

C. Hilgetag, a neuroscientist at Jacobs University Bremen, and Helen Barbas, a professor at Boston University, say that the phrenologists may have been on to something. The shape of the brain may be critical to the causes of such mental disorders as schizophrenia and autism.

The cortex of a human fetus starts out smooth, and stays that way for about the first six months of development, according to Hilgetag and Barbas. Fetal neurons send out spindly fibers called axons that become tethered to target neurons in other areas of the cortex. As the cortex expands, the axons tighten up like bungee cords. That's how bulges are formed, as the two parts of the cortex are pulled together. By the time a baby is born, the brain has become characteristically wrinkled.

Animals lower on the evolutionary chain, such as zebra finches and platypuses, have nearly smooth cortices. Large-brained mammals such

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as whales, dogs, and apes have corrugated brains somewhat like those of humans. In *Homo sapiens* the major convolutions are remarkably regular, but the small folds are so diverse that they differ even in identical twins.

The cerebral cortex is crucial to a human's ability to perceive, think, experience emotion, and act. It's what people are talking about when they say "gray matter." There are "clear differences" between the cortical folds of healthy people and those of sufferers from mental disorders such as schizophrenia and

autism, the authors write. But the findings are controversial because there's no uniform pattern to the aberrations. Many scientists now believe that some diseases affect "neural networks" rather than specific areas of the brain.

As with so many other questions involving the brain, scientists are working zealously to understand how neurological diseases with different symptoms might be the result of something that went awry during crucial developmental periods. "The landscape of the brain does correlate with mental function and dysfunction," Hilgetag and Barbas write. Like the earliest archaeologists, today's neuroscientists know they have found something important, but are only beginning to investigate exactly what it is. For the moment, even with advanced imaging methods for measuring brains, experts still cannot distinguish between the cortex of a saint and that of a criminal.

## ARTS & LETTERS

# Postmodern Pews

**THE SOURCE:** "Building for Humans" by Matthew J. Milliner, in *Christian Century*, March 10, 2009.

PARTISANS OF MODERNIST ARCHITECTURE in the mid-20th century didn't mince words, writes Matthew J. Milliner, a doctoral candidate in art history at Princeton, even when the subject was sacred buildings. Gothic churches were dismissed as a futile "fight against the forces of gravity."

Chartres Cathedral was a "sentimental" vestige of the past and St. Peter's Basilica a "wretched failure."

Religious architecture now should communicate a "scientific spirit," wrote one Modernist enthusiast. Churches should forsake architectural façades, showcase new materials produced by industrialization, and be honest about a building's structural needs. Modernism should

rebel against historicism and overblown form, and should no longer pander to the rich.

But Modernist religious architecture was often a failure in the eyes of the average parishioner it was supposed to serve. Its mistake, Milliner says, was to "underestimate the needs of humans who inhabit buildings." In spite of the human love of color and variety, Modernism offered monotonous white planes; in the face of people's appreciation of ornamentation, Modernism preached plainness.

Modernism went from a world-saving mission to one among several furniture options on an Ikea

showroom floor, Harvard sociologist Nathan Glazer wrote in *From a Cause to a Style* (2007). While its simplicity produced “wonderful factories,” it largely failed to inspire great religious architecture. Indeed, Modernism begat some terrible buildings. For example, in Washington, D.C., the congregation of the Third Church of Christ, Scientist is fighting a bitter battle with historic preservationists over the fate of their 1971 Brutalist-style church, which stands only three blocks from the White House. Preservationists have spurred the city to declare it a historic landmark building, but the parishioners have gone to court to overturn the ruling. They want to tear down a structure they consider unsightly, unchristian, and prohibitively expensive to maintain.

Premodern buildings often admirably serve people who worship because their architects were worshipers themselves, according to Philip Bess, head of the graduate school of architecture at Notre



**The Brutalist-style Third Church of Christ, Scientist in Washington, D.C., presents unadorned concrete walls and a projecting bar of bells to the street. The entrance (shown) is at the rear.**

Dame, and author of *Till We Have Built Jerusalem* (2006). Churches and synagogues fail when they kowtow to architectural fashion instead of honoring the beliefs

professed within their walls. Improving Christian architecture, Milliner says, could start with a renewed appreciation of the Christian tradition.

EXCERPT

## Extreme Fans

*One distinctly modern form of obsessive weirdoism is fandom: becoming so devoted to a work of art that you want to augment or even inhabit it. Out of this impulse was born the Klingon Language Institute, the phenomenon of “fan fiction” (unauthorized stories by civilians advancing new plot lines of beloved films and TV series), and also, one might argue, my ever-growing Moby-Dick website, which now includes not only a full annotation but also links to artwork, poems, movies, and even cartoons based on the book. It’s one thing to fixate on your own masterpiece, as Melville*

*did. . . . Many would say it’s something far less worthy to fixate on another person’s masterpiece. But here, too, the distinctions break down, because everything is based on something. Melville himself was a fan, of his friend Nathaniel Hawthorne. After bonding with the author of The Scarlet Letter, he tore up the lighthearted whaling yarn he’d been working on and set to work crafting something deeper. He also borrowed liberally from earlier whaling texts and real-life stories. The result may not have been as daft as a new X-Files episode written by a fan, but it is on the far side of the same emotional continuum—both are powered by the drive to exalt and augment what has come before. And, in so doing, to create something new.*

—MARGARET GUROFF, creator of the website [powermobydick.com](http://powermobydick.com), in *Urbanite* (Dec. 2008)