

## The Myth of the Digital Gene

by Mary Rothschild

The “Digital Gene” is part of a media-centered story about what children need to prepare for their futures. Mary Rothschild who founded a crafts center for young children and has taught Children and Media at Fordham and Adelphi Universities, proposes a human-centered alternative to that narrative and explores what is known about what very young children need to face the future, whatever it may bring, using all the tools their culture affords.

What follows is the transcript of a TEDx talk by Mary Rothschild

The digital gene. What is that? This talk has nothing to do with whatever you’ll find if you google the term and nothing to do with genetics. So, if that’s what you wanted, my sincere apologies, that’s not what you’re going to get.

(Laughter)

I first heard this term “the digital gene” a few years ago. This woman from the children’s media industry said, quite offhand “Well, kids are born with a digital gene now.” It really took me aback.

My interest is in children from birth, actually pre-birth, to age six and to see this of their lives was shocking. What I’ve seen is that this term “the digital gene” is part of a larger narrative, a media-centered narrative, a mythology if you will, that goes like this: children are born with a digital gene, they are digital natives. We have to prepare them for a digital world, a digital future in a digital landscape. Therefore, it is assumed that they will have digital media from the very beginning. They might even need to have digital media from the very beginning.

I do get it. Children do seem to pick up these devices and they do seem to know right away how to use them. That’s true. And it is just as natural for my daughter to go to YouTube to find out how to do something with her daughter as it was for me to go to The Mother’s Almanac with her thirty years ago. We do need to be competent, literate participants in the technologies of our time. I even advocate for coding as part of Media Literacy education. However, there is something more than that narrative.

### Human-Centered Narrative

There is something more human-centered and it goes like this: We are in fact living, breathing, thinking feeling embodied humans on a living planet and the future is, by definition, unknown.

## Attention: Importance of the First Six Years

So, the faculty that we all need and that we need to help children develop to navigate that future to take advantage of all learning, no matter what form it takes, is attention.

Dr. Michael Posner, a developmental psychologist, says that attention is like an organ system in the body, much like respiration and digestion and its structure is neurological. So, when we're looking at developing attention that basic neurological development, the forming of that structure during the first six years of life is vital during that six years, because in those six years there is more dynamic neural connection than at any other time in life. There are other very dynamic times, such as adolescence but this is where the basic worldview is formed in these neural connections. They connect in a kind of dance between our genetic predispositions and our environment.

So, if in fact attention depends on healthy neural development, we need to look at some of the things that help that development in young children.

I want to point out a few of those things, assuming there is good nutrition, sleep and safe physical conditions.

### Components of Adult Attention: Love, Adult Model, Orientation and Vigilance

The first is adult living attention. There are four components to that. The first is that attention of an adult is like weather to a child. They pick up on it directly. When an adult (not focusing in a worried way) but living attention - it is like sunshine for a child. If you're sharing a task with a child under a common attention to something. It's like: "Wow! This is a good place to be!"

The neurons will fire in a way that says: "The world is open. There's potential and abundance."

The state of the adult models something for the child. So, if we're centered, even attempting to be centered, the child sees that potential for themselves.

I have a friend who says she remembers the first time she saw someone being simple, just being attentive to what they were doing. She recognized it as something she wanted and was possible for her, even as a young child. It was her grandmother stirring a pot of pasta sauce.

The state of the adult, the "weather conditions" are interconnected.

The third is orientation. A child tends to orient toward what the elder is oriented toward and what the environment says is important. I'm old enough to remember when there weren't televisions in every house. The night the television came into our home, I was standing on the stairs, looking down at the living room. I have a visceral memory of the furniture all moving to face the screen and realizing that something had happened about whether we would be facing each other or facing the screen. When we walk into the home, what seems to be the most important thing? What is primary? The other thing is, now children might wake up in sheets that have media figures, put on clothing that has logos, so the question of orientation is broader and more ubiquitous for them.

Because they are in a state of trust that the people who take care of them: clothe them, feed them, are bringing these things, they must be good for them, need to be where they are paying attention. So, it is important to look at that.

The fourth thing is: vigilance. As parents, we are vigilant. We're trying to do our best. In terms of media, there are a lot of resources about how to distinguish between educational media, entertainment media and advertising. The American Academy of Pediatrics has good information on their website about media.

One point I'd like to make about that, in terms of accessing resources and trying to find information: there are two perspectives. One puts children in the center of the question, their development. That's the American Academy of Pediatrics (AAP). They see a whole constellation of influences.

Then there are the people who put children + media, as assumed, in the center of the question. They tend to be more from the Communications aspect. They have different emphases. They do different work. It's important when you're reading an article about "Media is Good for Your Child" or "Media is Bad for Your Child" to look below the surface and see what the perspective of the person who wrote the article or did the study is.

### Exploring the Environment: Free Play and Quiet

The other thing I want to talk about is free play. It is very important that children have the freedom to explore their environment. Everyone knows that free play is good. Children learn a lot of social things there. But people also say "If digital media is part of the environment, why wouldn't we encourage children to explore with that? There is a fundamental difference there. The main characteristic of free play is that it is open-ended and self-initiated. With digital media tools and apps, there is only one way, the way it is programmed. It can only do that one thing. It is an important distinction.

The other thing about manipulation and relationship with the environment is - quiet: leaving time when the child can just be quiet and observe. We give our children a tremendous gift when we allow them time that isn't programmed, when we're not worried about them being entertained or engaged. They can just be. It's a tremendous skill, for one thing.

This stillness is very important for all of us in terms of attention and Sherry Turkle points out in her book: *Alone Together* that if we don't allow our children, help them to know how to be alone, they will always be lonely, because they'll always be seeking connection.

My undergraduate students are concerned about their younger siblings and relatives, even though they are only nine or ten years younger, because they see this radical change in play and lack of any time that isn't connected.

### Going on to Narrative:

A very important part of neural development is stories. Stories use a lot of our neural connections. We all know that children love stories and stories are how, down through the ages, we have passed on culture and tradition.

We are surrounded by popular culture stories. The through-lines of popular culture stories are: you can never look good enough, you can never have enough stuff, and violence is an acceptable way to solve conflict. When those narratives come with strong visuals, they can be extremely overwhelming for a child.

One of the pivotal moments in my work came a number of years ago. I founded a crafts center for children. We were making bread one day. Everyone had their piece of dough. I looked up and thought "Wow! It has been four or five minutes of quiet, everyone just

kneading their dough" (my idea of heaven) and "This is why I started the center, to have these opportunities."

This little girl next to me looked up and said "The Lion King Video is too loud." What is this? I listened, thought maybe it is on the street or something; maybe someone is playing the music. I said: "I don't hear it" and she said "It's in my head."

(Gasps)

That was the moment when the idea, the intellectual understanding of how these images are intruding on imagination and attention became real and I knew I had to go work on it.

All these things take time. We can bring these strong tools of our own stories to our children: family stories, the habit of exchanging at the end of the day about how the day went. When we go back over vacations or trips to the park with a child and we say what we saw, they say what they saw, narrative psychologists call that "thickening the story." It helps children with empathy because they see that there is actually more than one way to see something: the same event happened and different people had different impressions about it.

We have our larger family stories: perhaps of immigration, suffering, trials . Then, we have our faith, humanist, ethnic stories to bring to children to make them feel situated in the world.

Robyn Fivush and her colleagues at Emory University did research on myth and ritual in American life and they found that adolescents who know their family stories are exponentially more resilient in adolescence, judged by drug use, alcohol use, truancy. It makes a difference.

Time

All these things take time and parents do not need guilt about not having time. So, the way I appreciate framing the question about time is to look at what's already there. What time is there - going to and from places - that can be repurposed. Of course, it's great if people can change their schedule to make more time, but if they can't, they can look for where they can find time.

Greetings and partings are very important for children. I hear from preschool teachers that at the end of the day, children are very excited with a story to tell or a drawing to show and the parent is there, looking at their phone, saying "get your coat, get your coat."

We don't need guilt, but we do need awareness. If we take the step back and we put relationship and healthy development in the center of the question, popular culture and media can re-orient and can actually serve us. And we won't be alone. There's a groundswell of people who are trying to find time for each other, trying to find how to use digital media intentionally and not be so obsessed with it. We need to encourage each other to share ourselves, our stories, our time our attention with our young children. We're laying the groundwork for possibly more difficult conversations that will come. It will help in the future. It's amazing the kind of societal shift that is happening. The people in Silicon Valley, according to an article in the New York Times, where do a lot of them send their children? Media-free Waldorf Schools. Bill Gates' children didn't have cell phones until they were twelve years old.

They know something. Because, if that myth is true, if children do adapt to these things so easily from the beginning, what is the rush? If it is so important to have these sensory experiences, to have healthy connection with family and narratives, why not do that first?

It's going to lay the groundwork to be able to use everything in life and to face the future, which is unknown, with agency and joy. From my point of view that's an investment worth making.

Thank you.

(Applause)

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For more on Mary Rothschild's work read: [Considering Media in the Light of Relationship and Attention](#)