The Four Foundational Harms of a Phone-Based Childhood

In this text, I describe the four foundational harms of the phone-based childhood. These are profound changes to childhood caused by the rapid technological shift of the early 2010s. Each one is foundational because it affects the development of multiple social, emotional, and cognitive abilities.

- The sheer amount of time that adolescents spend with their phones is staggering, even compared with the high levels of screen time they had before the invention of the iPhone. Studies of time use routinely find that the average teen reports spending more than seven hours a day on screen-based leisure activities (not including school and homework).
- The opportunity cost of a phone-based childhood refers to everything that children do less of once they get unlimited round-the-clock access to the internet.
- **Social Deprivation:** The first foundational harm is social deprivation. When American adolescents moved onto smartphones, time with friends in face-to-face settings plummeted immediately, from 122 minutes per day in 2012 down to 67 minutes per day in 2019. Time with friends dropped further because of COVID restrictions, but Gen Z was already socially distanced before COVID restrictions were put in place.
- **Sleep Deprivation:** The second fundamental harm is sleep deprivation. As soon as adolescents moved from basic phones to smartphones, their sleep declined in both quantity and quality around the developed world. Longitudinal studies show that smartphone use came first and was followed by sleep deprivation.
    - Sleep deprivation is extremely well-studied, and its effects are far-reaching. They include

depression, anxiety, irritability, cognitive deficits, poor learning, lower grades, more accidents, and more deaths from accidents.

- **Attention Fragmentation:** The third fundamental harm is attention fragmentation. Attention is the ability to stay on one mental road while many off-ramps beckon. Staying on a road, staying on a task, is a feature of maturity and a sign of good executive function. But smartphones are kryptonite for attention. Many adolescents get hundreds of notifications per day, meaning that they rarely have five or ten minutes to think without an interruption.
    - There is evidence that the fragmentation of attention in early adolescence caused by problematic use of social media and video games may interfere with the development of executive function.
- **Addiction:** The fourth fundamental harm is addiction. The behaviorists discovered that learning, for animals, is "the wearing smooth of a path in the brain." The developers of the most successful social media apps used advanced behaviorist techniques to "hook" children into becoming heavy users of their products.
    - Dopamine release is pleasurable, but it does not trigger a feeling of satisfaction. Rather, it makes you want more of whatever you did to trigger the release. The addiction researcher Anna Lembke says that the universal symptoms of withdrawal are "anxiety, irritability, insomnia, and dysphoria." She and other researchers find that many adolescents have developed behavioral addictions that are very much like the way that people develop addictions to slot machine gambling, with profound consequences for their well-being, their social development, and their families.

When we put these four foundational harms together, they

explain why mental health got so much worse so suddenly as soon as childhood became phone-based.

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