



New means better and the latest research always trumps that old research... right?

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Backstory: In an attempt to avoid reading the ever increasing bad news you get on mainstream media, I signed up to a mailing list called 'The Daily Good,' whereby every day I get emailed a good news article. This is where I read about Rat Park and the article I am writing about is one from a series of work from the 1970's which showed that addiction is probably more a child of isolation rather than a hostage of a chemically hijacked brain.

The classical model of addiction I was taught at medical school was developed in the 1970's and showed that rats in cages would preferentially drink water laced with morphine until they died, rather than drink the pure water. The results were translated to human terms that addiction is chemically driven by the brain wanting more and more...and more of the drug and the human is either powerless to resist this, or the human is an amoral failure who prefers to party and dwell on the edge of society rather than to conform.

This dwelling on the edge of society got the now retired, Professor Emeritus of Psychology Dr. Bruce Alexander thinking. The rats used in these studies are highly social animals. Was the isolation of the cage a confounding factor? So he built what became known "Rat Town." An 8.8m² plywood box with places to play, hide, climb and most importantly interact with other rats of both sexes. He and his team then concurrently re-ran the addiction experiments with 'caged' isolated rats and 'social' Rat Park rats.

When given the option the caged rats drank substantially more of the morphine water than the social rats, who essentially drank none. Even when both groups of rats were first purposefully addicted to the morphine water and then given a choice the social rats decreased their consumption of drug water while caged rats increased it. One of the final experiments before Rat Park was closed was written up in the only Open Source article I could find in this series. After weaning, rats were raised either in isolation (caged) or in Rat Park (social). After 65 days half of each group were shifted to the other environment and after 80 days all rats were given the option of morphine water or pure water. Again, the isolated caged rats drank more than the social rats, but also the Rat Park rats, who were initially raised in isolation, drank more morphine water than those who were raised in Rat Park. He suggested the morphine was undesirable to the social rats as it interfered with the complex social behaviour required to function in a community.

So what does this all mean and how applicable are any of these rat experiments to humans? From personal clinical experience, social isolation is a predicting factor in medical patients developing an addiction to pain medications. Prof. Alexander has used the addiction problems of Native Americans living isolated from their ancestral homes on reservations as a human real world example. The success of Portugal's decriminalisation of all drugs and transfer of drug funding to reconnecting addicts to their own feelings and society in general (which resulted in a 50% decrease in injecting drug use!) is another example. All these suggest that alongside, or possibly overshadowing the chemical component of addiction is the social component.

Prof. Alexander who has researched this for 50 years summarises it better than I ever could:

“The view of addiction from Rat Park is that today’s flood of addiction is occurring because our fragmented, mobile, ever-changing modern society has produced social and cultural isolation, even though the cage is invisible. Chronic isolation causes people to look for relief. They find temporary relief in addiction to drugs or any of a thousand other habits and pursuits because addiction allows them to escape from their feelings, to deaden their senses, and to experience an addictive lifestyle as a substitute for a full life.”

It feels wrong to finish on such a sad note, there are many positives to take from this old, yet refreshing view on addiction. Learning or continuing with more vigilance to look at the youth we encounter more as products of isolation, detachment and boredom and not hedonistic troublemakers can inspire creative engaging solutions. The hopeless addict now becomes the lonely, disconnected young adult in need of reconnection. ‘Interventions’ and tough love can only deepen the isolation meaning that tightening bonds, creating deeper connections and Aroha are the ways forward.

To read more about this issue read this Huffington Post article by Johann Hari -

http://www.huffingtonpost.com/johann-hari/the-real-cause-of-addicti_b_6506936.html

Or read his High Acclaimed book **‘Chasing The Scream: The First and Last Days of the War on Drugs’**

You can look at Prof. Bruce Alexander’s website - <http://www.brucekalexander.com/>

This story has been retold in cartoon form - http://www.stuartmcmillen.com/comics_en/rat-park/

Original Article

Alexander BK, Beyerstein BL, Hadaway PF, Coombs RB. Effect of early and later colony housing on oral ingestion of morphine in rats. *Pharmacology, biochemistry, and behavior.* 1981;15(4):571-6.

Pdf available free at - <http://www.brucekalexander.com/pdf/Rat%20Park%201981%20PB&B.pdf>