



# Dangers Lurking on Social Media for Kids

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# Impact of Social Media on Children

- ▶ Impact on brain development
- ▶ Impact on psychological development
- ▶ Why technology is so addictive
- ▶ What to do about it

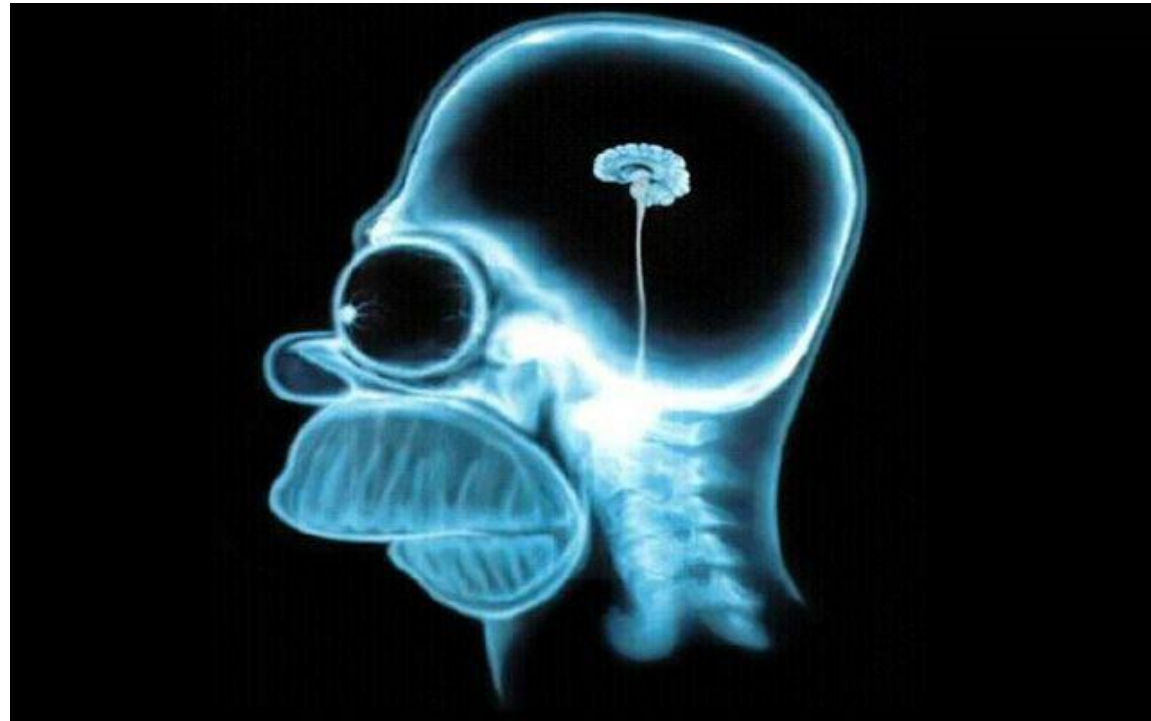
# Business Week Digital Immersion

- ▶ Estimated that the typical person by their early 20's will have spent more than 30,000 hours on the internet or playing videogames.

I calculated some of these numbers. This equates to:

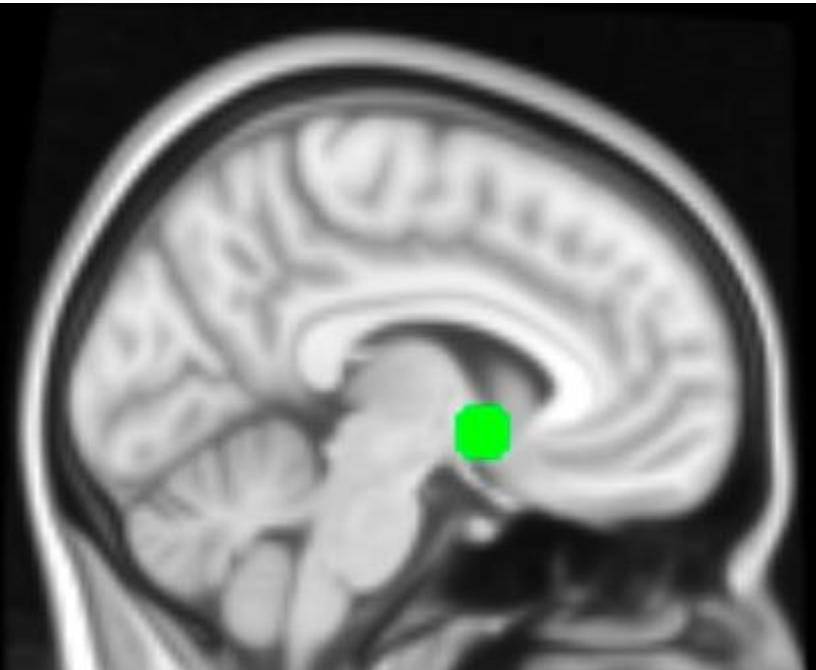
- ▶ Roughly 3.5 years on the internet, playing games or using technology
- ▶ And if you average 8-10 hours of sleep an evening, that is roughly 6-years of sleep
- ▶ So ½ of their lives are sleeping or using technology

# How does Technology Impact the Brain?



# Major Neuroanatomical Areas Involved with Technology

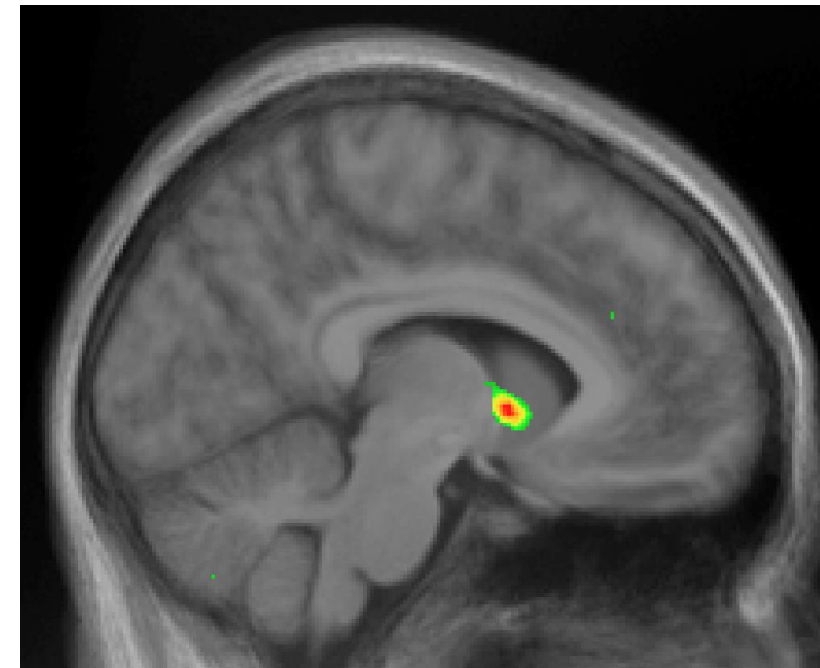
- ▶ Striatum: the caudate nucleus; putamen and nigrostriatal pathway. All of these structures are also part of the basal ganglia system, which plays a major role in learning, motor control, and several other cognitive processes.
- ▶ Nucleus Accumbens – pleasure seeking center of the brain, which also drives dopamine release



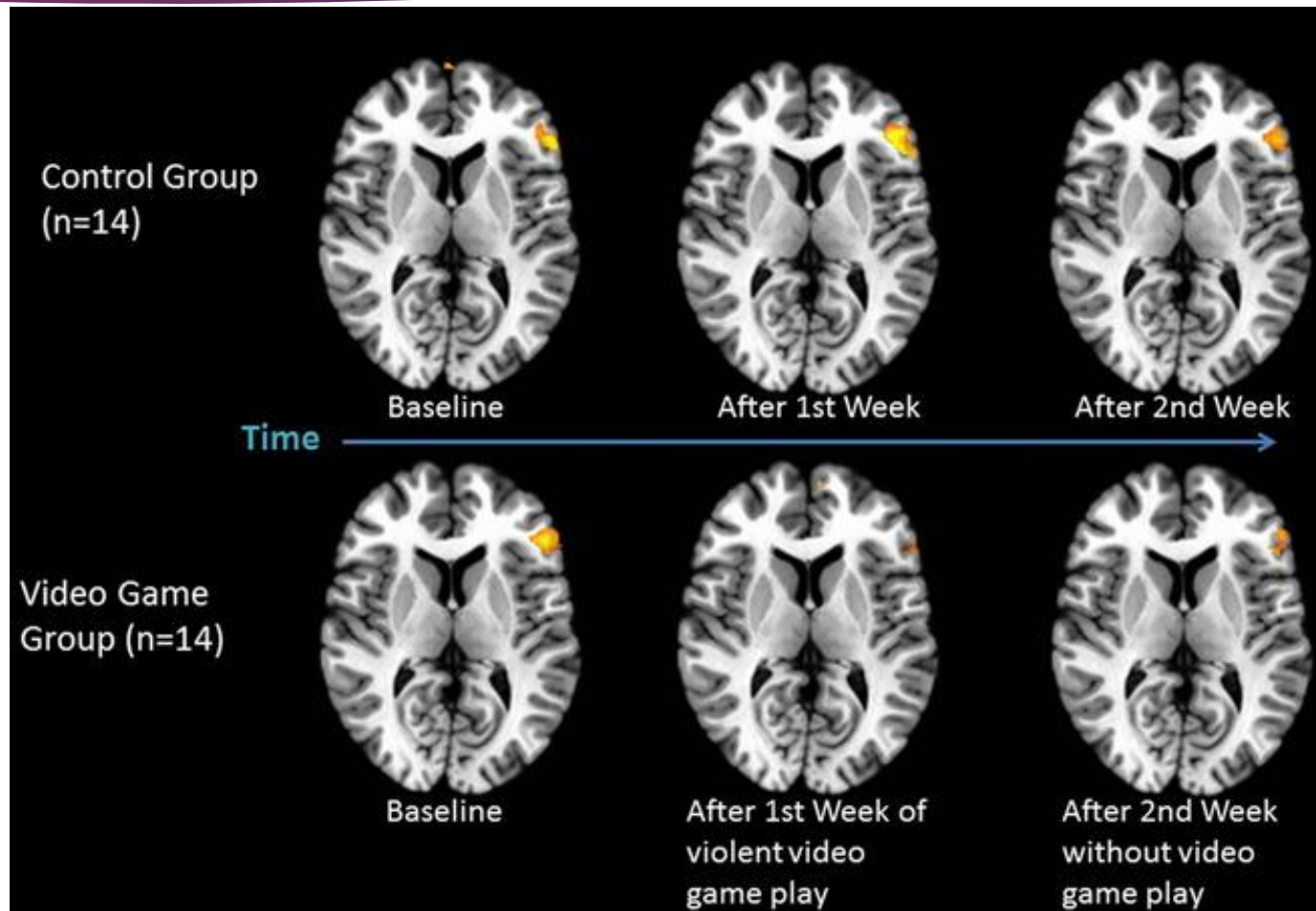
NA on videogames

NA on cocaine

The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media” by Lauren E. Sherman, Ashley A. Payton, Leanna M. Hernandez, Patricia M. Greenfield, and Mirella Dapretto in *Psychological Science*. Published online May 31 2016 doi:10.1177/0956797616645673



MRI scans show that after a week of playing a violent video game, young men showed less activation in a brain area called the dorsolateral prefrontal cortex. A control group did not show such changes.

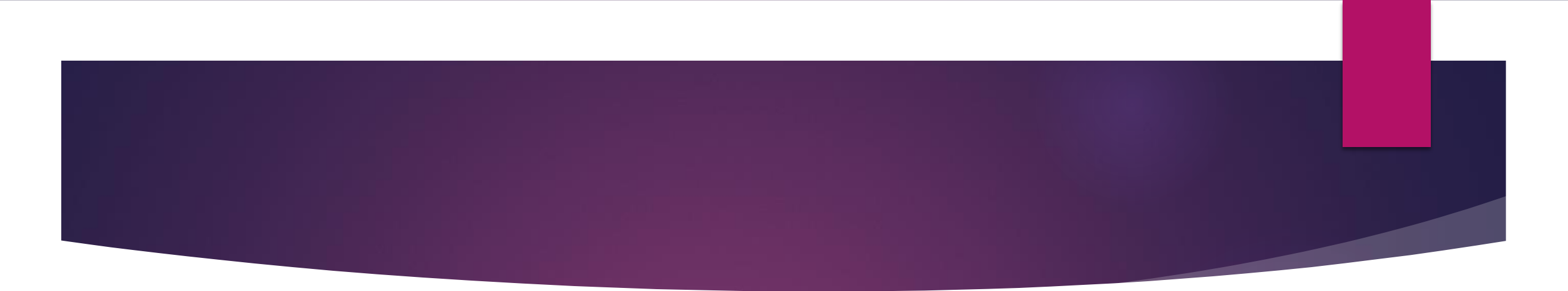


# Technology/Media Forces Multitasking

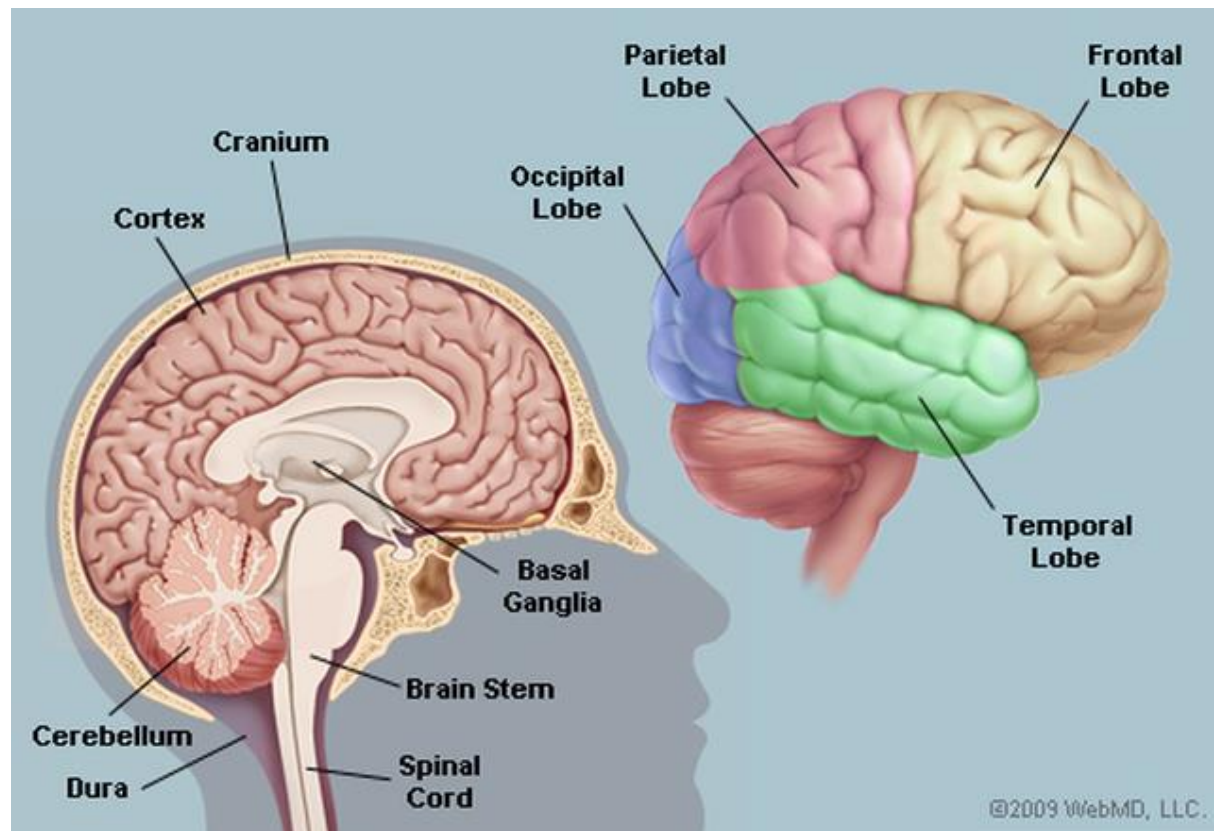
## Multitasking Optimizes Performance

**Ya – NO! This is a Myth a Big Illusion**

- ▶ Stanford Research: Frequent multitaskers performed worse because they had more trouble organizing their thoughts and filtering out irrelevant information, and they were *slower* at switching from one task to another

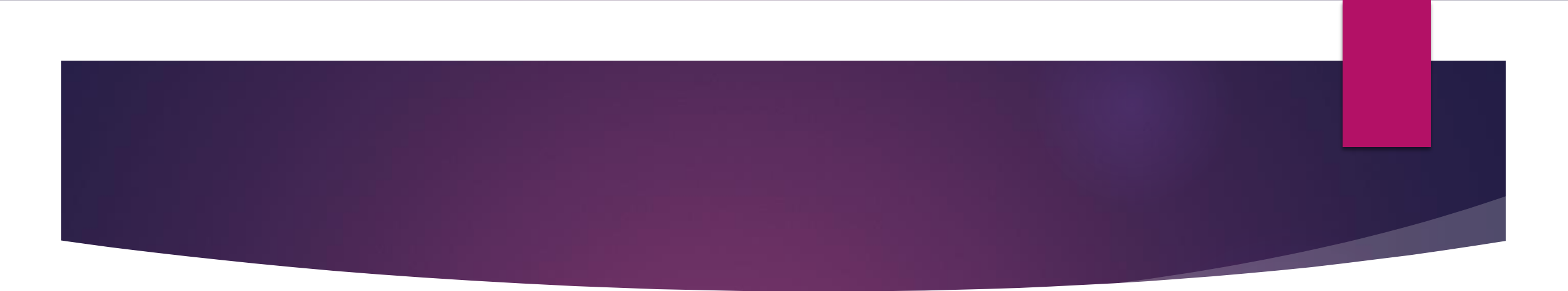
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- ▶ University of London found people who multitasked during cognitive tasks experienced IQ score declines similar to if they had smoked marijuana or stayed up all night. IQ drops of 15 points for multitasking men lowered their scores to the average range of an 8 year old child.
  - ▶ University of Sussex compared the amount of time people spend on multiple devices (such as texting while watching TV) to MRI scans of their brains. They found that high multitaskers had less brain density in the anterior cingulate cortex, a region responsible for empathy as well as cognitive and emotional control.





# Psychological Refractory Period

- ▶ Occurs when two tasks are performed at the same time and the reaction time to one of the tasks is delayed because of the presence of the other task.
  - ▶ So we are slower to engage a conversation
  - ▶ To pay attention to nonverbal cues
  - ▶ To shift our focus to the other “to dos”

- 
- ▶ When the brain is presented with two tasks at once, it quickly toggles back and forth between tasks.
    - ▶ But when your brain receives more information than it can process, an area of your brain called the posterior lateral prefrontal cortex (pLPFC) takes over
    - ▶ pLPFC will line these stimuli up in a queue, rather than trying to handle them simultaneously
      - ▶ But this will translate to homework, chores or other tasks not getting done

Cortex. 2013 Nov-Dec;49(10):2845-52

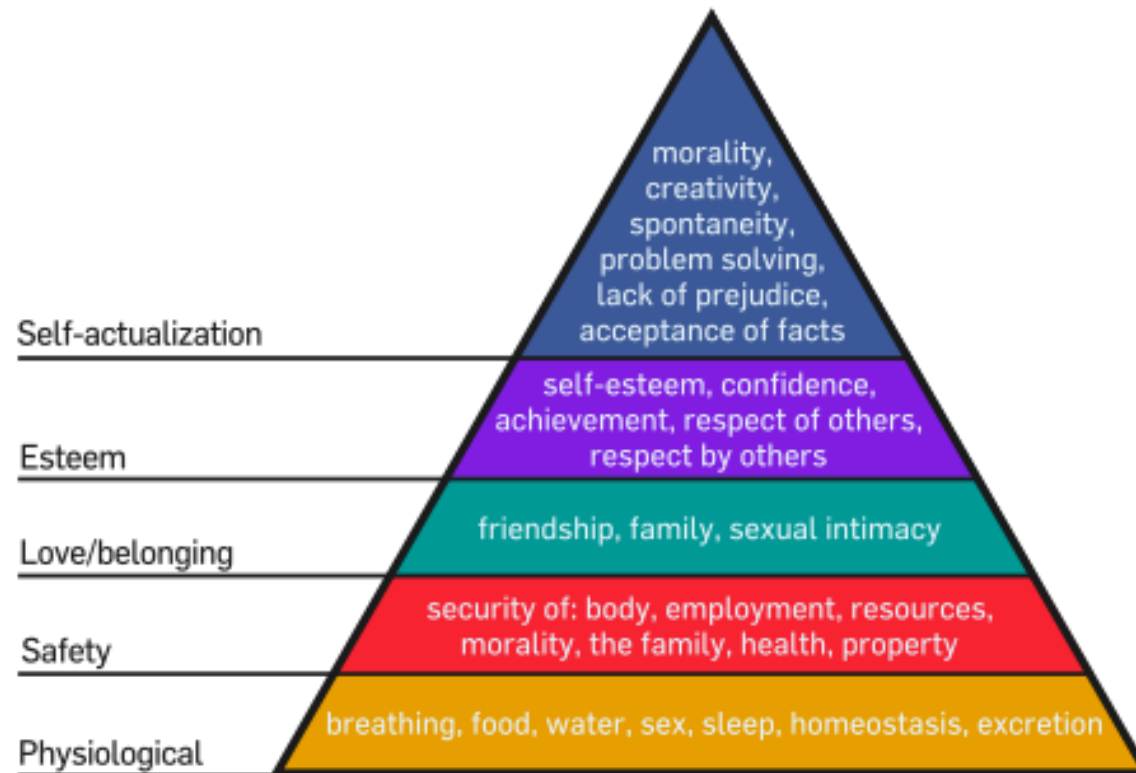
# Psychological Development

Stage	Psychosocial Crisis	Basic Virtue	Age
1	Trust vs. mistrust	Hope	Infancy ( 0 to 1 ½)
2	Autonomy vs. shame	Will	Early Childhood ( 1 ½ to 3)
3	Initiative vs. guilt	Purpose	Play Age ( 3 to 5)
4	Industry vs. inferiority	Competency	School Age ( 5 to 12)
5	Ego identity vs. Role Confusion	Fidelity	Adolescence (12 to 18)
6	Intimacy vs. isolation	Love	Young Adult ( 18 to 40)
7	Generativity vs. stagnation	Care	Adult hood( 40 to 65)
8	Ego integrity vs. despair	Wisdom	Maturity ( 65+)

# Technology as a Coping Strategy



# Good ol' Maslow



# What Makes Media so Powerful?

- ▶ Three main intrinsic needs involved in self-determination
  - ▶ Competence/mastery
  - ▶ Autonomy
  - ▶ Relatedness
- ▶ These needs are innate and universal across culture and time



# What Makes Media so Powerful?

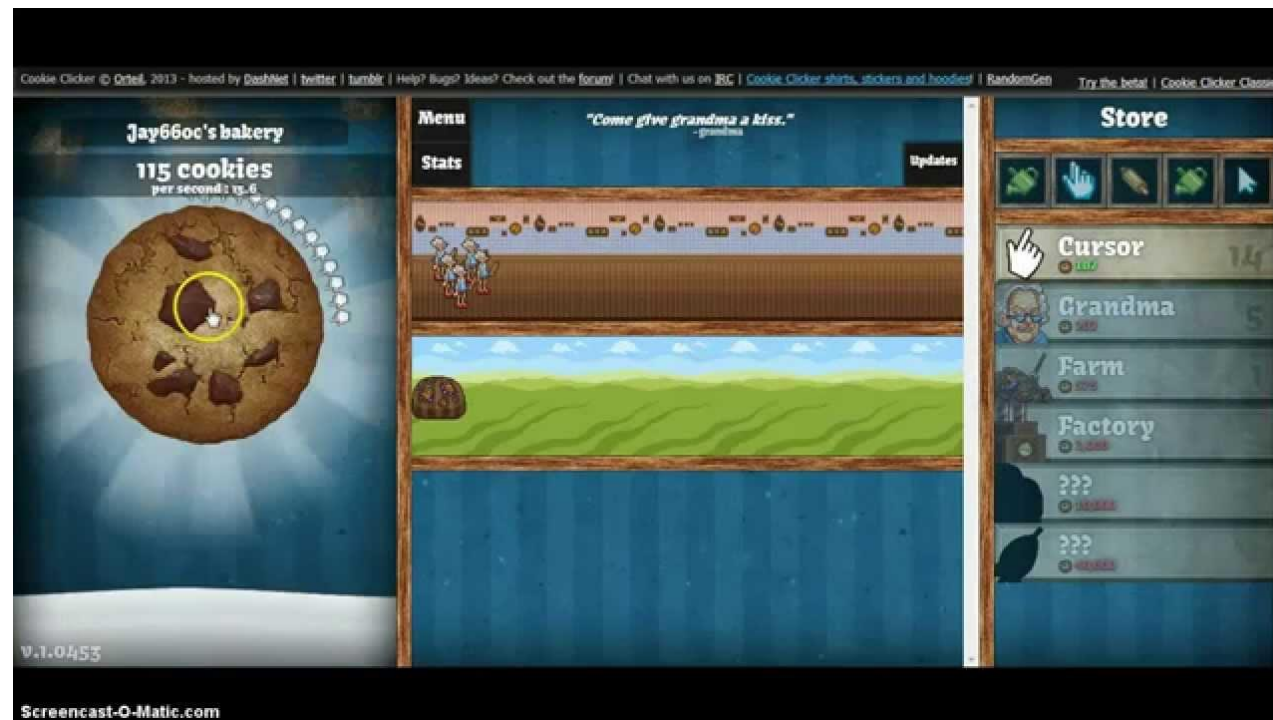
- ▶ People show commitment and effort to meet these needs that, if met, allow psychological growth
  - ▶ When these needs are not met there are negative consequences
- ▶ Electronics can give the sense of meeting these emotional needs conveniently
- ▶ Easier and faster than alternative real world solutions



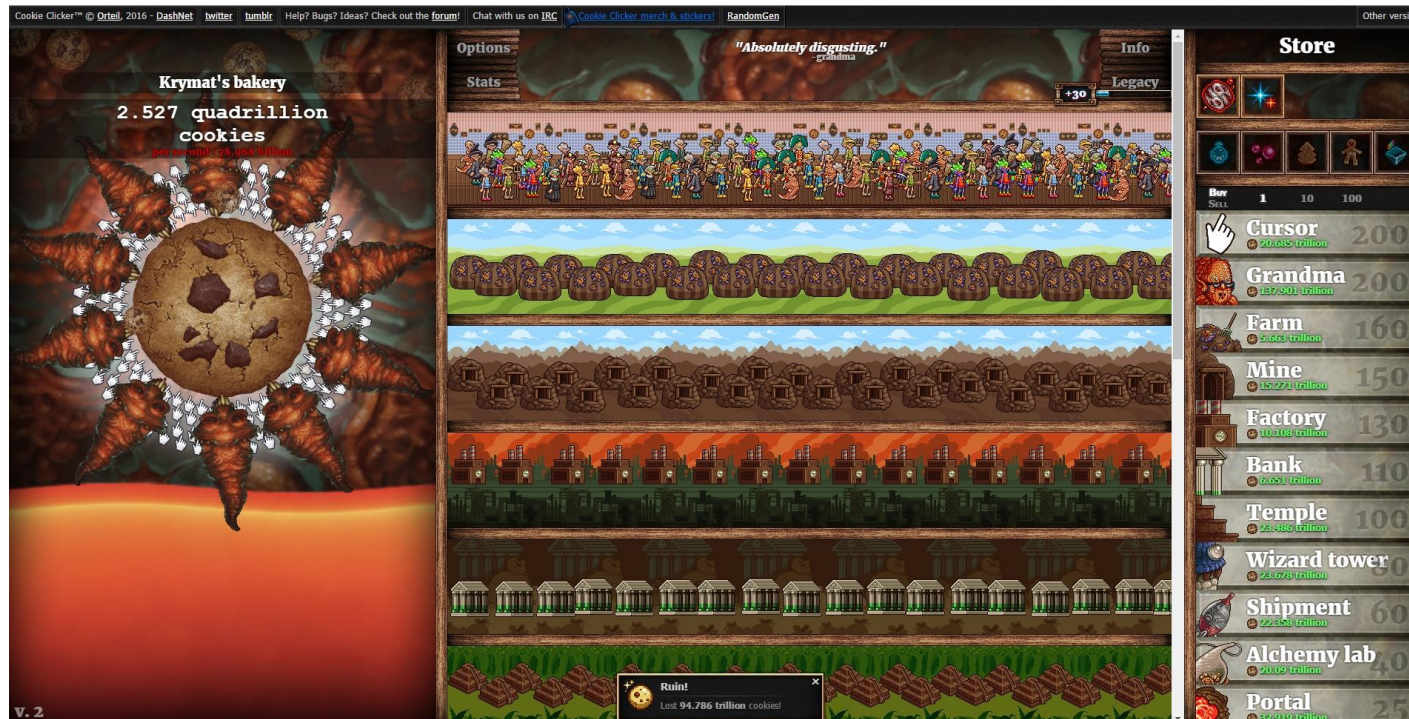
# Competence



# Competence



# Competence



# Autonomy



Relatedness

**facebook**

**You**  **Tube**

Technology = Convenience



# Why is this a Problem?



- ▶ Creates false sense of accomplishment
- ▶ Short-term resolution
- ▶ Needs are only met while engaged in the activity

Aristotle



Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.

AZ QUOTES



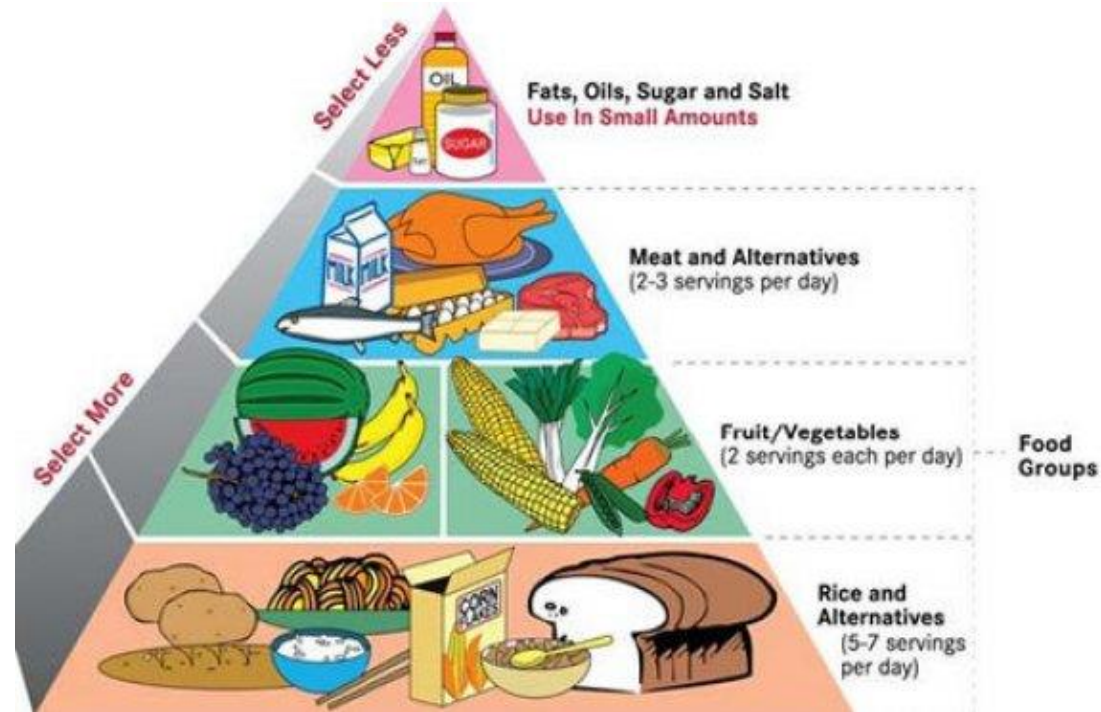
# False Panacea

- ▶ Imagine a pill that could make you feel full
  - ▶ This would not meet your underlying need for nutrients, but could mask your body's signals for such needs
  - ▶ Over time you could become dependent on such a pill because it is easier, cheaper, and more convenient than a healthy diet, all the while your body physically deteriorates
- ▶ This pattern becomes more likely the more immediate and effective an activity is
  - ▶ Pain medications are a relevant example

# Decreases Resilience

- ▶ Creating the perception of meeting these emotional needs very quickly lowers the threshold/expectation for how hard one should work to meet needs
- ▶ Real life is significantly more difficult in comparison
- ▶ Start to crave constant stimulation
- ▶ More difficult to cope with boredom, anxiety, etc.
- ▶ Perpetuates external sense of control, harder to focus self or calm self when necessary

# Think of Your Diet



# Is Media Bad?

- ▶ Can be healthy in moderation
  - ▶ Interact with others
  - ▶ Exercise brain and vision
  - ▶ Make quick decisions
  - ▶ Distraction from life stresses
  - ▶ Can help to cope with everyday life
  - ▶ Educational
- ▶ Similar to many other conveniences in life
- ▶ Many healthy things in life can become unhealthy in excessive doses



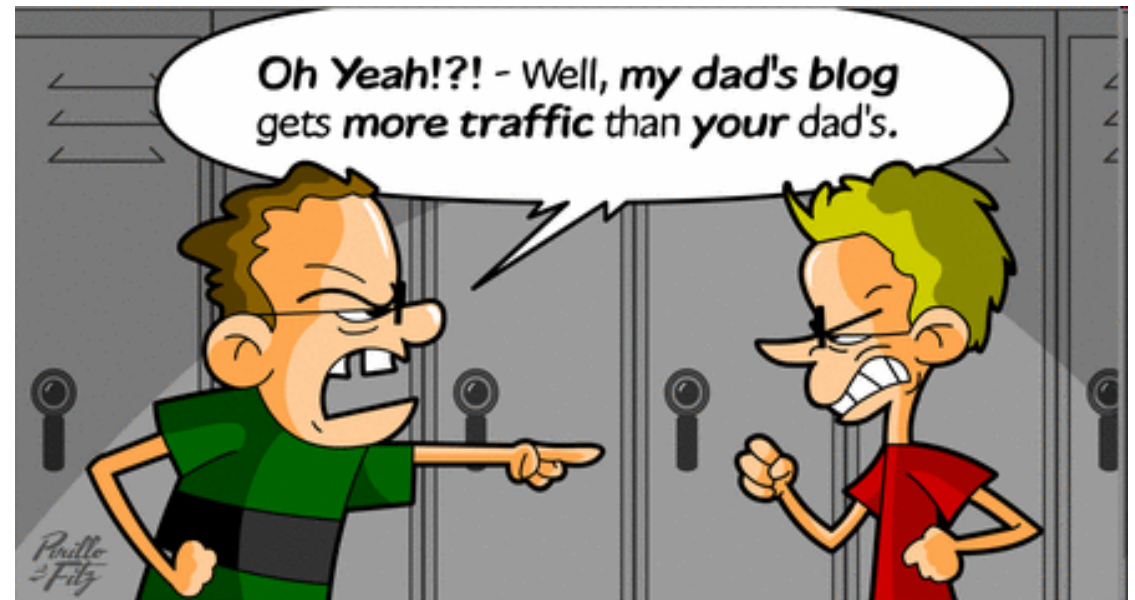


# But...

- ▶ When you have excessive exposure to technology and come to rely on it to meet your emotional and psychological needs, there becomes increased risk for...

# Consequences

- ▶ Obesity
- ▶ Social communication deficits
- ▶ Academic decline
- ▶ Cyberbullying
- ▶ Increases in aggression
- ▶ Diminished sleep
- ▶ Increased risk of mental health concerns
- ▶ Social isolation
- ▶ Easier access to inappropriate/adult content



# The Big Question – What to do About it?



**PARENTING**

Who Says It Has To Be Difficult?

# Be Objective





# Be Objective



# Basic Parenting Principles Still Apply

- ▶ Parents have always had to balance providing opportunities for autonomy and independence with protection through supervision and limits
  - ▶ This has historically occurred in the physical world (riding bikes, playing outside, driving, etc.)
  - ▶ Now more of this balance occurs in the technological world
- ▶ Valuable to provide authoritative parenting
  - ▶ Overly permissive or authoritarian parenting are high predictors of opposition and defiance in children and teens

# Basic Parenting Principles Still Apply

- ▶ Must recognize child's emotional and developmental needs
  - ▶ Setting limits is important, but relying on this to keep the child safe will be counterproductive
  - ▶ Continue to support ways for the child to explore independence and autonomy within limits that are provided
- ▶ It is generally more effective to focus on behaviors that are to be *increased* than those to be *decreased*

# Reinforcement vs Punishment

- ▶ Reinforcement = increases the likelihood of a behaviors occurring in the future
- ▶ Punishment = decreases the likelihood of behaviors occurring in the future
- ▶ Intent does not matter
- ▶ Can only be determined by evaluating if frequency of behaviors has increased or decreased
- ▶ Provides input as to what is motivating to the child

# Parent Strategies

- ▶ Promote intrinsic motivation
- ▶ Emphasizing restriction of media is not always useful
  - ▶ People can continue to fantasize about media even when it is not present
  - ▶ Create plan to meet other needs before entertainment
- ▶ Recognize that efforts to change are countered by culture and peer influence
- ▶ Figure out what you can do together
  - ▶ Seize opportunities to build relationships and make compromises
  - ▶ Work together on activities, deal with ending and starting activities together
  - ▶ Try trade-offs – do dishes together, play games together
- ▶ Practice thinking out loud

# Parent Strategies

- ▶ Understand what needs are met by this behavior
- ▶ Develop alternatives strategies to meet those needs
- ▶ Understand difference between reinforcement and punishment
  - ▶ Reinforcement increases likelihood a behavior will happen in the future
  - ▶ Punishment decreases likelihood a behavior will happen in the future
- ▶ Model behaviors
  - ▶ Children learn through modeling
  - ▶ Teenagers are sensitive to hypocrisy

# Intrinsic Motivation

- ▶ Feedback from others and rewards for efforts to meet these needs affect intrinsic motivation
- ▶ Positive feedback increases intrinsic motivation
- ▶ Negative feedback diminishes intrinsic motivation



# Internalization

- ▶ Transforming extrinsic motivators into personal values
- ▶ More likely to occur when there is a sense of relatedness
  - ▶ Especially when there is a sense of understanding, caring, and safety
- ▶ Competence in activities promotes internalization
- ▶ Autonomy is important when trying to internalize behaviors
- ▶ Increasing a person's choices and options tends to increase intrinsic motivation
- ▶ Giving unexpected positive feedback tends to increase intrinsic motivation
- ▶ Giving unexpected negative feedback tends to decrease intrinsic motivation
- ▶ Behavior that is not intrinsically motivated is not persistent



# Develop Executive Skills

a goal without  
a plan is just  
a wish - Antoine de Saint Exupéry

- ▶ Task initiation
- ▶ Perspective taking
- ▶ Metacognition
- ▶ Problem solving
- ▶ Goal setting
  - ▶ Explicitly teach, model, and reinforce skills
  - ▶ Set goals
  - ▶ Create plan
  - ▶ Follow plan
  - ▶ Evaluate and modify plan as necessary

# Strategies for Teens

- ▶ Learn to do what works
  - ▶ Speak in complete sentences
  - ▶ Make to-do lists
  - ▶ Do it or write it down
  - ▶ Seek out opportunities to learn
- ▶ Be proactive
  - ▶ Schedule
  - ▶ Visualize

## to do list

1. Make vanilla pudding. Put in mayo jar. Eat in public.
2. Hire two private investigators. Get them to follow each other.
3. Wear shirt that says "Life." Hand out lemons on street corner.
4. Get into a crowded elevator and say "I bet you're all wondering why I gathered you here today."
5. Major in philosophy. Ask people WHY they would like fries with that.
6. Run into a store, ask what year it is. When someone answers, yell "It worked!" and run out cheering.
7. Become a doctor. Change last name to Acula.
8. Change name to Simon. Speak in third person.
9. Buy a parrot. Teach the parrot to say "Help! I've been turned into a parrot."
10. Follow joggers around in your car blasting "Eye of the Tiger" for encouragement.



**Give me six hours to chop down a tree and I will spend the first four sharpening the axe.**

Abraham Lincoln

# Use Technology to Your Advantage

- ▶ Apps
- ▶ Reminders
- ▶ Alarms
- ▶ Be more efficient
- ▶ Use technology to learn
- ▶ Focus on technology as a tool to support other aspects of life rather than replace them
  - ▶ Texting/social media
    - ▶ Texting and social media can serve to enhance relationships by conveniently connecting with people, or
    - ▶ It can damage relationships by replacing other interactions
  - ▶ Video games can be a reason to get together with friends

# Learn to Calm Yourself

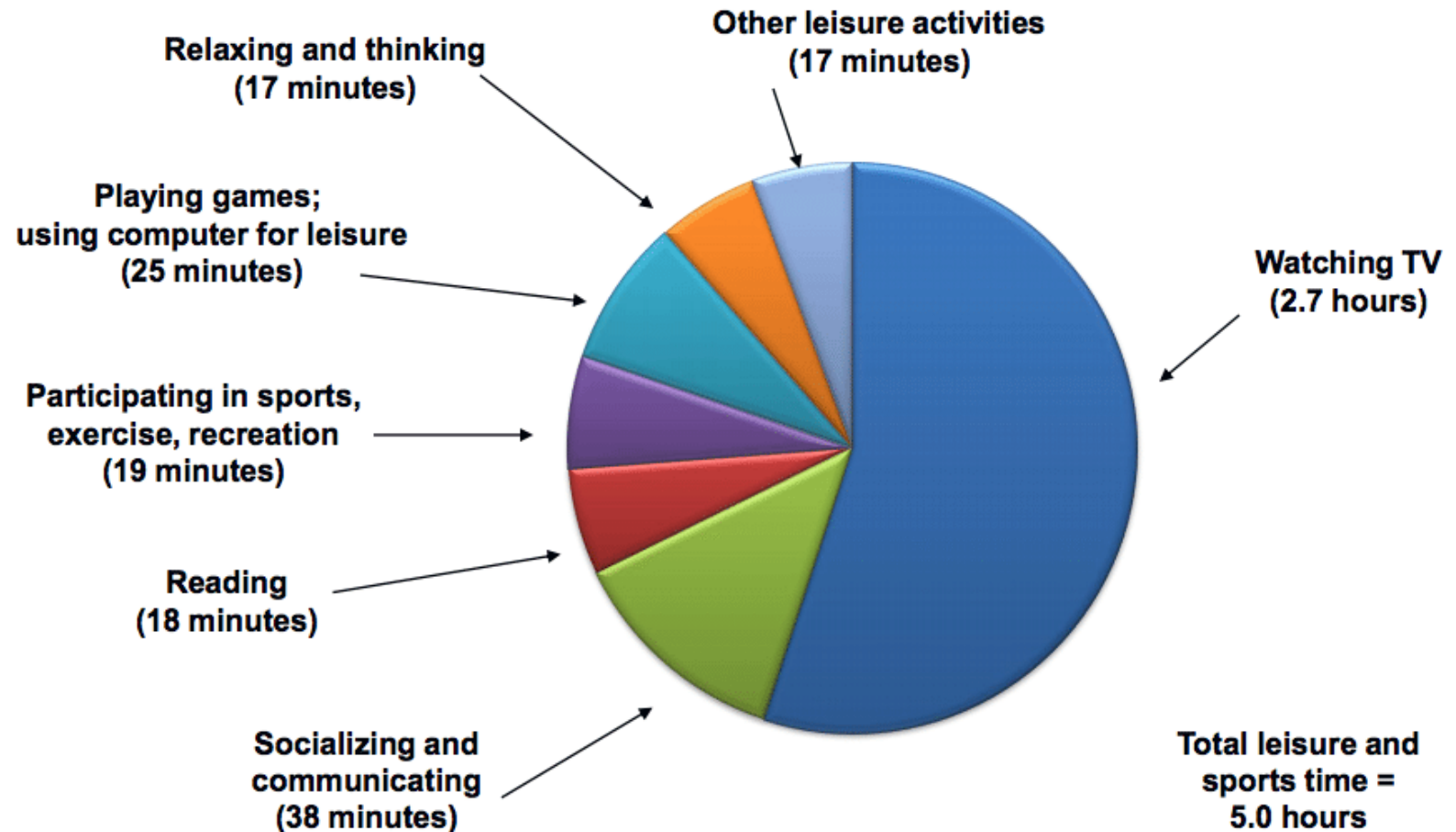
- ▶ Mindfulness
  - ▶ Open, undivided attention to what is happening within and around oneself
  - ▶ Learning to relax
  - ▶ Attend to senses
  - ▶ Being “in the moment”
- ▶ Use calming strategies before and after more stimulating activities



# Create a Family Media Plan

## Leisure time on an average day

- ▶ Identify how much time to spend sleeping, exercising, reading, with media, etc.
- ▶ Create media free areas in the house
- ▶ Keep electronics out of the bedroom
- ▶ Turn off electronics 1 hour before bedtime



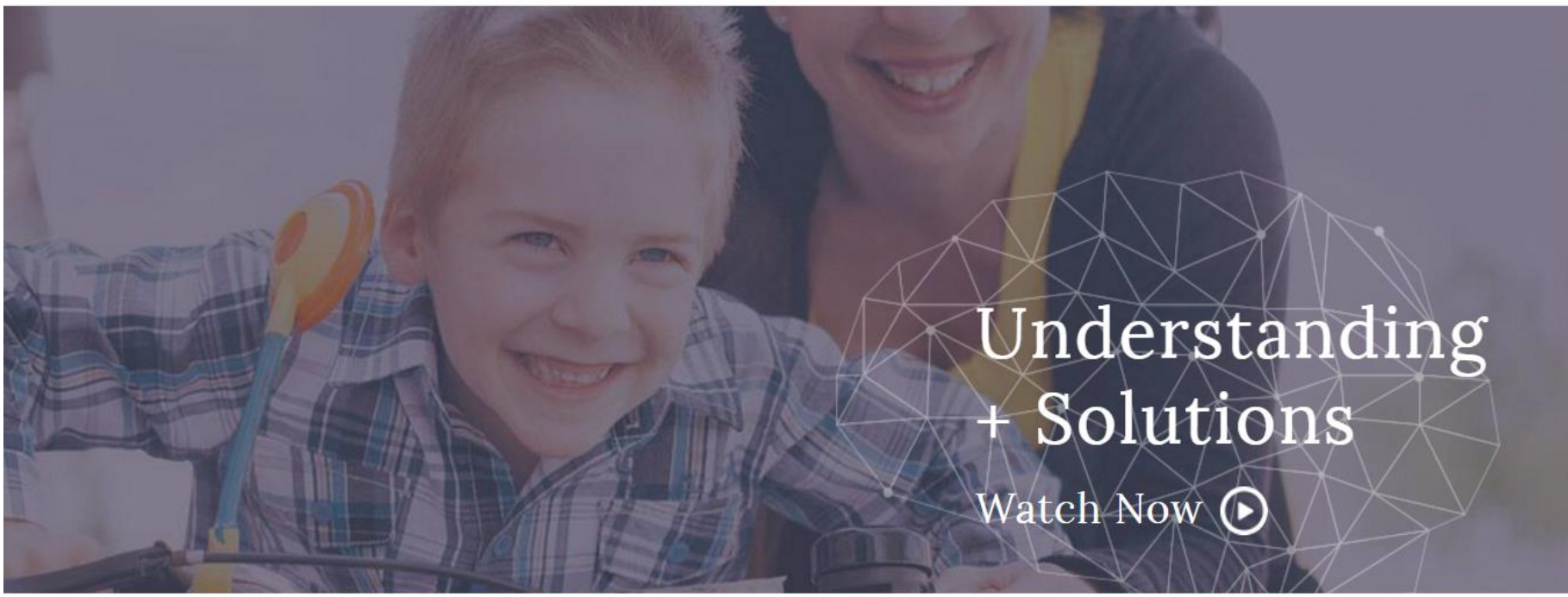
# What Next?

- ▶ Continued excessive use can be sign of underlying mental illness such as ADHD, anxiety, or depression
- ▶ Professional assistance in these situations
- ▶ When in doubt, consult



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