'Rape gene'? Law and Order SVU episode muddies genetic literacy waters

The teaser for the March 22, 2017 episode of *Law and Order: Special Victims Unit* was tantalizing: *"An investigation hits a nerve with Benson when a suspect claims his genetic makeup causes him to commit rape."*

Lieutenant <u>Olivia Benson</u> is a child of rape. Two seasons ago, she adopted Noah, infant son of a sex slave who'd died of an overdose at the end of 2013 and the man who had enslaved her. Noah came to SVU's attention when he showed up in child porn. Clearly, Olivia has some heavy baggage.

The episode is called "<u>Genes</u>," and so with high expectations for a new take on this old idea — perhaps embracing genomes — I tuned in. Would the new narrative implicate a <u>gene</u> sending testosterone into overdrive? Or would it haul out the <u>monoamine oxidase A story</u>? Perhaps it would evoke the extra Y chromosome, which had inspired the 1994 *Law and Order* episode "*Born Bad*," in which a 14-year-old blamed the beating death of a friend on his extra Y. (Tabitha Powledge wrote about such "warrior genes" <u>here</u> a few months ago.)

Alas, genetic specifics in the new episode were not to be.

Although the episode goes out of its way to repeatedly state that no, a gene does not predispose someone to rape, the last 30 seconds show a flicker of uncertainty in Olivia's eyes as she gazes at her young son.

The set-up

The story opens with a guy aggressively flirting with a pretty young bartender. He accosts her as she's leaving, but it's too soon in the episode for him to be the perp. Instead, a guy follows her to her car, shoves her in, and does the deed – and afterward he cries and says he did it because he got a gene from his father, a rapist.

Olivia and the gang soon find the perp through a familial DNA <u>search</u>. Two of the crew go to Sing Sing and lie to an inmate that his family may be in danger, and so the prisoner gives up his brother's name. But the arrest isn't violent – Nick readily admits that he raped the bartender, Jessica, because he has "the rape gene."

It turns out that Nick attends a minister-led "rape support group" where he can commiserate with others unfortunate enough to have inherited the evil rape gene, including a notorious serial rapist. Meanwhile, the folks at the police station haven't had time to research whether a gene can make someone rape. Instead, Olivia talks to her psychiatrist about her fear for herself and her young son because they are both children of rape. The shrink, apparently an expert in genetics, assures her that no genes promote such violent behavior.

genes

Image not found or type unknown Law & Order: SVU — "Genes" — Pictured: Dalton Harrod as Will Stein — (Photo by: Michael Parmelee/NBC)

Armed with this new knowledge, Olivia assures Jessica that there is no rape gene. At trial the dubious minister, who got his degree online in 2 weeks, reiterates the *"a gene made me do it"* mantra. Then towards the end of the episode, another young man from the support group, Will, hightails it up to the rooftop, about to fling himself off because he inherited the rape gene from his dad. Fortunately Olivia appears at the last minute, gives a speech on genetics, and her colleague grabs and saves the poor, confused Will.

Olivia's speech is nice, but then the episode garbles that message by ending on a highly disturbing note. Apparently young Noah was sent home from preschool with a few scratches from an altercation in the sandbox. Olivia gazes at him, knowingly. Is this the first sign of aggression from his rabid rapist biological father? Did beautiful little Noah inherit a rape gene?

XYY revisited

The scene with Noah flashed me right back to Michael J. Fox's character in "Back to the Future," Marty McFly, spying his future criminal uncle behind the bars of a playpen.

A famous true tale in human genetics, that of XYY syndrome, remains the standard in revealing the consequences of too easily pinning a behavior onto a gene or chromosome variant.

The story began in 1961, when a tall, healthy man, known for his aggressive behavior, had a chromosome check after fathering a child with Down syndrome and an extra Y chromosome turned up. The case was published in 1962, the first report of the anomaly, and soon other cases of aggressive men with the extra genetic baggage trickled in.

In 1965, Patricia Jacobs and colleagues, from Western General Hospital in Edinburgh, published a letterto <u>Nature</u>. They reported that among 197 inmates at Carstairs, a nearby high-security prison, seven oftwelve men with unusual chromosomes had an extra Y. The title of the paper, *"Aggressive Behaviour, Mental Sub-normality and the XYY Male,"* would set the stage for the misunderstanding of genetics that was to come and, judging from the recent *Law and Order* episode, persist.

If you look hard for something chances are you can find it, and sure enough more cases of "Jacobs syndrome" were found at other institutions. "*Congenital Criminals*" festooned the cover of the May 18, 1970 *Newsweek*, blaming such behavior on the extra Y chromosome. Having an extra Y became a legal defense for committing a violent crime. The dire prediction led noted geneticist Bentley Glass, also in 1970, to proclaim that women carrying XYY fetuses should be allowed, in that post-amniocentesis but pre-Roe v. Wade time, to abort them. For the sake of society!

Accusations flew. <u>Richard Speck</u>, who famously killed 8 student nurses in Chicago in the summer of 1966, was deemed an extra Y, until tests showed he was just an ordinary, if evil, XY.

speck

Image not found or type unknown Richard Speck

A biochemist, Mary Telfer, was one of the many who blamed Speck's behavior on an extra chromosome. She wrote in "*Are some criminals born that way?*" in *Think Magazine*, from the Elwyn Institute in Pennsylvania, of a typical XYY man, "He is ... unusually tall, and somewhat retarded, but appears to be highly, perhaps too highly, sexually motivated." She pointed out that geneticists had finally come on board with a fact that forensic psychiatrists had long known, which might explain why Olivia Benson would, decades later, consult her shrink and not a geneticist.

People love to have something concrete on which to pin blame, and so with this type of hype, it isn't surprising that in the early 1970s, newborn screens for XYY began in hospital nurseries in England, Canada, Denmark, and Boston. At the same time, social workers and psychologists visited the homes of

such doomed boys to offer "anticipatory guidance" to the anxious parents on how to tame their toddling future rapists. Fortunately by 1974, geneticists and others halted the program, pointing out that predicting future violent behavior in boys on the basis of a few statistical studies was inviting self-fulfilling prophecy.

So what does an extra Y actually do? One male in 1,000 males has it, and most have no clue. Why would they? Intelligence, testosterone levels, aggression, sexual development, and fertility are normal. "Symptoms" in most instances are great height, acne, and perhaps difficulties with speech and understanding language.

Yet findings of increased prevalence of XYY among mental-penal institution populations continues. But the association may be more psychological than biological: large body size early in life may lead teachers, employers, parents, and others to expect more of these people, and a few XYY individuals may respond with aggression. The Y, in fact, is a very puny excuse for a chromosome, as I've written <u>here</u>.

Genetic determinism

The *Law and Order SVU* episode never named a gene or chromosome, didn't tap at all into the rich roots of behavioral genetics. Note to TV writers: If you're going to open a can of worms about biology, at least name the species.

But the plot succeeds because it ricochets back to the supposedly disproven premise – something inherited might cause violent behavior after all. And that's a dangerous idea in this time when we can go far beyond visualizing chromosomes and detecting a few mutations. We can carry our genome sequences on our smartphones, use genetics to select dates and mates, and even predict the traits of our children.

That a "gene" can cause a man to rape a woman epitomizes genetic determinism, the idea, the excuse, that we are our genes. *We are not!* Social responsibility does not lie in our DNA.

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For more background on the Genetic Literacy Project, read <u>GLP</u> on Wikipedia.