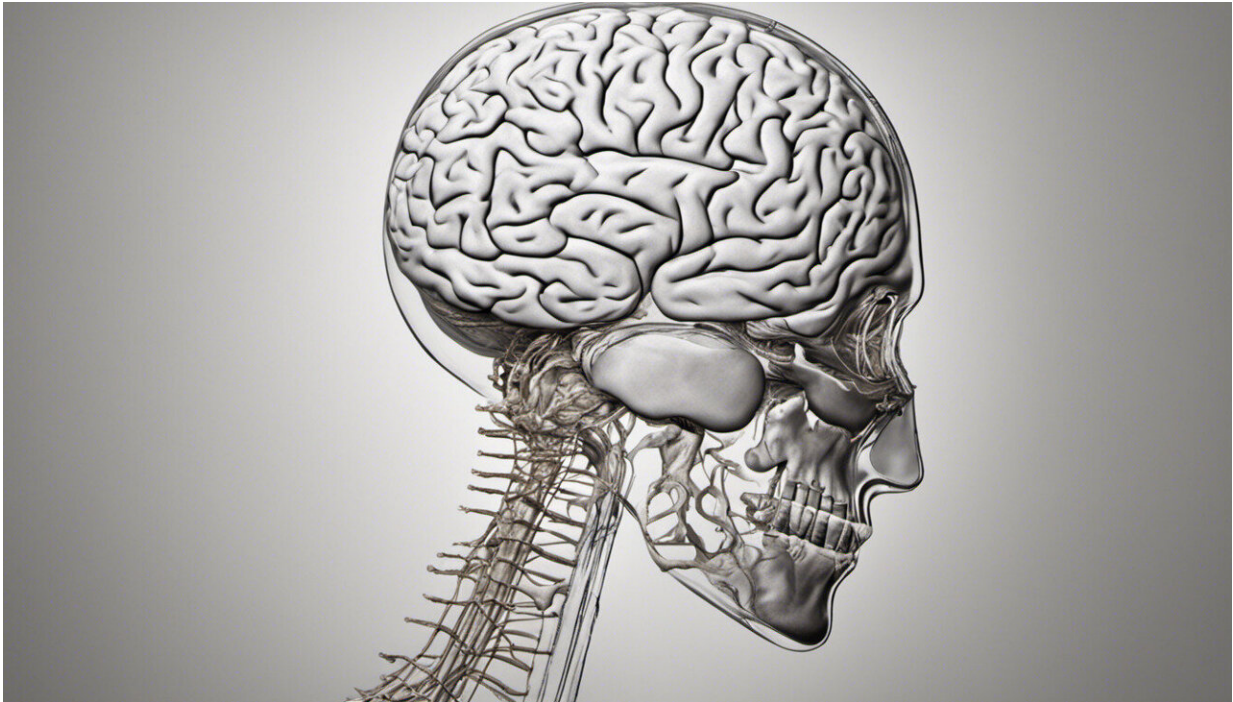


Why brain science won't cure poverty

November 17 2014, by Susan Sered



Credit: AI-generated image ([disclaimer](#))

Recently I've seen news reports with headlines like this one: "[Can Brain Science Help Lift People Out Of Poverty?](#)"

This particular article described the near miraculous recovery of a woman who grew up surrounded by violence in the housing projects, became a "single mom on welfare" who wasted her money and damaged her health with a pack-a-day smoking habit, and was stuck in an abusive

relationship. Then, with the help of "a novel program that uses the latest [neuroscience](#) research to help women dig themselves out of [poverty](#)" by making better choices, she quit smoking, got rid of the bad boyfriend, earned a business management degree and landed a job as an administrative assistant. It's not the only article I've seen recently that is looking at [brain science](#) as a way to cure [poverty](#).

The enchantment with neuroscience to explain social misery has spread among individuals and organizations with longstanding commitments to progressive social change. "What the new [brain science](#) says is that the stresses created by living in poverty often work against us, make it harder for our brains to find the best solutions to our problems. This is a part of the reason why poverty is so 'sticky,'" [explained](#) Elisabeth Babcock, chief executive of the nonprofit Crittenton Women's Union. Recent research from Princeton University has suggested that living in poverty can have an impact on concentration. Other research has found a similar correlation between [poverty and neuroscience](#).

There is growing public discourse invoking neuroscience to re-emphasize that poverty really is bad, that [bullying](#) and abuse really hurt children, and that someone who has [experienced rape](#) or torture really is suffering. But uncritically invoking neuroscience is a [risky proposition](#).

Proving the obvious

Studies showing that trauma and poverty change people's brains can too easily be read as [scientific proof](#) that [poor people](#) (albeit through no fault of their own) have inferior brains or that women who have been raped are now [brain](#)-damaged. In light of the ongoing failures of the Veterans Administration to adequately serve our veterans, I am particularly concerned with statements like this on the US Department of Veterans Affairs [website](#):

"Recent combat veterans with post-traumatic stress disorder have less volume in an area of the brain critical that is critical in fear and anxiety responses, say researchers with VA and Duke University. The scientists say their finding, published Nov. 1 in the Archives of General Psychiatry, is the first clear evidence that smaller amygdala volume is associated with PTSD, regardless of the severity of trauma. But there's still a chicken-or-the-egg question: Is the physiological difference caused by a traumatic event, or does PTSD develop more readily in people who naturally have smaller amygdalas?"

In other words, is some sort of pre-existing neurological flaw the reason that some people suffer?

"Brain imaging is an extremely blunt tool quite incapable of determining if someone is traumatized or has some 'poverty-stricken' thought process, whatever that might be," according to Tom Schwarz, Professor of Neurology and Neurobiology in the Department of Neurology at Harvard Medical School. "It only detects masses of activity by entire brain regions.... Those imaging methods are somewhat useful for neuroscientists if they tell us what part of the brain is engaged in a certain task, but only very partially because their resolution is so poor. Neurons that give rise to the sense of fear are mixed in and side by side with neurons that suppress anxiety and brain scans can't tell them apart."

At most, Schwarz explains, brain imaging can tell us "how;" it cannot tell us "why."

Focusing on the neurological changes caused by poverty or violence bequeaths upon doctors and psychologists the power to decide what constitutes sufficient misery to entitle an individual to merit assistance. Right now, it seems the focus is shifting from the causes of suffering to the medicalized "proof" of suffering as the yardstick for determining who gets things such as reparations or refugee status.

Brain damage as evidence of trauma?

In settings where medical experts have a monopoly on determining and corroborating claims of abuse, what would happen when a brain scan doesn't show the expected markers of trauma? Does that make the sufferer into a liar? Ineligible for asylum? Not entitled to veteran's benefits? Does it make the testimony of a woman who was raped less credible in court?

In my [own research](#) with women who have been raped and abused I've witnessed reactions ranging from fear and insomnia (classic symptoms of [post-traumatic stress disorder](#)) to anger, self-blame or even a relatively blasé sense that this kind of thing happens all the time and you can't let it destroy your life. Would these different sorts of personal reactions show up differently in the brain? Would the rape of a woman who was not traumatized not "count"?

The new neuroscience offers wonderful possibilities regarding Alzheimer's disease, epilepsy, brain injuries and much more. In particular, the notion of neuroplasticity – the ability of the brain to "re-wire" – is one of the most exciting and optimistic implications of cutting-edge [neuroscience research](#). But scientific knowledge always develops and is utilized within social contexts.

Holding the individual to blame

Social attitudes and policies regarding poor and marginalized Americans today are dominated by a culture that emphasizes individual rather than social pathology, and holds the individual accountable for the failings of the collective. That orientation is made clear in our national welfare policy - the "[Personal Responsibility and Work Opportunity Act](#)," and in our world-leading rates of incarceration and use of psychiatric

medication.

Within this climate, the notion that we can change or cure the brains of poor people so that they will no longer be poor assumes that if the individual just tries hard enough, in the right way, with the right mentoring, there really is a path out of poverty, abuse or prison. And it assumes that the current social landscape gives all people a fair shot at a decent life, that violence and deprivation are isolated incidents that took place in the past, and that it's always possible to "move on."

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