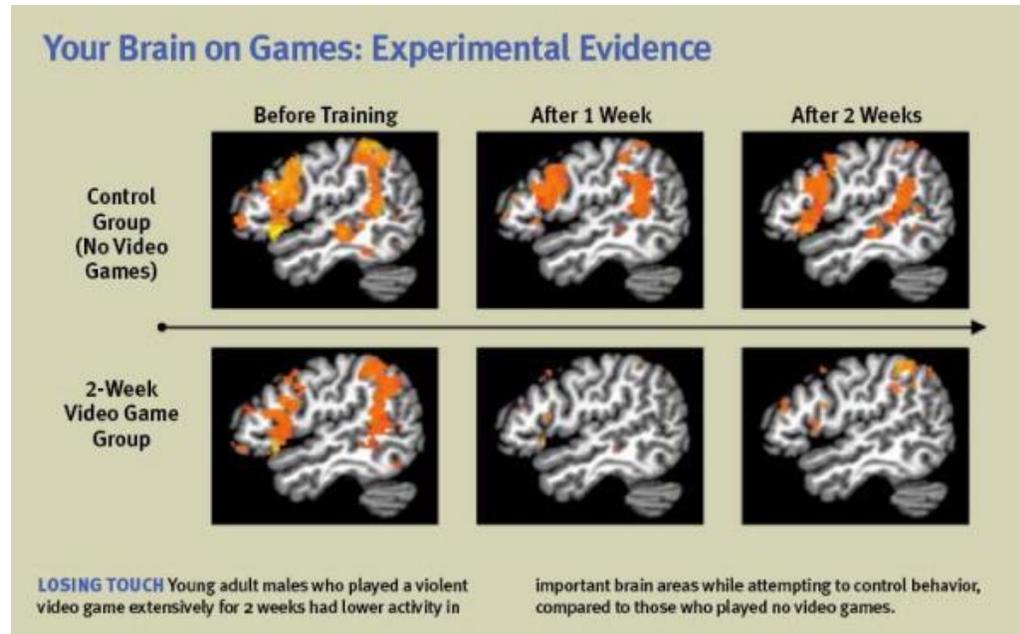


Daily Life with Christ. Understanding brain addictions-22. Behavior-induced brain addictions: Video Gaming.



When gaming becomes an addiction

Symptoms of addiction
Source: Online Gamers Anonymous

- Cravings**
 - The urge to go back to gaming and try to control the time played.
 - Feeling as though a return to gaming will make you feel better.
- Obsession**
 - A disruption in sleep patterns.
 - Fantasies and dreams about the game.
 - Excessive amounts of time spent sleeping.
- Social effects**
 - Anger and verbal abuse, sometimes extreme.
 - Excessive crying.
 - Lack of motivation and direction.
 - Difficulty facing obligations, procrastination.
 - Boredom/inability to find an activity of interest.
- Physical symptoms**
 - Nausea.
 - Physical illness - colds, allergies.
 - Restless, unfulfilling, taunting dreams.
- Psychological symptoms**
 - Anxiety.
 - Feelings of emptiness.
 - Depression.
 - Relief.
 - Uncontrollable feelings or rampant mood swings.
 - Fear.
 - Irritability.

This is the last article on brain addictions. The next article will complete the series with a look at what all of these brain addictions have in common with the curse of anti-intellectualism in contemporary Christianity, a curse that inhibits the believer's capacity to love God with all of his MIND. The mind is a terrible thing to waste, especially for Christians who are all under the mandate that is above all other mandates and the very reason for Scripture and life itself: loving God with all of one's MIND (Matt. 22:37-39).

After twenty-one articles on the various types of brain addiction—chemically and behaviorally induced—we have a better understanding of the uncontested brain science behind all brain addictions. Through brain imaging, we can see what is going on in the brains of alcoholics, crack addicts, smokers, and adolescents hooked on video games. This information puts us in a better position to form an educated opinion in the midst of our highly emotional and controversial times. In sum, the neuroscience shows that supernormal stimuli physically changes brain chemistry, causing physical brain disease, which very much effects the immaterial mind. We can now see that the neural effects on the brain of certain behaviors are very similar to the effects of psychoactive drugs of abuse.

Video games have come a long way since Atari introduced the very simple tennis game Pong in the 1970s or Pacman in the 1980s. Today's games involve sophisticated graphics, elaborate and detailed fantasy worlds, and extensive quests and adventures. And the video game industry is a very big business. For example, the game Grand Theft Auto 5 earned more than one billion dollars—in the first three days it was for sale. By comparison, that's more than five times faster than any movie in history.

Scientific consensus is that modern video games lead to compulsive use in some individuals. For example, Dr. Douglas Gentile at Iowa State University surveyed nearly 1,200 American kids between the ages of 8 and 18 about their use of video games. He found that about 8% of American kids met at least 6 of the criteria for pathological video game use and could be tentatively classified as pathological gamers. These kids played video games an average of 25 hours per week and experienced significantly more problems as a result of their gaming than other kids did.

The negative consequences can be tragic. However, much like gambling, most people who are hooked on video games can still maintain enough self-control that they can still manage to keep doing well at school or work. However, due to associated dopamine pleasure highs that are experienced during gaming, they cannot wait to get back to the game. Like the alcoholic who is occupied with another drink, they are always thinking about the game and achieving a new high at an even higher level. The same brain processes and neurochemicals that compel drug addicts compel children to prefer gaming to eating, sleeping, and being with friends and family.

As we have noted throughout this series, God has designed our brains with a reward system. Part of the reward system is the thrill of the hunt. Before commercial agriculture, refrigeration, and shipping, people had to hunt for food for themselves and their family. We were designed to hunt and find hunting rewarding. And modern video games take hunting to a whole new level. For example, hitting a target with a projectile is one of the core skills involved in hunting, and so people find it inherently rewarding. It is not a coincidence that some of the most popular and

engrossing video games are 1st person shooter games, which involve trying to hit targets with projectiles.

Furthermore, in most 1st person shooter games, there are a large number of targets to shoot at almost all of the time. A skilled player is therefore constantly being rewarded with a hit on the order of every few seconds. Contrasting that to real hunting, particularly if you are using a primitive projective weapon, hitting a target might happen only once every few days. It is not difficult to see how the stimulus is supernormal. Gaming takes naturally rewarding behavior and jacks it up to be significantly more stimulating than the original behavior was. The huge video game industry is evidence of just how rewarding and engrossing that supernormal stimulus can be.

Recall that dopamine is the molecule that is associated with craving, and it underlies our drive to do virtually everything we do. The dopamine release from excessive gaming is like its release with hard drugs. Matthias Koepp and his colleagues at the Hammersmith Hospital in London used positron emission tomography to measure dopamine levels in the reward circuit while participants played video games. They found that playing a simple tank navigation game led to significant increases in dopamine in the reward circuit. Furthermore, people who had the most success when playing the game also released the most dopamine.

Moreover, just as with drug addictions, excessive gaming numbs the pleasure center of the brain. Just as addicts turn to larger doses of their drug in an effort to overcome their numbed experience, and porn users need increasingly provocative images for arousal, game addicts seek greater and greater intensity in gaming to achieve same pleasure. Just like certain environmental clues can cause excessive craving for tobacco or alcohol addicts, the sight of a games (like a game image in a TV commercial) can trigger game craving in the brain. Brain imaging shows significant increase in neural activity in the brain reward circuit for those who are addicted to gaming, those who experience an enormous craving at the sight of any game-related image.

Of course, the first solution is to recognize the problem. Unless and until one recognizes that the mind has been hijacked by a chemically imbalanced brain, one will not address the problem. The second step is that one must want to break the addiction. This is true of all brain addictions we have studied—caffeine, nicotine, alcohol, marijuana, cocaine, amphetamines, methamphetamines, opioids, gambling, junk food, pornography, and gaming.

The desire to restore one's brain to normalcy must come from within before one can be freed from and be cured of a diseased brain. Of course, if your child has the problem, then you have the right and responsibility to force a behavioral change to break the addiction. Like with all addictions, it is all about control, mental control—the godly life is always one that is governed by rationality (God's image in us)—by rational governance. There is no healthy and robust life as a human being made in the image of God without rationality and truth being the most dominant features of the life. We are not designed to live like animals that all live by physical desires (food, sex, and play)—animals do not have rationality, they are not made in God's image. Without mental control, a person becomes victim to super-dopamine-induced feelings, which continue to create incessant and insatiable desires for things like junk food, porn, video games, or

other pernicious behaviors regardless of self-destructive consequences on self, family, and other loved ones.

God designed our brains with capacities for thinking and desiring, proper thoughts and proper desires: healthy minds and healthy wills. In all addictions, physical desires take over our wills and then our minds—we are turned upside down. We become slaves to our own harmful desires. Instead of our pleasure centers being stimulated with thoughts of love for God, others, and life, they become slaves of incessant and illicit fleshly desires from excessive dope (dopamine) flooding the brain.

In the next article, I will wrap up this study with a look at anti-intellectualism as the curse of contemporary Christianity, and how very similar it is to addictive brains, diseased brains, upside down brains, that live by feelings/emotions/sensations rather than rationality and truth—by what feels good rather than what is objectively and intrinsically true/good/beautiful.

In, by, and through ESSE (Exod. 3:14),

Pastor Don