


Growing up in a Digital World...

Wiring kids for distraction and dysregulation (and the path forward)




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Sensory Integration is the Foundation of Development




The way the brain takes in and organizes information from the environment and from our bodies to adapt and respond to everything we experience throughout the day




Where's the white space??
Space to calm, to be bored, to exercise, to get creative

Development is disrupted: Children are getting wired for Distraction and Disorganization



High speed Sensory and Information Overload

VS



Focus and Filtering to accomplish goals

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Where's the opportunity to connect with people INSTEAD OF devices to build relationships and collaboration??

Piaget's 4 Cognitive Stages

0-2 Years	Sensorimotor stage: sensory experiences and physical action
2-7 Years	Preoperational stage: words, images, symbolic thinking
7-11 Years	Concrete operational stage: logical reasoning and classification of object/
11-15 Years	Formal operational stage: abstract reason, idealism, complex logic

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This is NOT new: 2007



Marketers know how to tap into emotions to gain attention

Slot machine
Effect/Rewards

Need to be seen/
Feel Significant



Need to Reciprocate

Fear of Missing out

Impulse to compare
self with others

Texts, Email, YouTube Social Media, Notifications

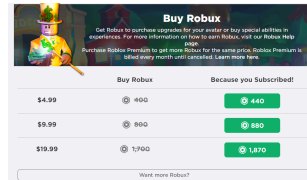


"The fundamental difference between computers and the human mind is the basic organization of memory." Computers organize logically and linearly. The brain remembers based on cues (other information and memories). It can connect and reconnect information in unlimited ways. This is how we get inventions/innovation.

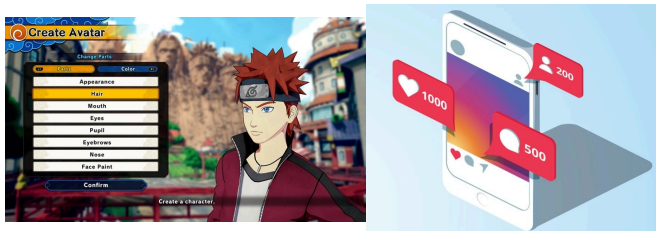
- Gary Marcus (Book on the Human Mind)



Technology is great at giving rewards to keep us connected



Tech also makes kids feel important or like the Hero of Their Own Story



But just for a moment if you don't keep playing/posting.....

Media Values Engagement over Sustained Attention. We are left with Kids who are Distracted, Disorganized, and Dysregulated



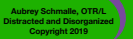
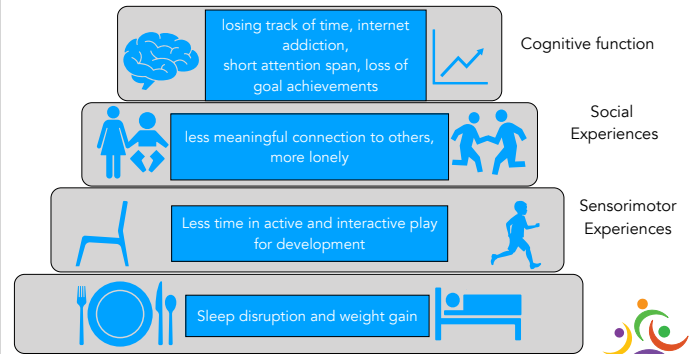
So why is Silicon Valley sending their children to Tech Free Waldorf Schools?



Waldorf Schools: a teaching philosophy focused on physical activity and learning through creative, hands-on tasks



Behavior Changes



Human Needs

Certainty	• assurance you can avoid pain and gain pleasure, safety, security
Uncertainty/Variety	• the need for the unknown, change, new stimuli, adventure
Significance	• feeling unique, of value, important, special or needed, independence
Connection/Love	• a strong feeling of closeness or union with someone or something
Growth	• an expansion of capacity, capability or understanding
Contribution	• a sense of service and focus on helping, giving to and supporting others



Technology Taps into Lower Needs

Certainty	• assurance you can avoid pain and gain pleasure, safety, security
Uncertainty/Variety	• the need for the unknown, change, new stimuli, adventure
Significance	• feeling unique, of value, important, special or needed, independence



BUT meeting higher needs when you feel safe and connected to the world around you is what builds lasting happiness and success

Connection/Love	• a strong feeling of closeness or union with someone or something
Growth	• an expansion of capacity, capability or understanding
Contribution	• a sense of service and focus on helping, giving to and supporting others

Goals, Close relationships, Sense of belonging and value



Fast Facts from the CDC, DOE, and School Violence Reports

- Rate of anxiety increased from 7.1% to 9.4% in teens pre-pandemic
- 44% teens report feelings of sadness and hopelessness in 2021
- The number of children receiving special education is up from 11.6% in 2010 to 15.9% in CT in 2022
- 15% of kids are receiving special education under Other Health Impaired compared to only 12% for Autism
- Cyberbullying was at 16% in 2021 vs 8% in 2009 for high schoolers



Physiological Changes from Screen Use Affect How Kids Feel and How They Sleep



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Blue Light From Screens



Boosts energy and mood but exposure at night
can disrupt melatonin production and sleep

Impact of Technology and Blue Light on Vision

Nearsightedness

Poor functional
vision

Retinal Damage

Dry Eyes

Computer Vision
Syndrome

Affected an average of 19.7%
of kids in 2015



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Postural deficits leave kids uncomfortable and irritable



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Postural Deficits and Tech Neck

- In a study of 207 children and adolescents, 180 with non-specific neck pain reported flawed extension in their neck and back while studying and using smartphones and tablets. (Fares, Fares, &Fares, 2017)
- 21% also had eye symptoms
- 82% reported a change in psychological and social behavior



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Screen Use also Impacts Learning



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