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A blog by Jason Collins on economics, evolution and those areas in between

Crime and biology

by JASON on 22 JUNE 2011

The July/August 2011 edition of the Atlantic has a [great article](#) by David Eagleman on the implications of advances in brain science on the way we approach crime (HT: [Jeffrey Horn](#)). Eagleman argues that these advances will require a reshaping of the criminal justice system to reflect the declining gap between whether actions can be attributed to biology and free will. Eagleman writes:

Technology will continue to improve, and as we grow better at measuring problems in the brain, the fault line will drift into the territory of people we currently hold fully accountable for their crimes. Problems that are now opaque will open up to examination by new techniques, and we may someday find that many types of bad behavior have a basic biological explanation—as has happened with schizophrenia, epilepsy, depression, and mania.

....

The crux of the problem is that it no longer makes sense to ask, “To what extent was it his *biology*, and to what extent was it *him*?” because we now understand that there is no meaningful distinction between a person’s biology and his decision-making. They are inseparable.

Eagleman’s first response to this problem is to move away from blameworthiness. If you cannot distinguish the extent of volition (if it can even be argued to exist), it is hard to blame. As a result, Eagleman suggests that justice will need to become more forward-looking:

Instead of debating culpability, we should focus on what to do, *moving forward*, with an accused lawbreaker. I suggest that the legal system *has* to become forward-looking, primarily because it can no longer hope to do otherwise. As science complicates the question of culpability, our legal and social policy will need to shift toward a different set of questions: How is a person likely to behave in the future? Are criminal actions likely to be repeated? Can this person be helped toward pro-social behavior? How can incentives be realistically structured to deter crime?

...

Deeper biological insight into behavior will foster a better understanding of recidivism—and this offers a basis for empirically based sentencing. Some people will need to be taken off the streets for a longer time (even a lifetime), because their likelihood of reoffense is high; others, because of differences in neural constitution, are less likely to recidivate, and so can be released sooner.

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While I agree the criminal justice system should ask what the law-breaker is likely to do in the future, it cannot desert the look in the rearview mirror. If you wish the justice system to offer an incentive to not commit crimes, it needs to act retrospectively or the threat of punishment will not be credible. If people have a biological propensity to commit a crime, you may need to make these incentives even stronger (Steven Pinker discusses this argument in [The Blank Slate](#)).

To make his forward-looking approach work, Eagleman suggests that the courts use statistically based sentencing. Statistical analysis can be used to find out which factors have the highest link to re-offending – and the evidence suggests that this is more accurate than leaving it to judges. I [suggested this recently](#) in response to the finding that the timing of lunch breaks in Israeli courts. Human judgement is a primary weakness in the criminal justice system. However, there will need to be a component of the algorithm that provides a certain, strong punishment that potential criminals can take into account.

While Eagleman’s article is thorough, there is one biological element missing from his analysis – the dynamic effects. Incarceration removes young men from the mating market during their mating prime. As the propensity to commit crime is heritable, the removal of criminals from the mating market will reduce the frequency of the genes associated with crime in the next generation. As Eagleman notes:

[I]f you are a carrier of a particular set of genes, the probability that you will commit a violent crime is four times as high as it would be if you lacked those genes. You’re three times as likely to commit robbery, five times as likely to commit aggravated assault, eight times as likely to be arrested for murder, and 13 times as likely to be arrested for a sexual offense. The overwhelming majority of prisoners carry these genes; 98.1 percent of death-row inmates do.

Instead of worrying about how to control the biologically impulsive, incarceration can simply cut their prevalence in the future.

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John Thacker

It does seem to me that a natural consequence of moving away from culpability and blameworthiness and becoming more forward-looking is to accept punishing people *before* they commit any crime, simply because they are likely to commit one. There is no logical reason, under his framework, for restricting his insights to proper punishment and sentencing after the fact. Take this sentence that you quote:

"Some people will need to be taken off the streets for a longer time (even a lifetime), because their likelihood of reoffense is high."

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What's the logical need for the prefix "re" in that sentence? Why not simply take people off the streets for a longer time or a lifetime before they commit an offense at all, simply because their likelihood of offense is high?

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The logical reason is a belief in free will, and in culpability. Far from assuming that a declining belief in free will and culpability will lead us to be more lenient with criminals, I fear it will cause us to punish people before they have done anything at all. (That's not even getting into the questions of potential abuse; at the least, it's not inconceivable that individual genetic markers we discover first are more common in one ethnic group or another, because of in-group mating, and thus lead to a de facto ethnic or racial discrimination.)

05/22/2011 10:04 PM

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brian

@John Thacker

There is logic in differentiating between those who have the particular genes who have no prior offenses and those that do, namely the presence of additional information. Suppose instead the discussion was about a genetic illness. A person may carry specific genes that make them more likely to develop a genetic illness, however there is little reason for a doctor to treat for said illness until symptoms arise.

05/22/2011 11:22 PM

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Faze

What if prison is not a punishment, but a preference? The simple rules and brutal hierarchy of prison life may appeal to simple, brutal men. The absence of responsibilities or expectations may appeal to others. Some men may find the "straight" world humiliating, emasculating, and alarmingly crowded with signs and languages they can't decode. These desperate, irritable souls might engage in patterns of behavior that are likely to put them in the way of imprisonment. They fight, they steal, they take or sell drugs -- all highly volitional behaviors. They ultimately wind up behind bars. They are not happy in prison, but they enjoy a grim sort of comfort.

05/23/2011 05:28 AM

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Jason Collins

Clear, long and certain prison offences would reduce the number of crimes they need to commit to achieve their objective. There might also be some people who [seek to go to prison](#) for medical care, food and shelter - but I don't think that this is a particularly successful or popular strategy.

06/23/2011 03:34 PM in reply to Faze

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bubba

"There is no logical reason, under his framework, for restricting his insights to proper punishment and sentencing after the fact."

It's not just potential criminal traits on their own. It's potential criminal traits minus restraint.

If you're getting beat to death in an alley by particularly scary individuals the type of man most likely to come to your aid will be like that, high in some criminal tendencies but with even higher levels of restraint.

05/22/2011 09:59 PM

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