

All in the cortex: "My DNA made me do it"

by [Martin E. Marty](#) in the [March 11, 2008](#) issue

The medial orbitofrontal cortex has given us much to think about recently. So far as I understand, which is not very far, the medial orbitofrontal cortex (mOFC) helps to explain why the more expensive wine is, the better it tastes. In an era of secular Calvinism, all of human life is predetermined, predestined and biologically fated. Not "the devil made me do it," but "my DNA made me do it"; not "I sinned" but "something in my cell structure committed my body to it."

Cal Tech professor Antonio Rangel and colleagues found that "prices, by themselves, affect activity in an area of the brain that is thought to encode the experienced pleasantness of an experience." While Rangel's drinkers sipped wine, his happy assistants observed on a functional MRI scan (fMRI) that the "neural encoding of the quality of an experience is actually modulated by a variable such as price." We can't rail at conspicuous consumption and other capitalist sins. It's all in the cortex.

Even savvy people cannot help being snookered by the price of wine. Their mOFCs go into action. At one time Australian wines, among the world's best, could not compete with some French or upper-crust California wines, because the cost of producing Australia's is low, and American buyers thus considered them of low quality. So the Australian marketers simply took some of their best and jacked up the prices. The Australian wines took off. Marketers have long known what scientists are telling us about mOFCs. If it costs more, we think it must be better.

We can quickly find corollaries to this wine experience. For example, whenever the adjective *outrageous* gets attached to the price of really horrible contemporary art, gallery owners have found that raising the price helps sell it. We thought that bragging rights were at stake: *we* can afford it and *you* can't. Here science aids our understanding: "We knew the price was inflated, but when we saw the dollar signs we just couldn't help it; our fMRIs will show that we were having a wonderful aesthetic experience."

Nothing this scientifically grounded can be occurring in the world of art and spirits without having analogues in the world of the Spirit. Some years ago, rational-choice theory was in vogue in studying competition among churches. In this theory, churches for which membership was low-priced—easy come, easy go—had trouble attracting and retaining members. But compel people to tithe more and make high demands on them, and they'll be attracted to church.

The Gospels do refer to what Dietrich Bonhoeffer termed “the cost of discipleship.” The German theologian was talking about blood, of course, not money: in a time of persecution disciples might have to pay with their lives. That costly tradition got radically traduced in an era of prosperity gospels: the evangelist raises the price for you, and since you are paying more, the payoff will also be more. Now we have a scientific explanation. The good old measurable, testable mOFC in the brain is doing its job, and you can't help but respond. Remember, “prices, by themselves, affect activity in an area of the brain” which is thought to encode “the experienced pleasantness of an experience.”

Advice to churches: chuck the advisers who talk about stewardship and rational choice. Neuron firings in the brain do it all, and we can't help ourselves. Call this the nonrational-choice theory, and let it get to work. The hymn for the occasion: *Take my will and make it thine; / it shall be no longer mine; / Use my brain, it is thine own, / my mOFC acted alone.*