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Fight or Flight

Six years ago, I took an IQ test. My psychologist confided in my parents about my results, saying that I was mentally handicapped in the processing speed category, and that this inadequacy would affect me my entire life. It was around this time that I began playing Counter-Strike: Global Offensive, a competitive first-person shooter. At this time, my reaction time averaged an abysmal 372 milliseconds. Five years and five-thousand hours later, I was ranked in the 99.25th percentile of players and my reaction time averaged and continues to average around 220 milliseconds. While this improvement is anecdotal, it is not isolated, as esteemed cognitive researcher Daphne Bavelier states in her TED talk on the subject, “action video games have a number of ingredients that are actually really powerful for brain plasticity, learning, attention, vision, etc.” However, society today refuses to reap these benefits as most socially acceptable forms of entertainment promote passivity and indecision. First, let me explain the specifics of this problem.

To many, action video games seem pointless and unnecessary; however this is due to much of the nation’s population finding satisfaction in the validity of biased statements about contraversial issues, creating surges of empirically unfounded beliefs. Cognitive researcher Daphne Bavelier in her Ted talk about the subject explains this sentiment: ”’Oh come on, can’t you do something more intelligent than shooting at zombies?’ I’d like to put this kind of knee-jerk reaction in context...There’s not one week that goes without some major headlines about wether video games are good or bad for you, right? I’d like to put this kind of Friday night bar discussion aside and get you to actually step into the lab.”

Findings in an experment lead by Lorenza Colzato and his colleagues at the Cognitive Psychology Unit and Leiden Institute for Brain and Coginition indicate that **action videogame**

experience is associated with cognitive flexibility as measured by a task switching paradigm.

A blocked design allowed the ruling out of differences attributed to age and IQ.

Additionally, playing first-person shooter games predicts performance on a relatively well established test for cognitive flexibility. Thus, action videogames present a concrete strategy to train the elderly to compensate for losses in ability and restructure their brains in response to changing situations, a skill required for almost all "functional" everyday

behavior. Turn into true paraphrase. These results are not singular either, as there are hundreds of new experiments displaying the same results as Colzato. Shifting to the results about vision improvement, a joint experiment by C.S. Green, a researcher at the University of Rochester's Department of Brain and Cognitive Sciences, and the aforementioned Daphne Bavelier concluded that "action video game play enhances subjects' ability in two tasks thought to indicate number of objects apprehensible at a given time" (1). After the initial experiment, followup analysis was performed in the form of a control experiment for the effect of confounding by instantaneous improvement in tracking. The combination of these two experiments establishes causation for playing action video games enhancing the number of objects that can be apprehended and "suggests that this enhancement is mediated by changes in visual short-term memory skills."

These skills again counter the passivity of usual modern entertainment by indirectly benefitting brain function. However