

Super Size Me: The Overconsumption of Technology

Through the pervasive influence of digital media, technology is reshaping our diet, our behavior and our ability to learn.

Denise Visuaño

Western Oregon University

Connections

As late as the 1950s, dinner at home was typically a family affair, with dad, mom and the kids seated around the dining room table. A home-cooked meal was presented, accompanied by conversation about the day's events. The family meal was an important (if occasionally underappreciated) tradition and provided a shared experience that affected the senses: hearing, taste, sight, smell and touch. Dinner together was a time to recharge and reconnect, to laugh and tell stories, to develop a sense of who we are as a family. Sharing a family meal is nourishment for both the spirit and the body. If we cannot make time to come together "in the fullest, richest sense of the word, we lose the opportunity to form those deeper bonds" (Jackson, 2009, p. 63).

Sharing a meal also can have a positive impact on a child's language acquisition and literacy development. Meals together needn't be limited to the dinner hour; breakfast might be a better option for a busy family with other after-school and evening commitments. Family meals can provide opportunities for a parent to speak to a young child, to help them learn words and

build conversation. Family meals also provide a means for daily communication and strengthening of family connections.

The importance of this bonding time was well understood by Steve Jobs. Perhaps surprisingly, this high tech executive was opposed to using technology at the dinner table. He and his wife made a point of having dinner with their children, “discussing books and history...[n]o one ever pulled out an iPad or computer” (Bilton, 2010). Another leader in the tech industry, former editor of *Wired* magazine Chris Anderson noted that his children accuse him of being a fascist, because their friends are not restricted by the same set of limited-technological rules. But he understands the risks better than most, having seen the dangers of online abuse firsthand. Bilton (2010) also noted that Evan Williams, founder of Blogger and Twitter, allows his sons to have hundreds of printed books they can read any time they choose instead of using iPads.

Our need for technology has also outpaced our desire for other “IRL” experiences. The emergence of different family styles, such as single-parent and dual-earner homes, has also had an impact. What is the new normal for today’s meals—when nearly half of Americans eat on the run, and 25 percent of those meals are ordered from our cars (Jackson, p. 98)? And when we do gather together for a meal we bring uninvited “guests” to the table, attached to our hands, with our eyes glued to the small screens. Our need to stay connected through digital devices affects all family members, regardless of age. Children, rightfully so, expect their parents to abide by the same set of guidelines for dinner etiquette. According to Hiniker, et al.’s (2016) research, all family members shared the same concern: when in each others’ company, both parents and children pay attention to one another. We are easily distracted from things that should matter most: thoughtful and healthy choices for our emotional and physical well-being.

Diet and nutrition play a vital role in the development—or hindrance—of a child’s behavior and cognitive ability. A good breakfast can directly affect the mental capacity of school-aged children, while meals high in saturated fats, salt, sugar, chemicals, and caffeine leave kids tired and unfocused. Grades and performance are affected, as well as behavior and mood. According to the Society for Neuroscience, diets with high levels of saturated fat have been shown to impair learning and memory (Hiniker, 2016). Good food is vital for good performance—healthy, nutrient-rich food even more so. Long-term neural issues in the brain also can be a result of malnutrition, which negatively impact a child’s reaction to stress. Researchers discovered that of the children surveyed in a recent study, one-third reported lowered school achievement, illness, and routinely made unhealthy food choices. A poor diet “impacts a child’s attitude and behavior, both in and outside of school” (Chen, 2016). Do kids show up to school prepared to learn? Sociologists have studied the effect of diet and nutrition and claim that a higher-quality diet is associated with better test scores. Several studies also show that nutritional improvements “can influence the cognitive ability and intelligence levels of school-aged children” (Dykstra, 2016).

For Convenience’s Sake

Convenience stores are turning into the grocery stores of choice for many, and fast food has become an acceptable alternative to fine dining. Jackson (2009) interviewed a supervisor for several 7-Eleven stores who was extremely diligent about tracking the amount of fiber, sodium, sugar and other ingredients in her fiber bars and her child’s organic baby food. Another concern, however, was uppermost in her mind: portability. “I’d rather be eating and moving and doing something productive,” she stated (p. 102). It would seem that to her, sitting down to enjoy a meal equals time wasted, denying the need for contemplation or reflection, or even permitting

the mind to slow while the body catches up. This hurried rationale for consumption (be it food or technology) in our multitasking lifestyle is shared by millions. It would explain the growing number of restaurant and fast food apps now available for our smart phones.

It is estimated that a significant number of America's youth are overweight, by a ratio of one in three (Chen, 2016). Merely consuming calories is not a fit substitute for getting adequate nutrients in our diets. Many schools have banned fast foods, French fries and other chemically processed items from their lunch programs. Since this healthier focus on food in American schools began in 1997, Chen states there have been reports of fewer cases of dropouts, drug use, weapons and fighting... "with a simultaneous rise in student performance" (2016). There is no doubt resistance amongst the rebels, but teenagers are demonstrating growing awareness of the power of food over their lives. In 2016, an Australian study interviewed 30 children about their social media use and consumption of fast food. A 12-year-old boy noted a recurring theme on his social media sites: "I don't know why, but I think some of the ads on the internet show me more of the things I want to see and I am interested in...like when there is a new product of something" (Thaichon).

It is not just the convenience of easily purchased, quickly consumed junk food that has grabbed Americans by their throats. By 2006, there were more than 1,300 food products with the word "go" printed on the label, a rise of 50 percent from the previous year. Jackson noted a six-foot section in the center of the store dedicated to the theme of "nutrition," (i.e. bars for energy, meal replacement, breakfast). This market has "experienced double-digit annual sales growth nationwide since the late 1990s" (p. 103). Our perception of food as fuel is reflected in the look and feel of what we consume and could be comparable to the concentrated, dehydrated single-serving meals we feed our astronauts. Eating on the run (in the car, at our desks, while watching

TV) is the new norm.

Kevin Elliot, the vice president of merchandising for 7-Eleven concurs with the need for speed, noting that food is merely functional; if you have a protein or breakfast bar, you have a meal that can be eaten in minutes. McDonalds customers agree with the dinner-on-the-fly timeline; the average fast food meal takes about 14 minutes for Americans to consume. The French linger over their burgers and fries for at least 22 minutes. The proof of our fast food addiction and popularity is reflected in the bottom line. \$110 billion dollars were spent on fast food in 2010; an increase from \$6 billion in 1970 (Jackson, p. 107). We claim to want nutrition (at least in bar or burger form), but we must eat it quickly. We want it in liquid form, so we can drink it in a hurry. Or we'll consume our food-like choices as fat-laden, factory-formed sticks and patties, so we can shove them down without being overly concerned about the consequences.

Plugged In

The increasing use of technology has helped influence this change in our dietary habits, but it is only part of the equation. Each year, American youth ages 8 to 18 spend nearly 4,000 hours absorbed in digital media (Strauss, 2014). They spend more time connected with their devices than with any other activity besides sleeping. With the well-practiced skill of multitasking, scrolling through social media while posting images from their phones, plugged into MP3 players while simultaneously playing video games online; it's not difficult to log in excessive hours online. What Postman (1985) envisioned has surpassed his fears in this technological age. He believed firmly in what Marshal McLuhan taught him in graduate school: "the clearest way to see through a culture is to attend to its tools for conversation" (p. 8). We haven't evolved significantly from passive television watchers of a generation ago to passive (and massive)

consumers of digital media.

The examples of tech executives who understand the need for balance with low tech engagement is telling. Through this coursework, a teacher shared that she has witnessed this same phenomenon in her classes. Parents in the high-tech-use category/higher-income bracket prefer less technology usage in the classroom. Their children typically use these devices with more discernment and display higher levels of critical-thinking skills. In contrast, children from low-tech-use/lower-income families tend toward eager, but less focused, and passive consumption of digital media. Parents in general, however, are concerned with their children's heavy use of technology and fear their child's development might be limited by exposure to advertisements, bullying, and other forms of harassment. It is widely acknowledged that learning how to use technology is critical in this age of technocracy. Teachers and students alike benefit from the various ways technology can impact effective learning experiences. But learning how to use digital devices does not equate to using them well.

Another side effect of this digital addiction is the risk of serious illness. Obesity and cardio-metabolic health issues are on the rise for youth across the U.S. Addiction to video gaming has been associated with health risks such as sleeping disorders, high blood pressure, high cholesterol, and high blood sugar in adolescents ages 2 to 19 years old (Turel, 2016). Researchers have found that more than 30 percent of gamers present serious addiction-like symptoms, and the number of health-related issues for these individuals is expected to rise. Furthermore, childhood obesity tends to continue into adulthood, putting these children at risk of developing Type 2 diabetes and cardiovascular diseases as adults. This behavior, coupled with poor dietary habits, could be a contributing factor to the difficulties students (and adults) have with distractions and the ability to pay attention in school (or at work). If they aren't sick, they

are probably tired. If they are hungry, they are understandably distracted. If they aren't hungry, then they likely are due for a hard crash after the sugary, caffeinated breakfast or lunch they grabbed out of habit. Or desperation.

Ooooh...Shiny

As technology has evolved and nutrition quality eroded over the years, advertising has helped lead the charge. Television and social media advertising significantly influence the types of purchases that children (or their parents) often make. Digital advertising is more pervasive than ever, streaming from our TVs and screens in commercial jingles or through the ubiquitous use of product placement. Companies frequently target children, and social media present new opportunities to market to them. In 2012, fast food companies allocated 19 percent of their online marketing to Facebook. Big brands such as Starbucks, McDonalds, Pepsi and Subway use various tactics such as celebrity endorsements, free product tie-ins, competitions, videos and discounts to encourage interaction between their brands and their customers (Thaichon, 2016). Marketing executives have no problem exploiting the trusting nature of children, or their ability to influence parents' resistance.

Postman (1985) comments on the void in communication that pervades television, although his focus was on news shows that were, in his opinion, essentially *anti*-communication programming. Logic and reason were abandoned, he reasoned, and the ultimate goal was to create content of short bursts that require little critical thinking. It still is. He quoted Robert MacNeil, co-anchor of the *MacNeil-Lehrer Newshour*, that the news should "provide constant stimulation through variety, novelty, action, and movement" (p. 105). This same practice is easily applied to advertising: visual stimulation trumps thought, instant gratification trumps

actual need. Audiences are not expected to think, but to react and to pay attention for no more than seconds at a time. Successful ads effectively distract us. The moving bits of information tease and cajole us, but without context or continuity, we lose historical perspective. Postman (1985) quotes Terence Moran that the snippets of information we receive “cannot be integrated into an intelligent and consistent whole.” He argues that we don’t necessarily find it useless to remember or that we refuse to do so, but rather that “we are being rendered unfit to remember” (p. 137). Are we changing how we think? Are we changing in our ability to think? One could argue with the staggering amount of banality on TV (reality shows), collectively, we choose not to think.

Banner ads and marketing messages appear constantly on social media sites, bombarding children in increasingly sophisticated ways. “Liking” a page or posting a comment might cause that action to appear in the news feed of their friends Facebook sites, appearing as an endorsement of the brand. Thaichon, et al. found that more than half of the children in their survey were overweight or obese. All the children interviewed had been using the Internet and social media for at least one year. They were shown images of fast food marketing, such as images of posts, links, and ads that featured toys, and were encouraged to talk freely. “Most of the ads on my page are food that I like to eat,” a 15-year-old boy observed. “The advertising sometimes makes me even want to have them more.” An 11-year-old girl recognized that a person “would seem to be an idiot if you don’t know this [fast food] stuff has been around on Facebook or Twitter. My friends and I always talk about it” (2016). Several themes were revealed through the recorded interviews; visual appeal and peer pressure mattered, and all fast food ads were associated with fun and socialization with their friends.

Parents of the children interviewed all made nearly the same admission: They try (and

more often than not, fail) to encourage their children to eat healthy food. A mother claimed that her children would complain and cry if she refused to buy them burgers or chicken nuggets. Another mother wanted her kids to eat fresh food, but found she “simply can’t stop them from eating fast food. They will nag and feel upset for the whole day” (Thaichon, 2016). Faced with mutinous children, doing what is best for them is a challenge. Advocating for their health should not take a back seat to doing what is easy.

The marketing experts also know that social media content can motivate the consumer to navigate to linked URLs, in the case of these children, for example, to get more information on the toy collections they were seeing. Ads can clearly make fast food, especially the advertiser’s promotional gimmicks, even more appealing. Does the visual appeal at a young age extend to brand loyalty as they grow older? Or is it forgotten as quickly as the next ad that pops up in their browser? Postman (1985) describes a “peek-a-boo world” where images and information quickly move in and out of our vision; with little or no sense of permanence or relevance (p. 77), and our wavering attention spans are grateful. American society embraced television, to the point where Postman wondered if it was merely a reflection of our culture or had helped shaped it. He then concluded that television gradually “became our culture” (p. 79). The age of the internet can be compared to television on steroids. Computer technology has usurped the power of television as the dominant source of information and entertainment. We are consuming more information than ever before, with the sheer number of devices and media available around the clock and around the world in the blink of an eye. The information being presented is so fragmented and fraught with errors and bias that it borders on irrelevance. Are the news and information we receive nothing more than show business, meant to entertain and not educate? Whether through the medium of television or the World Wide Web, Postman (1985) feared that the crux of the

problem is that we are not troubled by the loss of deep-thinking skills, “and decide we like it just fine...exactly what Aldous Huxley feared was coming” (p. 80).

Technology Working for Positive Change

To paraphrase Neil Postman (1992), it is clear that not all technology is created equal, and that technological advances bring with them both curses and blessings. Resources exist much the same as they did in previous tool-using societies: to “solve an urgent problem or...serve the symbolic world of art, politics, myth, ritual, and religion” (p. 23). When we treat technology with respect and thoughtfulness, these tools can be helpful and powerful instruments for the betterment of society. There are many types of technological aids that teachers employ to educate their students, dismissing all digital devices and media as harmful is naïve. How we choose to wield them is critical to our behavior, our health and our development as human beings.

There are online sites that cater to the growing demand for healthy meals (with fresh ingredients) that can be ordered online, delivered by mail, and prepared in the home; it’s convenient home cooking without the stress of shopping in person. *Blue Apron* and *Hello Fresh* are two such companies that are showing tremendous success in the marketplace. *Blue Apron’s* meal kit sales have more than doubled since 2016, from \$300 million to between \$750 million and \$1 billion in revenue (Rao, 2017). These meal delivery services provide the recipes and pre-portioned ingredients and offer meal kits that meet many dietary restrictions, such as gluten-free, paleo, vegan, and diabetic friendly.

There are apps that help promote better health and understanding of nutritional needs, and about the quality of the food in the marketplace. *Fooducate* is an app that scans a barcode to reveal the calorie count, fat, sodium or other ingredients. *True Food* lists foods that do not

contain modified ingredients as “green” against those that do contain GMIs/GMOs, or “red” foods. While there is debate about whether genetically modified organisms are harmful, the Center for Food Safety reports that more than 70 percent of packaged foods have been chemically altered (Bernstein, 2013).

There are apps that can help you with impulse control issues when you can't seem to keep from being distracted while online, or ensure that unsupervised children in the home are using the technology safely. Approximately three in 10 children under the age of 18 use the internet without any parental restrictions (Jackson, 2012). SelfControl is an open-source application for Mac OS X, developed by a high school student in 2010, that helps you limit access while working online. Simply put, you set the app's timer, and access to email and web surfing is blocked. While this sounds like a basic solution to our inability to police our own activity, it could be extremely effective against our waning impulse control.

There are web technologies that can help patients and their doctors work together online, to get the real facts and advice about their health needs, rather than Googling their symptoms and diagnosing themselves. As a way to reduce costs, the Affordable Care Act pushed for a reduction in paperwork and unnecessary testing. With a doctor-patient portal, patients can access health information from their home computers, send questions, and see test results outside of office hours (D'Alessandro, 2001). For this to be effective communication, however, patient information has to flow freely.

While not technology, per se, public schools offer breakfast and lunch programs to help combat the poor nutrition children face daily – and have found that “schools with high participation rates for breakfast programs, have, on average, higher Academic Performance Index scores than schools with low breakfast program participation rates” (Wright, 2015).

Students who eat breakfast, on average, get better grades. More importantly, children who eat a higher quality, nutritionally adequate diet improve their cognitive and mental abilities.

Shake it up and start fresh

The era of June Cleaver and family around the dinner table may be in our past, but it is not completely forgotten. Revived traditions of family meals (sans big Macs) and conversation (minus cell phones) are being forged. Family meals provide an avenue for daily communication and strengthening of family bonds. When our digital devices are put aside for even a brief time, opportunities for meaningful dialog can occur. While cooking together might not be an option for families with young children, preparing food together can be a creative way to promote healthy eating.

Finding ways to disconnect can be challenging for the parents of digital natives – and for themselves. Changes can be made with both groups online habits, by way of either activity or context restraints. Moderate use of a device, balanced with outdoor activities might be suggested, or allowing online activity only after certain chores or homework have been completed. Being respectful of personal information is important to both parents and children. There is a risk of over-sharing that many parents overlook when posting about their children (especially teenagers). Respect each other's privacy, but enforce rules that protect the young from online predators. There is a growing awareness of the health risks associated with out-of-control addiction to our digital devices, to both our bodies and our minds. Technology is able to teach us much, but we need to be willing to learn the right lessons. Question the how and why of things. Talk with each other. Relearn to communicate in real life with real people; wean yourself slowly from the incessant demands of digital media if you can. It's worth it.

References

- Bernstein, L. (Aug. 27, 2013). 10 Top Apps for Eating Healthy. Next Avenue. Forbes.com. Retrieved from June 12, 2017 from <https://www.forbes.com/sites/nextavenue/2013/08/27/an-app-a-day-keeps-the-doctor-away/#6a12e094543a>
- Bilton, N. (Sept. 10, 2010). Steve Jobs Was a Low-Tech Parent. *New York Times*. Retrieved May 27, 2017, from <https://mobile.nytimes.com/2014/09/11/fashion/steve-jobs-apple-was-a-low-tech-parent.html>
- Chen, G. (September 22, 2016). How Diet and Nutrition Impact a Child's Learning Ability. *Public School Review*. Retrieved May 29, 2017, from, <https://www.publicschoolreview.com/blog/how-diet-and-nutrition-impact-a-childs-learning-ability>
- D'Alessandro, D.M., Dosa, N.P. (Oct. 2001). Empowering Children and Families with Information Technology. *Archives of Pediatric Adolescent Medicine*. 2001;155(10):1131-1136. Retrieved June 2, 2017, from doi:10.1001/archpedi.155.10.1131.
- Dykstra, H., Davey A., O Fisher J., Polonsky, H., Sherman, S., Abel, M.L., Dale, L.C., Foster, G.D., and Bauer, K.W. (Feb. 10, 2016). Breakfast-Skipping and Selecting Low-Nutritional-Quality Foods for Breakfast Are Common among Low-Income Urban Children, Regardless of Food Security Status. *The Journal of Nutrition*. Community and International Nutrition.

Retrieved May 27, 2017, from <http://jn.nutrition.org/content/146/3/630.full.pdf+html>

Hiniker, A., Schoenbeck, S., and Kientz, J. (2016) Not at the Dinner Table: Parents' and Children's Perspective on Family Technology Rules. *CSCW '16*. Retrieved May 20, 2017, from http://yardi.people.si.umich.edu/pubs/Schoenebeck_FamilyTechRules16.pdf.

Jackson, M. (2009). *Distracted: The Erosion of Attention and the Coming Dark Age*. New York: Prometheus Books.

Jackson, M. (Updated March, 29, 2012). Does Self-Control Come in an App?. *The Huffington Post*. Retrieved May 30, 2017, from http://www.huffingtonpost.com/maggie-jackson/kids-technology-addiction_b_1239213.html

Postman, N. (1985). *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*. New York: Penguin Group.

Strauss, Valerie. (August 26, 2014). Too Much Tech? An argument for keeping schools low-tech. *The Washington Post*. Retrieved May 29, 2017, from https://www.washingtonpost.com/news/answer-sheet/wp/2014/08/26/too-much-tech-an-argument-for-keeping-schools-low-tech/?utm_term=.d8fb8c998226

Rao, L. (Apr. 11, 2017). Here's How Much Blue Apron Generated in Sales in 2016. (Video file.) Retrieved June 4, 2017, from <http://fortune.com/2017/04/11/blue-apron-sales>

Thaichon, P. and Thu Nguyen, Q. (February 2016). Online marketing communications and childhood's intention to consume unhealthy food. *Australasian Marketing Journal*. Elsevier.

Retrieved May 28, 2017, from

<http://www.sciencedirect.com/science/article/pii/S1441358216300039?via%3-DiHub>

Turel O., Romashkin, A., Morrison, K.M. (May 5, 2016). Health Outcomes of Information System Use Lifestyles among Adolescents: Videogame Addiction, Sleep Curtailment and Cardio-Metabolic Deficiencies. *PLoS ONE* 11(5): e0154764. Public Library of Science.

Retrieved May 20, 2017, from <https://doi.org/10.1371/journal.pone.0154764>

Wright, P. Breakfast (Summer, 2014). *After the Bell: Program Yields Many Positive Results*.

California Schools Magazine. Retrieved June 4, 2017, from www.csba.org