to link up with a neoliberal ontology: individuals are free because they have choice, they have interests, and they have the autonomy to pursue those interests in order to preserve dignity. In this normative picture of dying, the body in its slow, progressive, morbid decay remains relatively absent except insofar as it is a source of unfreedom. Medical care of the body is part and parcel of an effort to relieve the essence of the self—the mind in the brain and one’s interest in dying well—from an unfreedom while, of course, abetting it. Here we might notice how much the erasure of the dependence on the body depends on the assumption that the self is essentially the mind—an assumption that is validated by the clinical picture along side of narratives of heroic medicine and traditional understandings of autonomy and choice as conditions of freedom.

Conclusion

We are now in a better position to understand the significance of the cultural artifacts we considered at the beginning of this paper. Whether tied to a contemporary discourse of the self, or the discourse on end of life, a new scientific rubric of consciousness produced by physical processes has taken hold, one where the brain, as a cognitive machine, answers for us whether or not there is a there, there. *Avatar* and *Death and the Powers* invoke the logic of this cerebral ontology of being. They trade in a grammar and vocabulary of being that can be accessed by the ‘truths’ of science and harnessed by science’s capacity to engineer these ‘truths.’ These last points deserve elaboration. If dying today is a problem of the state, economy, law, and ethics, it is not simply because the body’s decay is sustained by technology and medicine. The idea that we need an ethics to respond to our technological power to sustain bodily life is misleading. Rather, what is happening is that a new discourse of life couched in biological consciousness frames the way individuals can be seen, recognized, and integrated as actors in a social, political, economic, and ethical ‘field of dying.’

Those who have experienced end of life care know that the promise of a good death is, for the most part, a cynical one. What then do we make of the ethics of end of life care? Is it mere political ideology? Is its function to paper over, or provide a good feeling for dying’s messy, morbid, painful, protracted, and ugly process? Does it function, perhaps, to exculpate and distance individuals from responsibility for the dying who are nevertheless kept alive at all costs?

Two points regarding these questions can be made to close this paper. First, let us return one final time to the concept of the cerebral subject. Biological consciousness, in its scientific development and medical application, makes it possible to respond to dying in a new way. It responds to the ambiguity of when one is dead by stating that, in fact, selves

are brains that are able to produce consciousness. But this new way is also practical; it makes it possible to initiate a legal, social, and economic response to dying. The cerebral subject is therefore deployed in these domains (Supreme Court cases, federal Medicaid registers, etc.) in order to modulate the care of individuals. Various processes can be set up (legal, financial, institutional, medical) because now the state knows how to organize and navigate a set of interests; hospitals know how to organize and deliver care; and economists know how to organize, track, and (attempt to) reduce costs. End of life ethics, as a particular kind of ‘brainhood’ ethics, lubricate the institutional mechanisms by which an individual, placed on a trajectory of dying, is made sense of: the dying individual, in other words, becomes a subject of health care resources, expenditures, legal procedures, and insurance liability and reimbursement. Why is this? Largely, in our view, because of the cultural circulation of a set of meanings about ‘being a brain’ that make it possible to identify dying patients with rights, interests, and desires in relation to death, despite the fact that their status as conscious beings is in doubt. Hence it is possible to set up a legal process by which the end of life interests of patients can be determined even though patients remain unconscious for the duration of their medical care. Or, legal instruments such as advanced directives allow individuals to stipulate their preferences for dying in enforceable legal documents. Or, finally, health care costs can be attributed to preferences about the purchase of medical goods and services. Indeed, it is crucial to recognize that political, legal, and economic rationalities are inserted into dying and death because they can be modulated through the cerebral subject. These rationalities allow for dying and death to appear as the total, aggregate phenomena of an entire population—which is where the state, the market, and the law find their legitimacy. In short, the cerebral subject establishes a frame within which law, state, economy, and institutions can graft and modulate their practices because this frame provides them with a sufficiently plausible stand-in for a subject (the brain) and, thereby, a useful structure of social action.

The second point is more normative in its evaluation of end of life discourse and its cerebral subject. As Avatar and Death and the Powers demonstrate, the desire to be a brain is a desire to remake oneself as an effect of our technical engineering prowess. Is it only coincidental that immortality appears here as a technical possibility, a dream that we find activated, again and again, as a narrative theme? One is reminded of Günther Anders’ observation that modern human beings are “ashamed to have been born instead of made.” What Anders’ observation captures is the frequently noted rebellion of modernity against what is given in human life. The exemplary expression of this ‘given’ is that we can neither explain our own birth nor account for our disappearance from the world. For this reason, technical expertise—that which springs entirely from scientific knowledge—is the object of a desire for refounding the distinctly human. “No matter the matter,” Simon Powers says to his daughter. But of course, the latter “matter” is of his own making, whereas the former, that of the body, is the given of his existence. We must acknowledge,

as Jean-Pierre Dupuy has argued, the anti-humanist move at the heart of the cerebral subject of end of life discourse. The cognitive-computational ontology that grounds this subject is, in fact, an attempt to reduce being to the technical existence of a machine that can think. It needs to be understood as a dream with immediate, practical consequences: it incites the desire to assume a technical control over death by re-making the conditions of life through engineering.

Is the issue of dying and death today, then, really about finding the proper ethics of medicine and developing the technical capacity to provide a ‘good death?’ If the ethical and juridical experts are to be believed, one supposes that it is. But a critical engagement with a broader cultural environment of brainhood reveals that the danger likely lurks elsewhere. The danger does not exist simply in the technoscientific modes by which we seek to remake ourselves through our biology. They exist, more immediately, through the reordering of social, institutional, economic, and legal practices which presume that biological consciousness is a proper ontology of being by which to interpret dying in a legal, social, and cultural way. There is an element of power—a biopolitics—at stake in this formulation of dying and death, but by this we note only the obvious.

The fluidity of this cerebral ontology is culturally powerful. Its framing of cerebral subjectivity offers narratives of hope, belonging, and eternal life. Nevertheless, the political reality of end of life care as a utilitarian, technical staging of the human subject within social, economic, and political processes is hard to escape. In this regard, the cultural staging of the brain performs a strategic political function: it obscures the way in which our social, legal, and cultural reform of dying, invested as it is in the rationality of the state, individualistic ethics, and economic rationale, is abetting the rational instrumentalization of human life in the name of ‘freedom.’

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