

The Implications of a Genetic Defense

Zach Smith

In the early days of mankind, so the story goes, there lived Epimetheus and his wife, Pandora. They were given a box by a disguised Zeus, with specific instructions not to open it. Pandora's curiosity became too much for her to handle, and eventually she opened the box to see what was inside. Out of the box flew all manner of evil sprites, such as Envy, Jealousy, Disease, and Famine, which entered the world to plague humankind.

This story from Greek mythology gave rise to the widely used phrase, "Pandora's box," referring to something that, when unleashed, brings about more harm than good. With the completion of the Human Genome Project, geneticists have opened their own Pandora's box—especially in the field of law. The law of the United States of America is based loosely on the English common-law system, which, in turn, was based upon theological principles. With the recent advances in modern genetics, however, it is possible that all legal bases will crumble in the face of what is coming to be known as "the genetic defense."

For example, some are arguing for the existence of a "gay gene." But if such a gene (or genes) did exist, how would that affect our criminal-justice system? As scientists seem to be alleging a genetic cause for practically every imaginable human action, lawyers have begun to turn to the field of behavioral genetics, in hopes of defending clients' actions. Behavioral genetics says that our actions are linked inextricably to our genetic makeup. Instead of merely determining our hair color or bone structure, some geneticists argue that our DNA determines whether we will be heterosexual or homosexual, benevolent or malevolent, or even whether we choose to rape or not. Randy Thornhill and Craig Palmer argued in their 2000 book, *Rape: Biological Bases of Sexual Coercion*, that rape is a biological holdover from our primate ancestors. If assertions such as those made by Thornhill and Palmer are taken seriously, and rape (to choose just one example) is considered as nothing more than a vestige of our phylogeny that is encoded in our genes (and thus beyond our control), we should be prepared



for the consequences, and expect to see behavioral genetics used as a defense in an increasing fashion in courts of law.

It is only a matter of time before defense lawyers are able to use genetic research to invalidate completely the legal system, by arguing that people no longer are responsible for their actions. If such effects as murder, rape, sodomy, etc. are designated as "genetically determined," then who could be prosecuted for such "crimes"? In tune with the old adage, "The devil made me do it," geneticists will have created their own version: "My genes made me do it." Harvard psychologist Steven Pinker (formerly at MIT) contended in his 2002 volume, *The Blank Slate: The Modern Denial of Human Nature*, that behavior and ideas are **not** formed by experiences (as argued by John Locke and his concept of *tabula rasa*, "blank slate"), but by our genetic coding. Thus, our desire to do (or not to do) certain things is innate in our genetic makeup.

The problem with this approach to human behavior is that there is no evidence to support it. Scientific data have yet to confirm that one's actions are controlled by one's genes. If, however, scientists side on the position of "my genes made me do it," then our laws eventually will be unenforceable. As with the case of the so-called "gay gene," activists might claim that other behavior also may be explained by specific genes. When this happens, it will wreak havoc on our criminal-justice system. Laws rest upon the supposition that people are responsible for their actions and behavior patterns. Geneticists have opened their own Pandora's box, and in so doing, they have released the twin sprites of Unaccountability and Anarchy.

There was more to the Greek myth of Pandora and the box. As she sat lamenting the sad fate that she had released upon the world, Pandora heard a small, sweet voice coming from the box. When she opened it again, out came the sister of the evil sprites—Hope. The decoding of the genetic makeup of humans has brought hope to those searching for the cures to deadly diseases. With that hope, have come all the problems potentially related to the idea of a "genetic defense."



“WHAT’S THAT YOU SAID?”

by Matthew Vanhorn

Many people recognize “Can you hear me now?” as a catch phrase made popular by commercial broadcasts of the Verizon® Wireless phone company. Hearing a response via a cellular phone requires much more than good wireless phone service, however. It requires the most complex auditory receptors on Earth—the ear. Even though we have invented amazing technologies, we have not been able to match the receptive design of the ear.

The ear is divided into three parts: the outer ear, the middle ear, and the inner ear. The process of hearing begins with vibrations in the air. These vibrations are captured and enhanced by the outer (external) ear, which is comprised of two parts—the pinna and the external auditory canal. Part of the external ear, called the concha, intensifies the sound waves. The intensified sound next enters the external auditory canal, which is the area from the external ear to the ear drum. The ear drum is so sensitive that it can perceive vibrations on even a molecular level. A faint high note may cause the eardrum to vibrate back and forth by less than the diameter of a single hydrogen atom. Still, this vibration will be transformed into nerve impulses within the inner ear, and will be registered in the brain. Even among the lowest notes, the inner ear will detect a motion of the eardrum that amounts to less than the wavelength of visible light. An amazing aspect of the eardrum is that after recognizing the tiniest vibrations, it can return quickly to its regular state within five thousandths of a second. This recovery rate is extremely important; if the eardrum could not return to its regular state so quickly, every sound entering the ear would echo. The sound waves are amplified by the eardrum, and they then proceed to the middle ear region.

The middle ear has the smallest bones in the human body: the malleus, incus, and stapes (a.k.a., the hammer, stirrup, and anvil). The middle ear contains a sort of buffer that reduces exceedingly high levels of sound. This buffer is provided by two of the body’s smallest muscles, which control the malleus, incus, and stapes. These involuntary muscles contract, thus reducing the intensity of the vibration of loud noises before they reach the delicate inner ear. As a result, humans are able to hear shockingly loud sounds at a moderate volume.

The middle ear must maintain a vital equilibrium. The air pressure inside the middle ear must be the same as the pressure beyond the ear drum (the atmospheric pressure). Thus, the ear has been equipped with a three-and-a-half-centimeter-long canal. This canal, known as the Eustachian tube, is a hollow tube that extends from the inner ear to the oral cavity, and allows a controlled exchange of air between the middle ear and the outside environment. Another interesting feature of the auditory canal is the wax that it constantly secretes. The ear contains about 4,000 wax-producing glands. This wax, which contains antiseptic properties, keeps bacteria and insects out. The cells on the surface of the auditory canal are aligned in a spiral form directed toward the outside, ensuring that the wax always flows toward the outside of the ear.

All of these processes occur within the outer and middle ear, and control only the mechanical portion of sound waves. These mechanical motions are turned into sound in the region known as the inner ear. The inner ear contains the most critical part of the hearing mechanism—the organ of Corti, located in the snail-shaped cochlea. The cochlea is an organ of the inner ear that is filled with a liquid called perilymph. The winding interior of the cochlea is studded with thousands of hair-like structures called stereocilia. When the middle ear receives signals from the eardrum, such as a ringing telephone, the perilymph fluid transmits the signal to the auditory nerve and the brain.

The vibrations in the liquid of the cochlea cause waves. The inner walls of the cochlea are lined with stereocilia, which move in perfect synchronization with the motion of the perilymph. When the stereocilia sense a vibration, they move and push each other in sequence, like dominos falling in a line. These tiny hairs vibrate at incredible speeds—up to 20,000 times per second! This motion opens channels in the membranes of the cells, allowing the flow of ions into the cells. When the stereocilia move in the opposite direction, these channels close again.

The perpetual motion of the stereocilia produces electrical signals, which are forwarded to the brain by the auditory nerve.

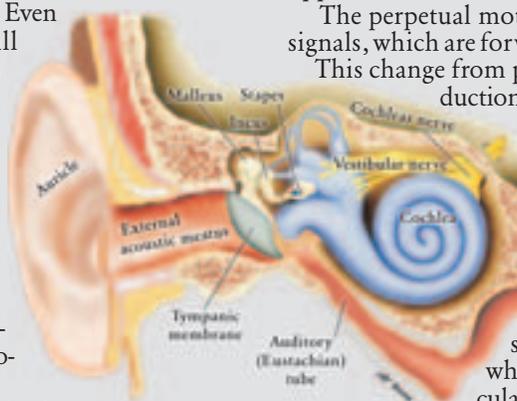
This change from pressure to electrical waves is called transduction. The brain now interprets the signals, and assesses the pitch, volume, and meaning of the sounds. Whereas a grand piano has 240 strings and 88 keys, the inner ear has 24,000 “strings” and 20,000 “keys,” which enable us to hear an incredible variety and range of sounds.

The inner ear actually can be thought of as two organs: the cochlea, which assists in hearing, and the semicircular canals, which serve as balance organs. The semicircular canals detect acceleration in the three perpendicular planes. They utilize hair cells similar to the stereocilia of the organ of Corti. These hair cells detect movements of the fluid in the canals caused by angular acceleration about an axis perpendicular to the plane of the canal. Tiny floating particles assist in the process by stimulating the hair cells as they move within the fluid. These signals of motion then are transmitted to the brain via nerve impulses, and are processed there by the cerebellum.

The fact that all parts of the ear are necessary to produce hearing should be obvious when one considers the complex chain of mechanical and electrochemical processes involved. In order for the ear to function, each component must be in perfect order. If any one of these mechanisms is taken away, hearing fails. Additionally the organs of the inner ear provide balance, which allows humans to stand upright. Could such amazing complexity arise by chance? Hardly. “The hearing ear and the seeing eye, The Lord has made both of them” (Proverbs 20:12).

REFERENCES

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Q Does Leviticus 18:22 condemn all homosexual activity, or certain acts?

A It has been argued by certain homosexuals, and those sympathetic to their cause, that Leviticus 18:22 does not teach that **all** homosexual acts are wrong. Supposedly, this verse (“You shall not lie with a male as with a woman. It is an abomination.”) “refers to the male’s assuming the passive role in anal intercourse, which was held as an abomination because of taking on the inferior status of women. Apparently it does not view the ‘active’ role in anal intercourse as an abomination, nor other homosexual acts” (http://www.sdawf.org/gaysda/biblestudies/old_testament.htm). As sickening as it is to respond to such a grotesque interpretation of Scripture, we are compelled to answer the homosexuals’ ever-growing perversions of God’s Word, including this one.

First, nowhere in Scripture is a particular posture commanded or forbidden for a husband and wife while they are engaged in sexual intercourse. The Bible’s only emphasis on legitimate sexual relations is that it always take place between a scripturally married husband and wife (1 Corinthians 7:2; cf. Matthew 19:1-9). God **never** stipulated specific postures in order for sexual relations between a husband and wife to be appropriate. For the homosexually tol-

erant interpretation of Leviticus 18:22 to begin to have any validity whatsoever, it must be proved that God placed emphasis on postures during intercourse. Such cannot be done.

Second, the homosexual’s explanation of this verse also is flawed in that it suggests that while the “active” person involved in anal intercourse is not sinning, the one “assuming the passive role” is doing something detestable. Thus, allegedly while two men are engaged in sexual intercourse, one may be doing something perfectly honorable, while the other is doing something despicable. What kind of nonsense is this? According to God, intercourse is either **legitimate** for both people (1 Corinthians 7:2; Hebrews 13:4), or **illegitimate** for both people (Matthew 19:9). Scripture never indicates that sexual relations between two men might be **moral** for one of the participants, but **immoral** for the other one.

Those who interpret the Bible in such a way are doing just the opposite of what Paul stated that he did (and that God wants from us all): They have **not** “renounced the hidden things of shame,” but are “walking in craftiness” and are “handling the word of God deceitfully” (2 Corinthians 4:2). They are unstable people who twist the Scriptures “to their own destruction” (2 Peter 3:16).

Eric Lyons

IN THE NEWS

The first amendment of the United States Constitution states:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble....

However, religion and free speech are finding themselves on the defense as homosexual activists do all they can to stifle preachers who would speak out against the sin of homosexuality. For the first time in history, preachers in Pennsylvania are considering liability insurance to protect themselves against prosecution for speaking out against homosexuality in the pulpit—an action they are taking in reaction to Pennsylvania’s recent addition of “sexual orientation” to the state’s hate crime laws.

On June 30, 2004, the Traditional Values Coalition noted:

In Canada, for example, a recently-passed hate crimes law (C-250) criminalizes speech if it incites hatred against any identifiable group. This law added “sexual orientation” to its hate crime law and left this term undefined.

In Sweden, Pentecostal preacher Ake Green was sentenced to a month in prison after being found guilty of having offended homosexuals

in a sermon, according to Ecumenical News International. In a 2003 sermon, Green had described homosexuality as “abnormal, a horrible cancerous tumor in the body of society.”

At some point, people must ask: what happens if a preacher offends a polygamist, pedophile, adulterer, murderer, rapist, or an individual who participates in acts of bestiality. Should the preacher also be punished (or jailed) for such “hate speech?” At what point will Americans realize that no matter how much society and the media may portray an act as simply an “alternative lifestyle,” that by no means makes it acceptable in the eyes of our Creator.

The time has come for faithful Christians to realize this issue is not about compassion or hate speech. The civil rights of all American are the same. The real issue is about a behavior that God found so vile, He destroyed entire cities of people who engaged in it.

REFERENCES

Traditional Values Coalition (2004), “Pennsylvania Pastors Seek Liability Insurance Against Hate Speech Prosecution,” [On-line], URL: <http://www.traditionalvalues.org/modules.php?name=News&file=article&sid=1715>.

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