

Neuroscience of Gaming: Ethical Issues

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SfN Social Issues Round Table



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Two main ethical questions

- Really work?
- Bad for people, individually or as a society?
- Answers to both will depend on specifics
 - game, targeted ability, user



Attention
Memory
Executive Function

Children
Non-elderly adults
Elderly

Mood
Social skills
Desensitization

Developmentally
impaired
Brain-injured
Dementia
Social-emotional
disorders
Prodromal



Do they work?



There is evidence that they do, but...

- Not all trials are of equal quality
 - Placebo
 - Power
- Isolated studies are hard to interpret, replicability issues



There is evidence that they do, but...

- Many of the leading researchers in this field have vested interests



There is evidence that they do, but...

- How generalizable are the gains?



There is evidence that they do, but...

- Remember, effectiveness is specific to games, psychological targets, users



A Consensus on the Brain Training Industry from the Scientific Community

Max-Planck-Institut für Bildungsforschung
Max Planck Institute for Human Development



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As the baby boomers enter their golden years with mounting concerns about the potential loss of cognitive abilities, markets are responding with products promising to allay anxieties about potential decline. Computer-based cognitive-training software –popularly known as brain games– claim a growing share of the marketplace. The promotion of these products reassures and entices a worried public.

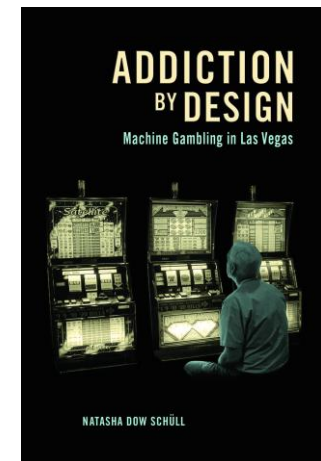
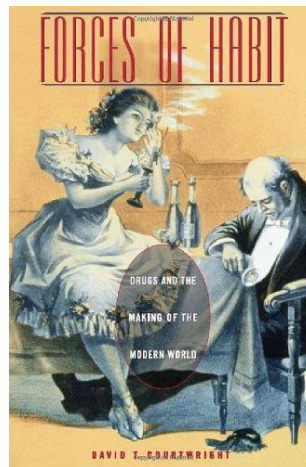
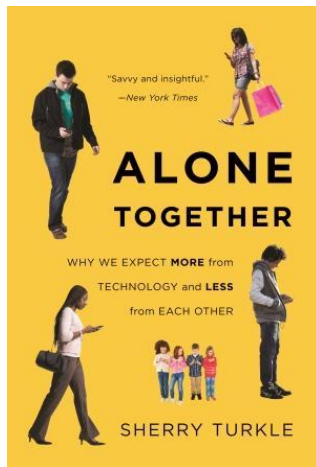
Consumers are told that playing brain games will make them smarter, more alert, and able to learn faster and better. In other words, the promise is that if you adhere to a prescribed regimen of



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Assuming they work... (or even if they don't)

- Are there negative effects?
 - Griffiths presentation
 - Broader issues:



Policy recommendations

- Not one-size-fits-all
 - Different targets (incl pure entertainment) and different populations require different policies
- Policy $\neq$ legislation
 - Consumer education
 - Professional best practices
 - Research, well-designed, powered, registered



- Thank you!

