

Understanding the biology of addictive behavior

Once, addictions were viewed as failures of character and morals, and society responded to drunks and junkies with shaming, scolding and calls for more “will power.” This proved spectacularly ineffective, although, truth be told, most addicts do quit without any form of treatment. Nevertheless, many do not, and in the mid-20th century, the recovery movement, centered around the 12-Step method developed by the founders of Alcoholics Anonymous, became a godsend for those unable to quit drinking or drugging on their own. The approach spread to so-called “behavioral addictions,” like gambling or sex, activities that don’t even involve the ingestion of any kind of mind-altering substance.

This conception of addiction as a biological phenomenon seemed to be endorsed over the past 20 years as new technologies have allowed neuroscientists to measure the human brain and its activities in ever more telling detail. Sure enough, the brains of addicts are physically different — sometimes strikingly so — from the brains of average people. But neuroscience giveth and now neuroscience taketh away. The recovery movement and rehab industry (two separate things, although the latter often employs the techniques of the former) have always had their critics, but lately some of the most vocal have been the neuroscientists whose findings once lent them credibility.

One of those neuroscientists is Marc Lewis, a psychologist and former addict himself, also the author of a new book [“The Biology of Desire: Why Addiction is Not a Disease.”](#) Lewis’s argument is actually fairly simple: The disease theory, and the science sometimes used to support it, fail to take into account the plasticity of the human brain. Of course, “the brain changes with addiction,” he writes. “But the way it changes has to do with learning and development — not disease.” All significant and repeated experiences change the brain; adaptability and habit are the brain’s secret weapons. The changes wrought by addiction are not, however, permanent, and while they are dangerous, they’re not abnormal.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Addiction is not a disease: A neuroscientist arguea that it's time to change our minds on the roots of substance abuse](#)