

# Blame It on Teletubbies

Cornell economists claim to have linked autism to tots' watching TV, but the real picture is much fuzzier

By CLAUDIA WALLIS

WHO WOULDN'T LOVE AN EASY EXPLANATION for autism, the heartbreaking brain disorder whose rates have been rising sharply and mysteriously over the past 30 years? History has served up many possibilities, beginning with a now discredited theory put forward by psychologist Bruno Bettelheim, who famously attributed the condition to uncaring "refrigerator moms." Today autism is thought to involve a genetic vulnerability that's triggered by an unknown X factor, or factors, in the environment. Recent speculation has focused on pesticides, childhood vaccines and thimerosal, a mercury-based compound that until recently was used to preserve vaccines.

The latest candidate? Television. Author Gregg Easterbrook stirred the blogosphere last week with an article on *Slate* provocatively titled "TV Really Might Cause Autism." The piece cited an as yet unpublished study from Cornell University, although not from its medical school. Economist Michael Waldman, of Cornell's Johnson Graduate School of Management, got to thinking that TV watching—already vaguely associated with ADHD—just might be the culprit that tips vulnerable toddlers into autism. That there was no medical research to support the idea didn't faze him. Nor was he deterred by the fact that there are no reliable large-scale data on the viewing habits of kids ages 1 to 3—the period when symptoms of autism are typically identified.

So he and two fellow economists turned instead to what most scientists would consider wildly indirect measures: cable-subscription data (reasoning that as more houses were wired for cable, more young kids were watching) and rainfall patterns (other research has correlated TV viewing with rainy weather). Lo and behold,

they found that reported autism cases within certain counties in California and Pennsylvania rose at rates that closely tracked cable subscriptions, rising most rapidly in counties with the fastest-growing cable service. The same was true of autism and rainfall patterns in California, Pennsylvania and Washington State. Their oddly definitive conclusions: "Approximately 17% of the

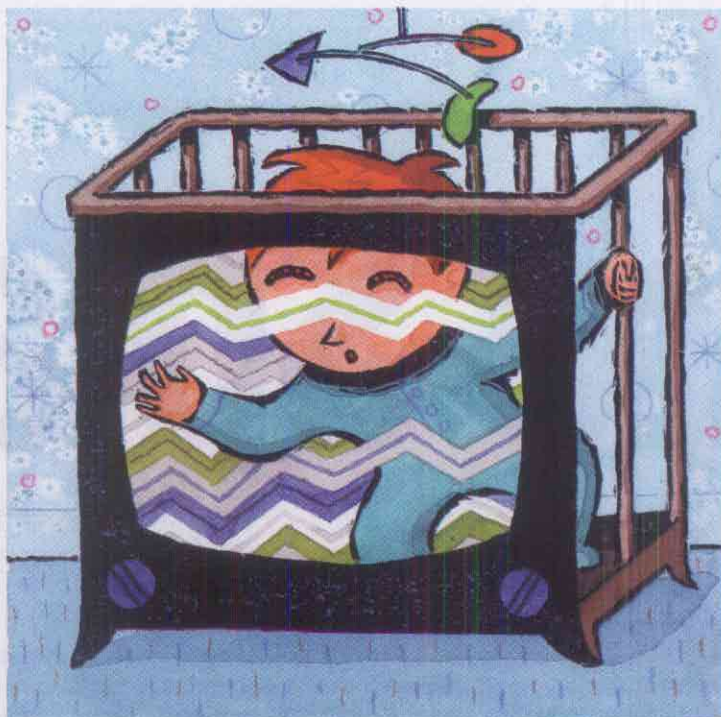


ILLUSTRATION FOR TIME BY ADAM MACAULEY

**IN 1970 THE ESTIMATED  
INCIDENCE OF AUTISM  
WAS 1 IN 2,500. TODAY  
IT'S 1 IN 170**

growth in autism in California and Pennsylvania during the 1970s and 1980s was due to the growth of cable television," and "just under 40% of autism diagnoses in the three states studied is the result of television watching due to precipitation."

Result of? Due to? Critics were quick to ask how the researchers could impute causality when no actual TV watching was ever measured. "The standard interpreta-

tion of this type of analysis is that this is cause and effect," Waldman insists, adding that the 67-page study has been read by "half a dozen top-notch health economists."

Could there be something to this strange piece of statistical derring-do? It's not impossible, but it would take a lot more research to tease out its true significance. Meanwhile, it's hard to say just what those correlations measure. "How do you know, for instance, that it's not mold or mildew in the counties that have a lot of rain?" says Vanderbilt University geneticist Pat Levitt. How do you know, for that matter, that as counties get more cable access, they don't also get more pediatricians scanning for autism? Easterbrook, although intrigued by the study, concedes that it could be indoor-air quality rather than television that exerts an influence. Moreover, says Drexel University epidemiologist Craig Newschaffer: "They ignore the reasonable body of evidence that suggests that the pathologic process behind autism probably starts in the womb."

The week also brought a more definitive—though less splashy—finding on the causes of autism, published in the *Proceedings of the National Academy of Science*. A team led by Vanderbilt's Levitt found that a fairly common gene variation—one that's present in 47% of the population—is associated with an increased risk of autism. People with two copies of the gene have twice the average risk of autism. Those with one copy face a slightly increased risk. The gene is intriguing because it codes for a protein that's active not only in the brain—the organ most affected by autism—but also in the immune system and the gastrointestinal tract, both of which can function poorly in many people with autism.

As with cancer, there are probably many routes to autism, involving diverse combinations of genes and noxious influences. Could *Teletubbies* be one of them? Conceivably, but more likely the trouble starts way before TV watching begins. —*With reporting by Alice Park/New York*

A version of this piece was one of our most e-mailed stories last week. Check out more by Claudia Wallis on autism on [time.com](http://time.com)