

What background do I come from?

1. My own gaming¹



¹Blizzard Entertainment, 1994, 1998.



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What background do I come from?

1. My own addictive demons
2. **Decision on parenting**



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Brain, do you see what I see?



What I look like from the brain's perspective:



Senso-motor homunculus: brain cortex area devoted to each function

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What background do I come from?

1. My own addictive demons
2. Decision on parenting
3. **Clinical Practice**

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You might have noticed

Most of us do not
“speak digitally”
as our mother tongue.¹

¹Prensky, Marc (2001)

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Digital Natives vs Digital Immigrants



Digital natives are tech savvy by default of their being born around technology – Dr. Ofer Zur (Digital natives was reported originally coined by Marc Prensky)

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Hours of Daily Technology Use¹

Technology hours/day	Net Generation	Generation X	Baby Boomers
Online	2:31	1:58	1:14
On Computer	2:08	2:32	1:41
Email	1:26	1:37	1:14
IM/Chat	1:45	0:36	0:14
Telephone	2:02	1:47	1:38
Texting	2:20	1:07	0:28
Video Games	1:08	0:31	0:13
Music	3:33	2:35	1:44
Television	2:37	2:12	2:25
Total Daily Technology Use	20:38	14:55	7:51

¹Compuserve Data from 2011

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Children seem so easily drawn to screens

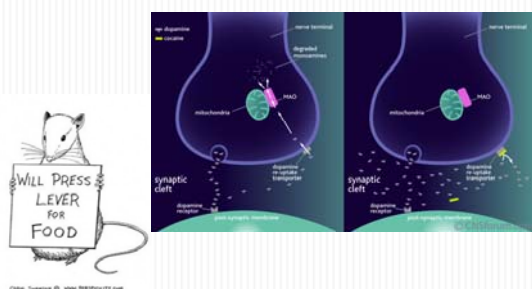
Why is the digital world attractive/addictive?

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Anonymity



Reward Mechanism



Realism

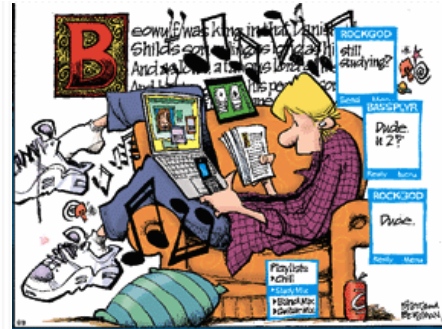


Autonomy



"I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!"

Busyness/Preoccupation



Digitizing Ourselves to Death



In partnership with your Richmond Public Library, Workshops are open to all members of the general public including parents and helping professionals. All sessions are **FREE!**

Come to one workshop, come to all!

Tuesday Evenings
7pm to 830pm

LOCATION:
Brighthouse Library (Main) Branch
Community Place | 7700 Minoru Gate

1	Problem Video gaming <i>Prevalence, diagnosis, treatment and prevention of Internet Gaming Disorder</i>	January 13
2	Problem Video Everything Else <i>Internet gaming: other activities: behaviors in a digital world</i>	January 20
3	Parenting in the Age of iParenting <i>Being mindful, intentional, and intelligent</i>	January 27
4	Battlefield: Schools <i>Understanding and managing technologies: including to enhance learning and healthy development</i>	February 3

To register, visit www.yourlibrary.ca/

Please note the location and date of each workshop!

RASS

Richmond
Mental Health
Services

For information: info@richmondaddictions.ca

604-270-9220

You are getting only the syllabus!

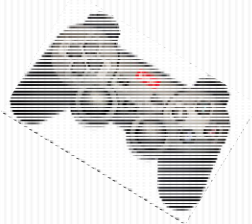
Objectives for this morning

1. To consider internet addiction as a condition with physiological, social and psychological health consequences.
2. To understand challenges presented by a technophilic culture and its implications on development of healthy brains.
3. To consider a "purpose-driven, evidence-informed" approach as best practice in areas of parenting and education in the encounter with our technophilic society.

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Video Gaming

- Video game use has increased over time; about 9 out of 10 American children and teens play video games¹
- Research shows that video gaming effects are NOT trivial; effects found in short-term and long-term contexts²



¹Gentile, 2009

²Anderson, Gentile, & Dahl, 2012

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Problem? Or Symptom?

- Landmark longitudinal study in Singapore¹
- Finding #1: Depression became **worse** if youth became pathological gamers
- Finding #2: Anxiety, social phobia, and school performance also became **worse** after becoming a pathological gamer
- Finding #3: If children **stopped** being pathological gamers, their depression, anxiety, social phobia and school performance all **improved**.

¹Gentile, 2011

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Problem? Or Symptom? (cont')

- Mood issues, social phobia and school performance are likely to be **outcomes of pathological technology use** rather than predictors of it
- The observation that these conditions worsen suggests that PVG is a **distinct mental health disorder** rather than being just a symptom of other conditions
- Also likely that such mental health issues have reciprocal relationships and share common risk factors

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Comorbidity

- Typical comorbid/primary disorders include **mood disorders, substance use disorders, anxiety disorders, impulse control disorders and personality disorders**¹
- **ADHD and anxiety/depression**²
- **Poorer school performance, insomnia, suicidal thoughts, financial problems, relationship problems**³

¹Sheepin et al., 2003

²Lemosa et al., 2011; Gentile, 2009, 2011

³Gentile, Lynch, Linder & Walsh, 2004; Anand, 2007; Gentile, Coyne, & Briscoe, 2013

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Comorbidity (Con't)

- **Alcohol consumption**¹
- **Conduct problems**²

¹Ream, Elliot & Dunlap, 2011

²Rehbein, Kleinmann, Meddick & Mobile, 2010; Holtz & Appel, 2011

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Problematic Effects of Video Gaming

- Violent video games & media¹
- Attention problems and executive functioning²
- School performance³
- Emotional development⁴
- Addiction

¹Larson, 1961; Bandura, Ross & Ross, 1963; Bandura, 1965; Friedrich & Stein, 1973; Grosser, 1973; Choe, Craft & Courlier, 1973; Davidson & Thomas, 1977; Collins, Bondi & Hess, 1974; Singer & Singer, 1980; Greer, Potts, Wright & Hutton, 1982; Shrem & Williamson, 1987; Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Anderson et al., 2010; Bartholow, Bushman, & Sestir, 2005; Bushman & Anderson, 2009

²Christakis, Zimmerman, DiGiuseppe, & McCarty, 2004; Chan & Robinson, 2006; Gentile, Swing, Lin, & Khan, 2012; Swing, Gentile, Anderson, & Walsh, 2010; Hoofnagle et al., 2009

³Barton, Calcutta & McCreveny, 1979; Lineberger & Walker, 2005; Anderson & Dill, 2000; Chan & Robinson, 2006; Cordes & Miller, 2000; Gentile, 2009; Shovel & Sargent, 2006

⁴Hinkley et al., 2014; Uhl et al., 2014

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"The Problem"

Addiction

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Addiction – Terminology

- Internet Addiction
- Video Gaming Addiction
- Digital Addiction
- Social Media Misuse
- Pathological Video Gaming
- Internet Gaming Disorder (DSM 5)
- **Problem Video Gaming**

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The 21st Century Addictions Debate

Can technology addict?

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A behavior that

affects moods.

adversely affect normal functioning.

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Normal functioning?

"I'm not sure that it's the gaming that is an addiction or if it's what someone who's mentally ill does. Our boarder was so addicted to gaming he didn't come out of his room for days at a time. I was suspicious that he was peeing in the room but wondered about "the other." He never ate, slept, or took a bath. Well, we disconnected the internet and he left the very next day. My husband had to clean his room coz I couldn't stomach it. **He actually defecated in a bag and pee-d in coke bottles—all left for us to clean up.** Wow! Yet, I was very concerned about him since he looked like he would faint at any minute."

-Case Presentation, February 11, 2015
Julie M. Hynes, Iowa Department of Public Health

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A behavior that

affects moods.

adversely affect normal functioning.

can be used to cope with other emotional and psychological issues.

can result in neurological changes.

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3 Cs of Addiction

Control - there are repeated attempts to cut back or control use, with episodes or loss of control in between.

Compulsion - a person experiences a sense that they must use. *Can be due to tolerance, withdrawal or psychological need.*

Consequences - use is continued despite significant negative consequences.

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Physiological Consequences in Long Term Video Gaming

Tolerance – the person needing more and more of the addictive behavior/experience in order to obtain as close as possible the highest of "high"

Withdrawal – the experience of the opposite effects obtained from video gaming and internet use.

Brain circuits that suffer alteration:

1. Endorphin Circuit
2. Dopamine Circuit
3. Impulse Control Circuit
4. Stress Response Circuit

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Formidable force against developing brains

"Game developers design games to addict, to hook, to prevent termination of play."



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Video Gaming vs. Substance Use

Similarities

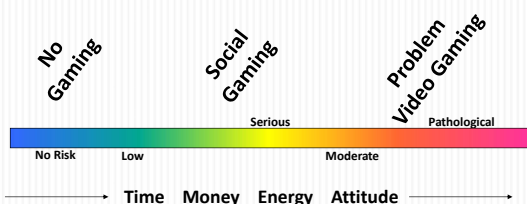
- The illusion of control
- User chasing the high
- Provides escape
- Rituals surrounding use
- Increased tolerance over time
- Continual preoccupation
- Withdrawal
- Mood altering

Differences

- Absence of physical signs in early stages of video gaming
- Experience is the substance
- Cognitive Distortions
- "Win" offers positive effects
- Video gaming is often thought of or rationalized as a positive
- Perceived competition of outwitting A.I., opponents

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The Gaming Continuum



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Factors that influence this behavior



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Motivators (clinically-reported)

- Fun
- Hope to accomplish something
- Boredom
- Wanted to do things with friends
- Parents told me to play video games
- Interested in the video gaming industry
- Deal with stresses in life
- Frequently see people play video games



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How much is too much?

- Video gaming use is **not** the same as video gaming addiction; time spent is neither a factor nor predictor¹
- Subjective reality varies from gamer to gamer

¹Davis, Eklund-Sartin, Cavallo & Potenza, 2010; Ferguson, 2011; Ferguson, San Miguel, Garza & Jerabek, 2012; van Solich, Vogelgesang, Krizan & Oppel, 2011

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Problem Video Gaming

- Research has focused on damage to family, social, school, occupational and psychological functioning (Sim, Gentile, Bricolo, Serpelloni, & Gulamoydeen, 2012)
- "Internet Use Gaming Disorder" currently in appendix of the new DSM-V (APA, 2013)

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Signs of Problem Video Gaming

- Missing school or work to gamble.
- Excessively monitoring sports results.
- Forgetting or ignoring personal hygiene.
- Creating opportunities to play games.
- Losing interest in other activities you once enjoyed
- Most of non-school hours are spent on video games.
- Falling asleep in school; tardiness at work.
- Not keeping up with school/work assignments.
- Worsening grades.
- Lying about computer or video game use.

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Signs of Problem Video Gaming

- Choosing to use the computer or play video games, rather than see friends.
- Dropping out of social groups (clubs or sports) in order to play games.
- Stealing money in order to buy or play games.
- Irritable when not playing a video game or on the computer.
- Unsuccessful attempts to cut back on game play.

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How does addictive behavior form?

Enabling Environment
 +
 Vulnerable Person
 +
 Access to
 Internet/Casino/Drugs/Porn/Credit Cards
 can =
Dependency / Addiction

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Parents/Adults/Caregivers tend to deal with

Enabling Environment
 +
Vulnerable Person
 +
 Access to
Internet/Casino/Drugs/Porn/Credit Cards
 can =
Dependency / Addiction

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Clinical interventions attempt to support

Enabling Environment
 +
Vulnerable Person
 +
 Access to Internet/Casino/Drugs/Porn/Credit Cards
 can =
Dependency / Addiction

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Prevalence of Video Gaming Addiction

- 8.5% of youth between ages 8 to 18 in United States¹
- 8.7% in Singapore²
- 10.3% and 10.8% in China^{3,4}
- 8.0% in Australia⁵
- 11.9% in Germany⁶
- 7.5% in Taiwan⁷

¹Gentile, 2009²Choo et al., 2010³Pang & Li, 2009⁴Pang, Mui, & Jing, 2009⁵Pariser, Shoenberg, Berlin, & Fenech, 2010⁶Crosser, Thakerness, & Griffiths, 2007⁷Ko, Yen, Yen, Lin, & Yang, 2007

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Counseling/Treatment:

- Helps to **recognize** the extent of the problem
- Establishes **practical adjustments** to deal with immediate negative consequences from video gaming
- Addresses **issues that underlie the problem gaming**
- Enhances and/or strengthen **developmental assets**
- Assesses for **mental health issues** previously unrecognized/diagnosed

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Approaches that hold promise

- ACT, CBT, Motivational Interviewing, Existential Theory, Family work
- Family Involvement; **Mentorship**
- Treat underlying conditions frequently encounter, e.g. mood issues, ADD/ADHD, trauma.
- ADD/ADHD parenting tips
- Simplicity Parenting
- Collaboration with family doctor, psychiatrist, school teachers and counsellors etc.

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Treatment Outcomes

- Client-Directed, Outcome-Informed (aka Feedback Informed Treatment)
- Subjectivity
- Common desirable outcomes:
 1. Improvement in daily functioning
 2. School/work performance
 3. Relationship, Interpersonal Communication
 4. Emotional Regulation
 5. Physical Health

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Other Digital Problems

Problem Video Everything Else



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Positive Effects of Video Gaming

- Visual-spatial skill development¹
- Pro-social video games²
- Exergames³
- Educational video games⁴

¹Green & Bavelier, 2003; Adamson, Green, & Bavelier, 2008; Green & Bavelier, 2007; Peng, Spence, & Pratt, 2007; Green & Bavelier, 2003²Rivaux, Martin, MacMichael, & Squitace, 2008; Sestri & Bartholow, 2010; Anderson et al., 2012; Gentile, 2009; Sestri & Bartholow, 2010; Griesmeyer & Oswald, 2009³Siddons & Irwin, 2010; Graf, Pratt, Hester, & Short, 2009; Malleck & Mulkam, 2008; Klein and Simmers, 2009; Rideout, Foehr, & Roberts, 2010; Rosenberg et al., 2010⁴Gentile, 2008; Murphy, Parnell, Means, Korbak, & Whaley, 2001; Corbett, Kowdinger, & Hostley, 2001; Entertainment Software Association, 2011b

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Myths

"The more I play, the better I'll feel."

"This is just a time management issue."

"Our electronic environment is neutral and does not contribute to dynamics related to mental health problems or addiction."

"Treatment is too expensive. I will deal with this on my own."

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Seek help, today!

"If an individual is contemplating treatment, he or she might feel it is too expensive. But on the other hand, **the person probably can't afford not to go into treatment.** Also, in many cities treatment can be free, at low cost, or on a sliding scale, so cost is not a valid excuse. Even if it was expensive, it is cheaper to treat than not to treat! That might be surprising but this is what has been found by several studies Treatment is more of an investment than a cost."

Michael Kuhar, *The Addicted Brain*

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Myths (con't)

"Money is not involved as long as I do not gamble online."

"Once the gamer in the home is fixed, all problems related to him/her go away."

"I'm great at video games, so I'm sure I'll be good at Internet poker or something that makes money."

"I need video games to improve my hand-eye coordination."

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Now.....

Myths about learning, schools, and education

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Myths (con't)

"Teachers told my 5th grade son that access to a the internet from home is necessary for schoolwork."

"IT skills necessary for future employment. Better get kids on them ASAP."

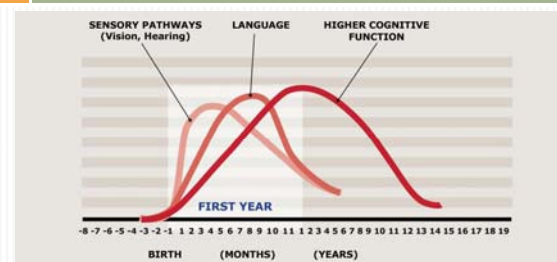
"Screens make learning fun, and fun is necessary for engagement."

"My child learns so much in such a short time with educational games!"

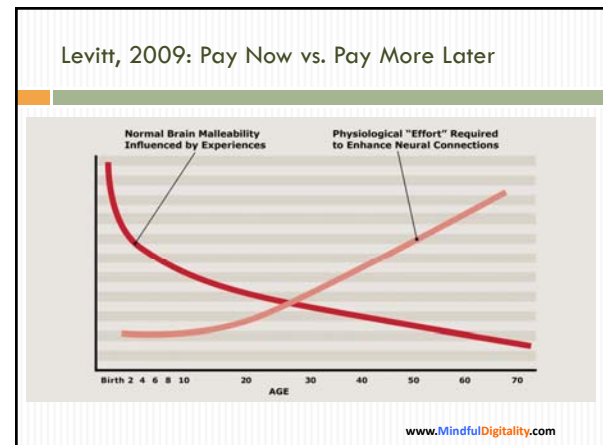
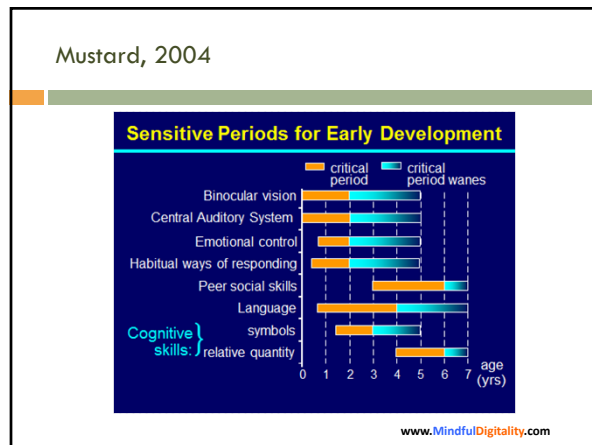
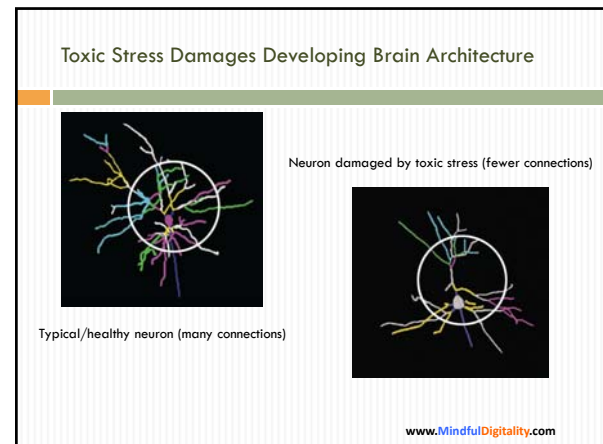
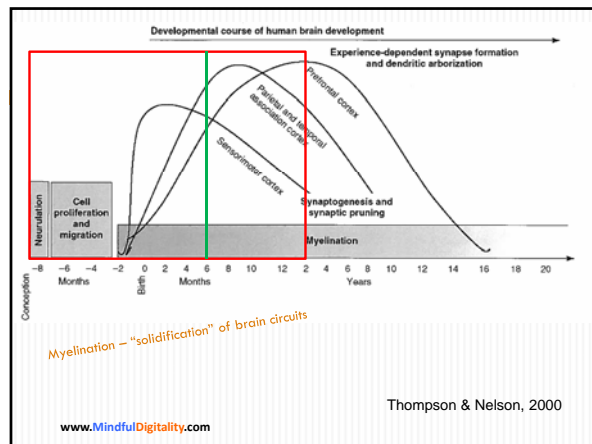
"Computer use makes everyone smarter."

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Thompson & Nelson, 2000



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Experience and Education

“Perhaps the greatest of all pedagogical **fallacies** is the notion that a person learns only what he is studying at the time. Collateral learning in the way of formation of **enduring attitudes** ... may be and often is more important than the spelling lesson or lesson in geography or history For these attitudes are **fundamentally what count in the future.**”

- John Dewey (1859-1952)

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Myths (con't)

“Teachers told my 5th grade son that access to a the internet from home is necessary for schoolwork.”

“Screens make learning fun, and fun is necessary for engagement.”

“IT skills necessary for future employment. Better get kids on them ASAP.”

“My child learns so much in such a short time with educational games!”

“Computer use makes everyone smarter.”

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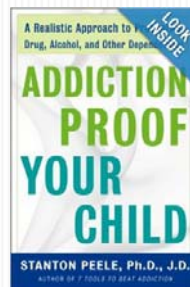
What does prevention look like?

Prevention is MUST!

Mindful Use of Screen Technologies

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Prevention – The Standard A & D Approach



Addiction Proof Your Child

Stanton Peele

www.MindfulDigitality.com

Prevention – The Standard A & D Approach (con't)

**Seek out local
Addiction Education!
Attend and learn!**



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Popular Approach

Screen Time Management Guidelines

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American Academy of Pediatrics (2011)

1. The AAP discourages media use by children younger than 2 years.
2. The AAP realizes that media exposure is a reality for many families in today's society. If parents choose to engage their young children with electronic media, they should have concrete strategies to manage it. Ideally, parents should review the content of what their child is watching and watch the program with their child.
3. Parents are discouraged from placing a television set in their child's bedroom.
4. Parents need to realize that their own media use can have a negative effect on their children. Television that is intended for adults and is on with a young child in the room is distracting for both the parent and the child.
5. Unstructured playtime is more valuable for the developing brain than any electronic media exposure.

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www.WebMD.com

Cut Back and Get Kids Active – Without a Fight

Try these stress-free strategies with your teen to reduce his time in front of the TV or on the computer or phone:

- Watch your own screen habits.
- Remind teens to limit screen usage.
- Motivate your teen to exercise.
- Encourage activities that involve socializing.
- Create screen rules together.
 - No texting during meals, either at home or a restaurant
 - No TV during meals
 - No TV until after homework and chores are done
 - The TV gets turned off at a set time at night
 - The computer stays in a public room in the home
 - No TVs in bedrooms
- Talk about it.

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Google “Manage Screen Time”

..... and get 139 million results



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Do tips work?

*“Lists of tips, strategies and to-dos do not make sense, do not matter, and are never practical without a **solid, well thought-through understanding and attitude** to accompany their execution.”*

- Benjamin Wong (Not-an-expert)

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Screen Time Management is a Band-aid!

Enabling Environment

+
Vulnerable Person
+

Access to
Internet/Casino/Drugs/Porn/Cr
edit Cards

can =

Dependency / Addiction

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Best Practice: Early Prevention



From <http://www.drugabuse.gov/publications/addiction-science/what-addiction/addiction-usually-begins-in-adolescence-thus-early-prevention-critical>

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Prevention – The Tech Add-On

Let's Take Technology Seriously!

- Be clear in what we want to achieve by using/including them in our lives
- Q: “To what problem is ____ the solution?”
- Take time to understand what technology gives AND takes away

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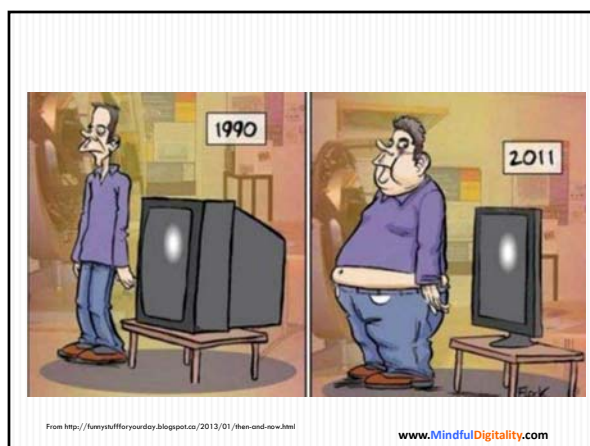
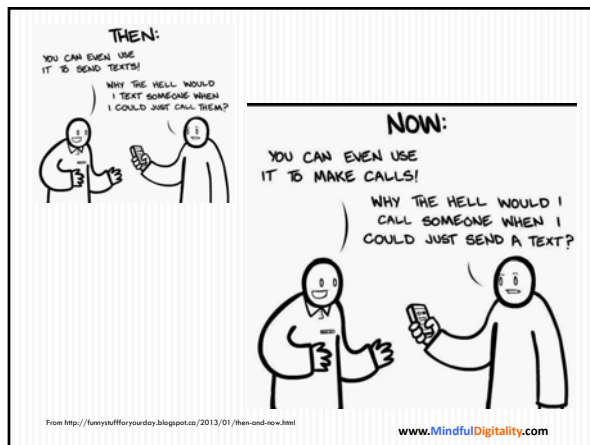
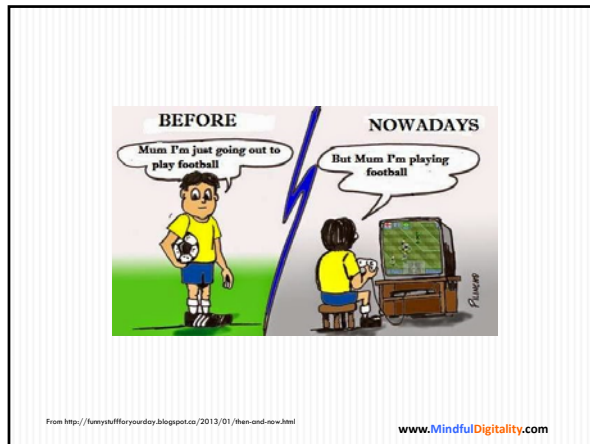
Prevention – The Tech Add-On (con't)

Let's Take Ourselves Seriously!

A Drastic Attitudinal Shift to Combat Mindlessness



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3 observations to help us take ourselves seriously¹

1. Technological progress is **NOT** the equivalent of human progress.
2. New technologies **DO NOT** always offer us more options; often, they offer less.
3. New technologies **DO NOT** always help solve significant problems that demand urgent solutions; as a result, society often invents problems to justify the existence of new technologies.

What do we become if we do not keep these in mind?

¹Postman, Neil, The Disappearance of Childhood (1982), Amusing Ourselves to Death (1984), Technology (1992)

5 ideas to help us take technology seriously¹

1. All technological change is a Faustian Bargain
2. Advantages and disadvantages a new technology brings are not distributed evenly; it benefits some, harm some, and some are not affected.
3. Embedded in every new technology is a powerful idea, sometimes a few powerful ideas.
4. The philosophy in every new technology always makes war with that in an old one.

¹ Postman, Neil, *The Disappearance of Childhood* (1982), *Amusing Ourselves to Death* (1984), *Technopoly* (1992)

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The 4th Idea (con't)

Printed Word	Television/Visual Presentation
Logic	Imagery
Sequential Thinking	Narrative
History	The Immediate Present Moment (Now)
Objectivity	Simultaneity
Exposition	Immediate Gratification
Discipline	Instant Emotional Response

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The 4th Idea (con't)

Paul Roberts writes: 'The notion of future consequences, so essential to our development as functional citizens, as adults, is relegated to the background, inviting us to remain in a state of permanent childhood.'

¹ Roberts, Paul, *The Impulse Society: America in the Age of Instant Gratification* (2012)

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The 4th Idea (con't)



Orality	Print	Computer/Screen
Group Learning	Individualized Learning	Private Learning
Cooperation	Competition	Individualized Problem Solving
Social Responsibility	Personal Autonomy	Egocentrism?

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Egocentrism on the rise?

"The Children We Mean to Raise" (2014)¹



¹ Harvard Graduate School of Education, 2014.

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"The Children We Mean to Raise"

- 10,000 youth surveyed
- 1. 80% → achievement or happiness is top priority; 20% → caring for others is their priority
- 2. Youth more likely to say, "My peers value achievement and happiness over caring."
- 3. Youth 3X more likely to agree than disagree to statement: "My parents are prouder if I get good grades than if I'm caring community member."

¹ Harvard Graduate School of Education, 2014.

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"The Children We Mean to Raise" (con't)

1. 96% of parents surveyed say they want caring kids, that moral character in children is "very important, if not essential."
2. Not what the youth heard! 81% of youth thin happiness or achievement is their parents' top priority.

¹Harvard Graduate School of Education, 2014.

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The 5th Idea

1. All technological change is a Faustian Bargain
2. Advantages and disadvantages a new technology brings are not distributed evenly; it benefits some, harm some, and some are not affected.
3. Embedded in every new technology is a powerful idea, sometimes a few powerful ideas.
4. The philosophy in every new technology always makes war with that in an old one.
5. Technological change is not additive, it is ecological.

¹Feather, Neil, The Disappearance of Childhood (1982), Amusing Ourselves to Death (1984), Technopoly (1992)

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Statement from National Center for Infants, Toddlers, and Families¹ (2014)



"..... Although children learn best through hands-on exploration, the reality is that most young children are exposed to screen media at a very young age and can learn from these experiences."

¹Lerner & Barr, 2014.

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Language of Irresponsibility Disguised as Myths

"How can we say no to screens? They are everywhere!"

"We lose out if we do not stay on top of technological changes in our society."

"Since research evidence has yet to demonstrate screen use as an overall 'harmful' experience, childhood screen usage is not a problem."

"Benefits of electronic screen usage out-weight the costs."

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Transformation of Attitude

From

Evidence-Driven

To

Purpose-Driven, Evidence-Informed

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Advocacy of our work:

- To help parents and educators consider the **POSSIBILITY** that screen technology usage plays, at best, a minimal supportive role and at worst a downright harmful role in healthy child development

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Relevant Resources

- **National Institute on Media and the Family** – KidScore – a rating system by parents for parents – www.mediafamily.org
- **The Mediatrician** – cmch.typepad.com/mediatrician/
- **Entertainment Software Rating Board (ESRB)** www.esrb.org
- **Online Gamers Anonymous** – www.olganon.org
- **PTA** – “PTA/ESRB Brochure on Video Game Safety” www.pta.org
- **Net Addiction Information** – www.netaddiction.com
- **Prominent Researchers** Studying the Impact of Media on Children - www.drdouglas.org/, www.maketvwork.com/ etc.

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Questions?

**Thk u vry mch 4 ur tme.
NE q's 4 me?**

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