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Morals and the Mind

Michael Gazzaniga's *Ethical Brain*

Michael Gazzaniga is one of the most venerated experimental neuroscientists of our age. He is a fellow of the American Academy of Arts and Sciences, president of the American Psychological Society, and a member of the President's Council on Bioethics. He is the author of many highly regarded technical books and studies, but his latest effort is for the non-specialist.

Gazzaniga embarked on *The Ethical Brain*, a 2005 book published by the Dana Foundation, out of a sense of *noblesse oblige*: "Those of us who focus on how the nervous system works," he explains, "must begin to address larger issues even though the ones we are working on are large enough." These other issues are the kind ordinary citizens might worry about—like whether human embryos are a fit object for experimentation, what to do about grandparents with dementia, and whether it's OK to select traits in our children or give them drugs to improve their mental performance.

Many before Gazzaniga have pondered these terribly difficult and ethically complex issues, but none to his satisfaction. He impatiently dismisses those who lack his scientific credentials: Of a bioethicist with whom he disagrees, "it is clear that [she] has never walked the neurology wards, has never cared for or studied patients with the disease in question." Of those who come to these issues from a religious perspective, they are "quite simply out of the loop." Gazzaniga would like to replace such ignorance and quackery with scientific truth. His aim is to establish a new discipline called "neuroethics"—or a "brain-based philosophy of life." Unfortunately, instead of a philosophic revolution, rooted in new insights from the cutting-edge of brain science, we get arguments that range from the conventional to the confused to the downright silly.

Gazzaniga turns to the embryo question first. When is it morally acceptable, if ever, to experiment upon human embryos? Are embryos "one of us," entitled to at least some rights and protections, or are they closer to the moral status of, say, sea slugs? Countless bioethicists, moral philosophers, scientists, and statesmen have wrestled with this question, but, avers Gazzaniga, "the rational world" still awaits an answer, an answer to be found in the facts of neural development.

Here are those facts, as provided by Gazzaniga: When the egg and sperm meet, the embryo begins its rapid growth, but not until week four is there any sign of the beginnings of a brain, and not until week six does the embryo show signs of electrical brain activity. By week eight, the cerebrum is growing rapidly; by week twelve, the frontal and temporal poles of the brain are apparent; and by week thirteen, the brain's infrastructure is rapidly developing. Synapses form around week twenty-three, and about ten weeks later the brain is in control of such bodily functions as breathing, though even at birth, the brain is still far from fully developed.

What are we to make of it all? For Gazzaniga, neuroscience tells us that "life begins with a sentient being," around week twenty-three, or around the same time that the fetus can survive outside the womb with medical support. In Gazzaniga's view, it is at this point, and not until then, that the fetus becomes "one of us," with all "the moral and legal rights of a human being." And thus Gazzaniga holds that we should allow unrestricted experimentation on human embryos up to week twenty-three.

To explain his argument, Gazzaniga uses an analogy: the embryo is like housing materials found at a Home Depot. Says Gazzaniga: "When a Home Depot burns down, the headline in the paper is not '30 Houses Burn Down.' It is 'Home Depot Burned Down.'" Similarly, to destroy a fetus is not to destroy a human life, but merely the "materials" of life.

Gazzaniga's principle that "you are your brain" also has implications for those at the end of life. About 15 percent of those over the age of 65

will develop dementia, in particular Alzheimer's disease. It is a terrible and frightful scourge. It is also for Gazzaniga an intellectual puzzle. As he puts it, at what point are people "due less respect because their brains have deteriorated so much that they no longer support cognition"?

Gazzaniga's sweeping claim is that "demented patients…are no longer even members of our species." To demonstrate this, he offers another analogy. Imagine, he says, that you have an old car "Nelly," your very first car. "Nelly is part of your life and mind and story. You learned to drive her, your first date was in Nelly, and who knows what else happened inside Nelly." But now Nelly's motor is broken beyond repair and her body is rusting away.

In Gazzaniga's view, poor old Nelly is a lot like your demented old grandpa. You may have many fond memories of "Gramps," but let's face it, "Gramps" too is nothing but an old rust-bucket, merely a shell of his former self. "Gramps lives in you, not in himself, just like Nelly," reasons Gazzaniga. The "neuroscientific truth" is "that Gramps is not really with us anymore." Gramps has all the moral worth of, well, Nelly, and in "our pluralistic society" there should be a right "to euthanize him."

Despite what his neuroscience tells him, Gazzaniga has his ethical reservations. He admits to being affected by the embryo's apparent humanness, which leaves him momentarily befuddled. "I am reacting to a sentiment that wells up in me.…And yet, at the level of neuroscientific knowledge, it could easily be argued that my view is nonsensical." And while he can find nothing wrong with euthanizing Gramps by the lights of his science ("You are your brain"), he says he would not take such measures himself.

When it comes to enhancement, Gazzaniga has no reservations at all. Once again he uses an analogy—a future in which there would be "no more Fords—only BMWs." Two roads will get us there—genetic manipulation and "smart drugs." Gazzaniga is in favor of both, happily embracing the label "eugenics." To those who worry about self-inflicted dehumanization, he replies: "But what is it to 'dehumanize'? We are talking about a practice that exists only because of the very nature of being human: to discover, to think, to figure out new ways to do things." And to those who would apply legal and moral limits, he replies: "We should be free to try whatever we can think to try—this is the nature of scientific inquiry."

The enemy of such uninhibited inquiry is religion, which Gazzaniga seeks not to understand but to supplant. The persistence of religious beliefs puzzles him—especially in this enlightened age, "when most of the educated world realizes that religious ideas are explanatory systems." How to explain such credulity in the masses? Perhaps, Gazzaniga muses, the founders of the world's religions, men like Moses, the Buddha, the Apostle Paul, and Mohammed, were epileptics—and we are their dupes. "No one

has told the kids yet there is no Santa Claus," Gazzaniga remarks.

Gazzaniga finds a more general cause for the persistence of religious belief in that "humans are belief-formation machines.…It seems to be what our human brains do." Yet in this possibility there is for Gazzaniga also cause for hope. Religion and philosophy are the stories we once told ourselves. But now that we can see these stories for what they truly are, mere fictions, we can replace them with a more scientific account. And it is this possibility that leads Gazzaniga to happily conclude, almost in a religious rapture of his own, "that a universal ethics is possible." "There could be a universal set of biological responses to moral dilemmas, a sort of ethics, built into our brains."

Altogether, this is pretty thin gruel, especially in light of its grand promise to help launch a whole new discipline of ethics rooted in real science. It is the kind of stuff that might seem clever at parties or in the *New York Times* op-ed page, but hardly holds water under rigorous scrutiny. To take his own favorite example: The embryo is a self-generating organism, an individual life in-process, already the particular person it is destined to become. The supplies at Home Depot, by contrast, could be arranged or rearranged into an infinite number of houses—big houses or small houses, brick houses or wood houses, dog houses or club houses, or just fences surrounding an empty pasture. The analogy is both stupid and misleading.

Gazzaniga's reasoning also fails on end-of-life issues. As important as the brain is to human identity, our mental life is inseparable from our bodily life in subtle but profound ways, perhaps too subtle for Gazzaniga's scientific mind. Whatever one may think of "Nelly" and "Gramps," there is a difference between, say, old grandpa's picture and the living body of the man himself, in the flesh, his hands interlocked with ours, even when his memory has already left him. Alzheimer's patients are not corpses—a human fact that we can verify without the benefit of neuroscientific expertise.

Nor is Gazzaniga the pure scientist he claims to be. Consider, for example, how Gazzaniga describes the thirteen-week-old fetus: "It is more like a sea slug, a writhing, reflex-bound hunk of sensory-motor processes that does not respond to anything in a directed, purposeful way. Laying down the infrastructure for a mature brain and possessing a mature brain are two very different states of being." That reference to the "sea slug" gives the game away. Such are not the words of a disinterested scientist seeking the truth, but of a polemicist looking for the best "spin."

Even worse, with his passing reference to "different states of being," Gazzaniga has, without even realizing it, stumbled upon one of the oldest questions in theology and metaphysics. The question of "Being" has perplexed thoughtful men and women at least since the time of Plato, so we're entitled to know on what basis Gazzaniga makes critical distinctions among various "states of being."

Of course, this is not simply a scientific question, and in truth, Gazzaniga's "science" reeks of all sorts of half-baked notions and unexamined value judgments. What Gazzaniga offers is not science but the *religion of science*. Such a religion may have once attracted converts, but who today still believes in that god?