

Holy therapy: Can a drug do the work of the Spirit?

by [Ted Peters](#) in the [August 9, 2003](#) issue

What if science could demonstrate that original sin is something we inherit from our families either through the genes or our upbringing or both? And if science could show us how we inherit a predisposition toward sin, might science also show us how to heal the soul and harvest fruits of the Spirit? For instance, could the laboratory produce a drug that would do the work of the Holy Spirit?

I will answer these last questions in the affirmative, but in the process I will try to clarify what Christian theology means by original sin and inherited sin. Under the hypothesis of genetic determinism or genetic influence, questions are being asked about biological factors in human behavior. This becomes especially relevant to theology when the behavior in question is either sinful or virtuous.

Let's take a look at a scientific study—we will call it the X chromosome study—that addresses the question of genetic influence in moderating environmental influence on antisocial or criminal behavior. This study examined young boys who were maltreated in their youth (Avshalom Caspi et al., "Role of Genotype in the Cycle of Violence in Maltreated Children," *Science*, August 2, 2002). The researchers asked: why do some male children who are maltreated in their home grow up to develop antisocial behavior traits while others do not?

The assumptions behind the research question are worth noting. First, boys were selected because the researchers were already looking for a factor on the X chromosome which only males carry; they assumed, in other words, that the antisocial behavior in question is a gender-specific phenomenon. Second, the researchers assumed that maltreatment of young boys increases the risk that they will grow up exhibiting antisocial symptoms and being violent offenders—that a social environment of victimization exerts a strong influence toward becoming a victimizer.

The researchers focused on 26-year-old males who had been severely maltreated between the ages of three and 11, and slated them for genetic testing. They

examined the gene on the X chromosome for monoamine oxidase A (MAOA), a gene that governs a neurotransmitter-metabolizing enzyme in the brain. Those young men whose MAOA gene exhibited low expression levels were much more likely to exhibit aggressive antisocial behavior and become incarcerated for violent crimes than those whose gene exhibited a high level of expression. Conversely, the effect of childhood maltreatment on antisocial behavior was significantly weaker among males with high MAOA activity. Moreover, the researchers noted that maltreated males with low MAOA activity were more likely than nonmaltreated males with this genotype to be convicted of a violent crime, a finding that reinforced the environmental assumption identified above. Finally, they concluded that the association between maltreatment and antisocial behavior is conditional, depending on a child's MAOA genotype.

In sum, environmental or social influences are relevant but insufficient to explain antisocial behavior; genotype must be factored in. The DNA is decisive.

Both the beginning assumptions and research conclusions are deterministic in structure. They began with the assumption of environmental determinism—if maltreated, young boys will grow up antisocial. Then they shifted to genetic determinism—gene expression exacerbates or mitigates environmental influence. The net effect of both the assumptions and the conclusion is that some boys are born into situations in which the combination of gene expression and social context heavily determine what kind of person they will be. Do such findings contradict or complement what theologians have traditionally believed?

We could imagine that a modern Pelagian might want to defy the science of the X chromosome study by asserting that we are born morally neutral, that we enter the world and grow up with the capacity to decide equally between right and wrong. Good and evil are equal options standing before a freely deciding human psyche. Assumptions about determinism, either biological or social, would have to be dismissed as compromising this morally neutral anthropology. The theological position that we are born morally neutral will find rough sledding in this scientific environment.

An Augustinian, in contrast, might see such scientific research as partially demonstrating what most Christians have assumed all along: that we emerge from our mother's womb with a self-orientation that makes loving God and loving

neighbor contradictory to our innate predisposition. We are born *homo incurvatus in se*, curved in upon ourselves. It takes an act of divine grace to reorient us toward loving God and loving our neighbor as we would love ourselves. It takes the inspiration of the Holy Spirit to orient our hearts and wills and minds toward expressing the fruits of the Spirit.

This theological perspective is much broader and more sweeping in scope than what appears in the X chromosome study, which does not ask about the total orientation of the human self. It deals with only one segment of human behavior, and a pattern of behavior that applies to some but not all of us. But this restriction does not obviate the value of comparing science and theology. Science is still quite relevant to theological anthropology. If genetic inheritance and social inheritance combine to predispose us to behavior with moral significance, then we can hypothesize that some level of biological and environmental determinism has an effect on everyone's life. Our genes and our family experience provide both opportunity and constraint for the kind of person we will grow up to be.

Although we are focusing here on a predisposition toward sinful behavior, in another setting we might provide a parallel analysis of caring behavior. I believe we can safely assume that favorable genotypes and loving family contexts increase a child's opportunity to grow up with high-minded values and an increased capacity for loving his or her neighbor.

A nuance related to the X chromosome study might be worth pondering here. The young men studied were victims of maltreatment. We might wish to ask: do they love themselves? Does their overwhelming experience of abuse permit the emergence of self-love, or might maltreatment more likely retard the growth of self-worth and leave the child with self-loathing? Might the antisocial behavior in question be an expression of self-hatred rather than a self-love unable to expand to include others? If the Augustinian lens through which sin is interpreted is that sin is too much love for self and not enough love for God or neighbor, then perhaps we need a more subtle analysis of the young men in the X chromosome study. If scripture is right—that we love because God first loved us (1 John 4:19)—then all of us, these young men included, need first to experience love before the capacity to love either self or neighbor can develop. Perhaps we need to experience unconditional love before we can develop the capacity to love others unconditionally. This may be the way grace works toward redemption.

The theological language of original sin creates discordant sounds in the ears of modern people. The concept is unwelcome, even shunned. Perhaps this shunning is due to the historical connotations of the term “original.” The picture painted by Augustine is that in the Garden of Eden Adam and Eve committed the first sin, the original sin; and through procreation they have passed this fallen state on to each subsequent generation. We all inherit Adam’s sin; we all participate in Adam’s fall.

This prompts two contemporary objections. First, modern notions of justice limit responsibility to our own sins; we should not be held accountable for someone else’s action. Second, the Augustinian perspective is apparently no longer acceptable in a Darwinian era. The theory of evolution has no room for a myth of origin that places the human race in a prior state of grace. Rather than a fall from a pristine state, modern science sees the human race arising from a long struggle characterized by natural selection and survival of the fittest.

However, the concept of “original” in original sin does not require a history that includes a past Garden of Eden with a now lost perfection; nor does it require blaming Adam and Eve for our own moral condition. Rather, it is sufficient for original to refer to the origin of each one of us. Our own individual origin is characterized by genetic conditioning and family-context conditioning. We are born with opportunities and constraints over which we had no original control, and some of this conditioning influences our predisposition to behavior toward others.

The theological term “inherited sin” is relevant here. The Augsburg Confession in Article III says that all of us who are conceived according to nature are born into sin, that we are “full of evil lust and inclinations” from our mother’s wombs onward, and that we are unable by nature to have true fear of God and true faith in God. This state is referred to as an “inborn sickness and hereditary sin (Erbsunde).” John Calvin similarly interpreted the concept of original sin so that what we inherit becomes prominent.

When we are born we find ourselves already conditioned and predisposed toward a life that is alienated from God’s will and alienated from faith in God. Although the presumption was that this inheritance is physical—passed on through conception and birth—the point is that we begin our life of moral responsibility already conditioned by factors beyond our control.

It was appropriate, then, for early 20th-century Social Gospel theologians like Walter Rauschenbusch to observe how prejudice and social discrimination are passed from one generation to the next, and it is consistent for theologians today to incorporate observations about social inheritance—what liberation theologians and feminist theologians call “social location” or “systemic evil”—into our understanding of the human condition. Whether biological or social, whether innate or environmental, we begin our morally responsible life with a specific inheritance and a predisposition toward behaving in specific ways.

Suppose a clever researcher could invent a pharmaceutical capable of regulating the expression of monoamine oxidase A, with the result that this genetic therapy strengthens the influence of genetic determinants over environmental determinants. Suppose also that if the young boys subjected to family abuse could have access to this MAOA therapy so that when attaining adulthood they would possess a greater sense of social responsibility exercised through greater self-control. Theologically speaking, should we consider this to be a fruit of the Spirit?

A *Time* cover story, “How Your Mind Can Heal Your Body” (January 20), proclaimed extraordinary benefits from antidepressant drugs such as Prozac, Paxil and Zoloft. Monoamine oxidase inhibitors such as Nardil and Marplan, despite dangerous side effects, may increase our control over genetic expression. Such chemical therapies have demonstrated potential for enabling many people to function with increased emotional equanimity. Should we consider such therapies also the work of the Holy Spirit?

Let me offer a highly qualified affirmative answer. Augustine sorted out the dialectic of sin and grace with a movement from bondage to sin to liberty from sin. “He who is the servant of sin is free to sin,” he said. “And, hence, he will not be free to do right, until, being freed from sin, he shall begin to be the servant of righteousness. And this is true liberty” (*Enchiridion*, XXX). If we think of the combination of genetic predisposition and maltreatment in youth as a form of bondage, might we think of medical therapy that readies a person for increased self-control a form of liberation?

I am trying to avoid defining the question in terms of metaphysics. If we assume that the distinction between body and soul or the conflict between flesh and spirit are metaphysical divisions, then the situation is conceptually hopeless. However, if we presume that a person is a psychosomatic unity inclusive of both body and soul,

then their interaction at the level of the human self becomes accessible. If we understand flesh and spirit as forces (Gal. 5:19-22) at war with both body and soul, then we will not equate flesh with body or spirit with soul.

One of the fruits of the Spirit is “self-control” (Gal. 5:22). No matter what genotype we are born with or what family pattern of rearing we experience, self-control remains an achievement that each self must attain in the maturing process. Self-control means, literally, that the self assumes a level of control previously under the hegemony of bodily cravings and social influences. If a pharmaceutical could enhance one’s capacity for self-control, such therapy could very well be thought of as a spiritual force. That this therapy would work on the body does not make it any less spiritual. Nor does it make medical therapy anything less than an expression of God’s grace in the life of a person who benefits from it.

Theologians need not worry that medicine will put them out of a job. The struggle between flesh and spirit is a big one; winning one little battle over genetic expression of MAOA does not in itself indicate that we are ready to declare total victory in the war against the flesh. The Spirit’s orchard covers many acres, and there are many more fruits of empowering grace the Holy Spirit can cultivate through either our body or our soul.