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**T**he Allen Institute for Brain Science in Seattle is currently in the painstaking and tedious process of mapping the brain. All of it.

There have been brain maps from earlier research, some of them dating back to the 19th century. These older topographies of tissue, however, deal with anatomical areas in terms of convolutions and lobes and hemispheres.

Instead, the Allen Brain Atlas is mapping the brain gene by gene. It is an ambitious attempt to describe the entire cortex at the genetic level. Going well beyond a mere comparative cartography of continents and countries, this new Allen project is focusing on acres or hectares.

How? Some have called the process “industrial-strength” or “brute” science. The institute is analyzing thousands upon thousands of frozen slabs of tissue only microns thick, each containing billions of cells. The aim is to determine which snippets of DNA are activated in

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each cell. Using robots that work 24-7, it is producing more than a terabyte of data per day.

In contrast, the 3 billion chemical base pairs that make up human DNA fit in a text file of only three gigabytes. This data took the Human Genome Project, with thousands of scientists, 13 years to complete. “How many of these base pairs,” posits Francis Collins, former director of the Genome Project, “does it take to provide the information for a human being? If we were to read it out loud, without stopping, it would take thirty-one years. We have all that information inside each cell of our body.”<sup>1</sup>

The intention of the Allen Brain Atlas is to produce a universal map of the cellular structure of the normal human brain. But, of course, each brain is unique. So with only a limited supply of human specimens to draw from, the researchers have early on struggled to define what is “normal.” As one perceptive writer phrased it, “Is it normal to smoke

cigarettes? Is it normal not to drink alcohol? What about a cortex of someone who has taken antidepressants? Or spent years in psychoanalysis? Or committed a violent felony? Is anybody normal? How do you standardize the individual?”<sup>2</sup>

Good questions.

Every now and again, we see the flippant bumper sticker: “Why be normal?” More than anything else, this sentiment probably expresses a declaration of nonconformity. It is not so much a comment on quality as it is on a distaste for sameness.

But the concept of “normal” *does* relate to some interesting issues. For example, if some consensus could be arrived at as to what is a normal human brain, its definition would almost certainly relate in some fundamental ways to worldview.

Some evolutionists, for example, may consider normal to be a kind of current standard at which human development has arrived in a progression to something even better in the future. And today’s normal human brain would perhaps be superior to, say, a 15th-century human brain.

A Creationist would likely agree that today’s human brain may be superior to that of 500 years ago, but for other than evolutionary reasons—and certainly *inferior* to that of the pre-Flood human being.

We are told by inspired writing, for example, that antediluvian peo-

ples were giants, more than twice the size of the people during the early part of the 20th century.<sup>3</sup> And, though physical size of the brain isn’t everything, we’re informed that these pre-Flood human beings were *intellectual* giants as well.<sup>4</sup>

Even the Christian who does not recognize the inspiration of Ellen White’s writings could certainly assume that the human mind and body in the 21st century would not measure up to its potential at the very beginning—before sin had six or seven thousand years to diminish it. By now, after millennia of the dehumanizing effects of sin, we could almost wonder whether we’re truly recognizable physically—or intellectually.

Can it still be said that we are truly created in *Imago Dei*? Can it still be said that humanity even approximates what it means to be “normal”?

Thinking in yet another direction, a growing number of evolutionists are concluding that the biological aspects of the human condition have pretty much run their course, arrived at a place in our progressive development at which humanity is ready for the next evolutionary step. They think that the human race is on the cusp of a further adaptation as significant as when they say our ancestors supposedly crawled out of the primordial soup for the first time. It’s just about

time, these transhumanists say, to alter the parameters of the human condition by embracing emerging technologies.

Twenty-first century technology is making available to humankind all new tools of self-improvement such as plastic surgery, cybernetics, steroids, mood-altering and intelligence-enhancing drugs, robotics, genetic engineering. For quite some time, science fiction writers have been exploring the possibilities that these breakthroughs suggest: cyborgs, disembodied brains, and so on. One of the most common themes in these explorations of science fiction is what it means to be human—even basically human.

In a horrifically cosmic sense, Lucifer’s bumper sticker might well have read: “Why be normal?” A central part of his rebellion was a rejection of God’s created normality.

So, today, we find ourselves wondering what *is* normal anymore. And, given that sin has brought us to this point, should we be actively trying to do anything about it? Why not just “go with the flow” till Christ returns to put it all right?

The Tower of Babel Construction Company hoped to use the latest in technology to redefine for their time the meaning of “normal.” This was pretty much a reiteration of Lucifer’s original intention.

In the broken-down, sinful condition in which we find ourselves as

human beings today, however, we must strive ever to be as fully human in God’s likeness as possible. As we are active participants in the Great Controversy, we should do everything we can to improve the human condition and the world we live in. “Whatever you do, do all to the glory of God” (1 Cor. 10:31, NKJV). “Whatever your hand finds to do, do it with your might” (Eccl. 9:10, NKJV). The Christian life is hardly that of a slacker!

Presumably this concept of “all to the glory of God” would include the fullest judicious utilization of available technologies. A Christian is not a neo-Luddite.

But as for any other human endeavor, the aim of science and technology should be “all to the glory of God.” Certainly any effort like that of the Allen Brain Atlas to understand ourselves better should also help us along to a fuller realization of God’s definition of normal.

## REFERENCES

<sup>1</sup> Francis Collins, “Francis Collins, God, and the Human Genome,” in Kelly Monroe Kullberg and Lael Arrington, *A Faith and Culture Devotional* (Grand Rapids, Mich.: Zondervan, 2008), p. 31.

<sup>2</sup> Jonah Lehrer, “The Brain Revealed,” *Wired*, April 2009, p. 118.

<sup>3</sup> See *The Seventh-day Adventist Bible Commentary*, vol. 7, p. 986; *The Great Controversy*, p. 664; *Patriarchs and Prophets*, pp. 90, 112; *Spiritual Gifts*, Book 3, p. 61.

<sup>4</sup> See *The Great Controversy*, p. 664; *Patriarchs and Prophets*, pp. 82, 83.