New Technologies and Old Brains: Challenges of Digital Interactions:

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Objectives

- Communication and the brain
- Adolescents' development, brains, and digital behaviors
- It's not all bad: positive aspects of social media for adolescents
- What can adults do to support youth on social media?





Communication and the Brain

- Human beings are social much of our brain is involved in social interactions. It works to help us understand and predict each other's behaviors.
- Social brain: networks of brain areas that enable us to recognize and be attuned to others' mental states, emotions, and actions.
- Theory of mind: ability to think about what others are thinking, which develops over childhood
- A complex network of areas is involved in recognizing basic and complex emotions and mental states in others.





The Social Brain

- Children's brain development depends on social experiences which build strong neural connections (Harvard's Center on the Developing Child)
- Mirror neurons activate to reflect another's actions and emotions, as if we were experiencing the same action or emotion.
- The brain works to reinforce positive social interactions when someone responds positively to our behavior, the neurotransmitter, dopamine, is released and we experience it as rewarding, leading us to be socially motivated and engaged.





Verbal and Non-Verbal Communication

- Our brains evolved for face-to-face interactions.
- Before the 15th century when the printing press was invented, most people only communicated through face-to-face interactions.
- Brain is highly adapted: research on literature shows that it can create a deep experience of social interactions, which facilitates social understanding, capacity for empathy, and social inference.
- Literature is carefully crafted to provide the emotional and intentional cues that support social understanding.





Growing Up in a Digital World

- Vast change in the nature of human interaction, with information and communication technologies
- Interactions that were once face-to-face are now digital teens prefer texting to talking (Pew Report)
- Text-based interactions are limited in non-verbal cues emotional expressions, gaze, tone, body language.
- But digital conversations are experienced as being more expressive and disclosing, contributing to perceptions of greater similarity and closeness





The Adolescent Brain: Work in Progress

- Adolescence is a period of significant biological, social, and psychological changes – tied to brain development.
- Capacities for executive function and self-regulation start in early childhood, but connecting neural networks continue develop through adolescence and early adulthood
- Brain structure changes (e.g., decreased grey matter volume, which is, in part, pruning of unused synapses)
- Brain function changes (e.g., recognizing faces & emotions).
- Reward sensitivity increases, which may be positive (e.g., praise for academic achievement) or risky (e.g., peer reinforcement for deviant behaviors)





Adolescents: The Self and Social Realms

Development of:

- Identity and self awareness: mattering
- Sexuality and sexual orientation
- Autonomy and relatedness
- Close peer relationships, belonging
- Intimate partner relationships





Challenges on Social Media for Adolescents (and Us!)

- Complexity of sending and receiving text communications
- Complexity of privacy, consent, & anonymity
- Longevity of text messages and digital images
- Managing one's identity adolescents have an average of 145 Facebook friends (Girls – 175, Boys – 100) (Pew Report)
- Challenge of understanding the impact of an online communication on the receiver





It's Not All Bad!

- Youth rely on technology to socialize and communicate with existing friends, which may contribute to adolescents' identity formation, autonomy, and intimacy
- ICT enables to youth stay connected with friends, regardless of the physical distance between them
- ICT enables youth to seek, access, and offer support
- Youth at the margins (e.g., LGBTQ youth) can find others who are similar to them
- Provides connectedness through gaming





Are We Trustworthy Supports?

- Many youth who are cyberbullied want adult support and are willing to approach adults who have been helpful before – who were caring, empathetic, and strong listeners
- BUT youth didn't expect teachers at their schools to provide support following cyberbullying
- When unsupportive, there is a risk of not only being unhelpful, but also making life harder for youth
- We're not seen as helpful, without education and experience with ICTs, social media, and cyber





Adults' Role in Supporting On- and Off-line Interactions

- Role Models children are highly attuned to our behaviors at all times – still face experiments
- Healthy adult-child relationship one that values, supports, helps to buffer and doesn't create stress
- "Recognize me!" -- caring, empathetic, and **strong listener**
- Scaffold to self-reflect, regulate, and consider issues of identity, privacy, consent, and impact
- Monitoring does not equal spying





Digital World is Here to Stay!

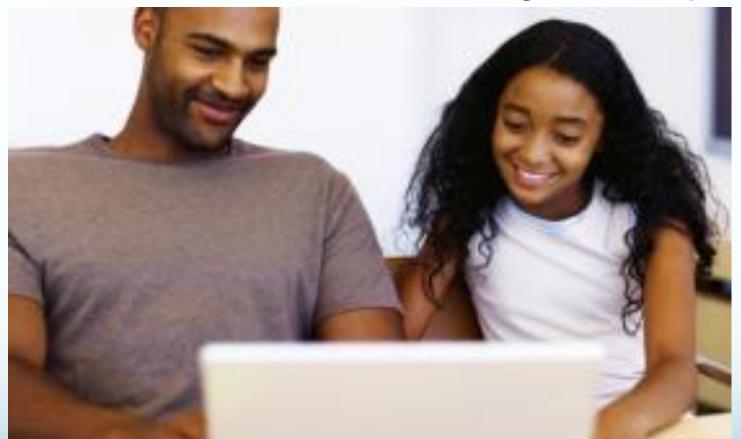
- 92% of teens report going online daily (Pew Report)
- Youth are more advanced than adults in ICT use
- It's challenging to get around imposed restrictions
- Uncharted territory emergence of social responsibility and unwritten codes on social media
- Adolescence is a time of change and risk-taking, which makes digital communication challenging
- Honor mistakes and provide education for digital citizenship.





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Thanks in advance for all your help







Useful Resources

- Bullying, Today's Youth, and the Internet Online Symposium
- <u>http://link.brightcove.com/services/player/bcpid48001118</u> <u>16001?bckey=AQ~~,AAADf10jKiE~,mDP7QD494oB1XQX5e</u> <u>zXxoEITdrl_lc3U&bclid=4799707198001&bctid=47997491</u> <u>15001</u>
- Pew Report Teens, Social Media and Technology

http://www.pewinternet.org/2015/04/09/teenssocial-media-technology-2015/



