Handout 10: Natural or Technologically-Mediated Experiences?

Technologies have the capacity to enhance our understanding of the world, each other, and ourselves. They expose us to experiences that would not have been possible without them. With microscopes we can view very small things and with telescopes and binoculars far things appear close. Trains, planes, and automobiles allow us to visit and communicate with people in distant countries while spaceships allow us to travel to other planets. In addition, the Internet, computers, text messaging, and mobile devices allows us to quickly access factual information and to communicate with anyone across the globe. Such technologies are not only in use, but they are extremely popular. In Dec. of 2012, 171.3 billion text messages were sent in the US.[1]

> **Q1:** Are there any drawbacks to increasing technologically-mediated experiences, specifically our ability to access information?
> **Q2**: Have all of our experiences become mediated by technology or do we have any completely natural experiences anymore?
> **Q3**: Is there anything about natural experiences that cannot be replaced by technologically-mediated experiences? Is there anything wrong with a *completely virtual existence* or should we *aim for a more natural life*?

Let's begin with **Q1**. In brief, we might contend that there may be two side effects to this increase in understanding:

> **Side Effect #1:** Certain cognitive abilities may be diminishing
> **Side Effect #2:** We may be experiencing information overload.

These two side effects together seem to produce certain negative effects:

Problem #1: *Addiction*. Individuals have become so consumed with technology that their behavior is similar to those suffering from some kind of addiction. More than 1 billion people are on Facebook and most users seem to spend at least 1 hour a day using it. Investigators have questioned why SNSs are so widely used and many users report behaviors consistent with Internet addiction.[2] Symptoms of such addictive behavior have been compared to those suffering with substance abuse, loneliness, and social anxiety.
Problem #2: *Attention and Driving*. Mobile devices pose an addition threat to those who drive. The CDC contends that there are three main types of distraction: visual (taking your eyes off of the road), manual (taking your hands off the wheel), and cognitive (not paying attention to driving, e.g.

[1] http://www.ctia.org/your-wireless-life/how-wireless-works/wireless-quick-facts Accessed 1 Jan 2014
[2] Kittinger, Robert, Correia, Christopher J. and Jessica G. Irons. 2012. Relationship Between Facebook Use and Problematic Internet Use Among College Students. *Cyberpsychology, Behavior, and Social Networking* 15(6): 324-327. Anderson KJ. Internet use among college students: an exploratory study. Journal of American College Health 2001; 50:21–26. Morahan-Martin J. (2008) Internet abuse: emerging trends and lingering questions. In Barak A, ed. Psychological aspects of cyberspace: theory, research, applications. Cambridge, UK: Cambridge University Press, pp. 32–69. Watson JC. Internet addiction diagnosis and assessment: Implications for counselors. Journal of Professional Counseling: Practice, Theory, & Research 2005; 33:17–30.

thinking of other things). Visually, sending / receiving a text message involves the driver taking his/her eyes of the road for an average of 4.6 seconds. When driving at 55 mph, the driver has driven the entire length of a football field.[3] In 2011, 3331 people were killed in crashes involving a distracted driver and 387,000 people were injured in a crash involving a distracted driver.[4] However, note that distracted driving involves activities other than using mobile devices (e.g. eating).
Problem #3: *Memory*. If technologies divide our attention, this has an effect on our ability to remember. At least one study[5] shows that when our attention is divided, our ability to recall things is significantly diminished (although divided attention is linked to small increases in reaction time!).

CDQ: What other negative *cognitive* effects do you think technologies pose? What about *emotional capacities and their social* effects? How do you think technologies have changed how we interact with each other, e.g. do they create stronger, *better quality* friendships? Do they make us more sympathetic? Do they make us more loyal to our friends? Do they make us quicker to judge? How do they impact family life?

> **Q2**: Have all of our experiences become mediated by technology or do we have any completely natural experiences anymore?

Before answering this question, it is worthwhile to point out how some technologies become *naturalized*. A technology becomes **naturalized** when it isn't looked at as foreign or out of routine or even as a technology. It is when a technology becomes so integral to our lives that it seems "natural". When a technology becomes naturalized, you don't notice it as a technology.

> **E1: Flight** in an airplane isn't a novelty (unless maybe it is for the first time). Nye contends that we instead on "checking in, on leg room, on airline food, and on lost luggage" (p.189)
> **E2: Food** at the grocery store. This seems natural but much of our food is produced and stored with industrial methods and technology, chemicals, sprayed with pesticides, genetically enhanced.
> **E3: Air** in this room is modified by heating, cooling systems.
> **E4: Desks, your bed, your home, etc.**

CDQ: What are some technologies that you interact with so regularly that they are almost woven into your life? We might say that they are a part of you or so integral to the world that you live in that they seem "natural".

One important thing to note is that List some experiences you have that you think are clearly natural, i.e. not mediated or influenced by technology.

Natural Experience	Technologically-Mediated Experience

[3] http://www.distraction.gov/content/get-the-facts/facts-and-statistics.html Accessed 7 Jan 2014
[4] http://www.distraction.gov/content/get-the-facts/facts-and-statistics.html Accessed 1 Jan 2014
[5] Craik, Fergus I. M.; Govoni, Richard; Naveh-Benjamin, Moshe; Anderson, Nicole D. The effects of divided attention on encoding and retrieval processes in human memory. *Journal of Experimental Psychology*. Vol 125(2), Jun 1996, 159-180.

One difficulty in picking out a *completely natural experience* is that (i) our experience of natural objects seem to be technologically-mediated because they occur in **technological contexts**, e.g. an old oak tree surrounded by freshly cut grass with a fence around it, and (ii) many natural objects are where they are *and* are what they are because of technologies, e.g. a tree imported from another country or genetically-modified plants.

Let's assume the following answer to **Q2**:

> **A2.** There are some natural experiences and there are some technologically-mediated experiences.

Assuming this, we can ask the following question, should we aim to increase the proportion of natural experiences or technologically-mediated experiences? To put this in a more extreme way, should we try to *completely virtualize all of our experiences (all produced by a machine)* or should we *aim to increase our natural experiences*?

> **Q3**: Is there anything about natural experiences that cannot be replaced by technologically-mediated experiences? Is there anything wrong with a *completely virtual existence* or should we *aim for a more natural life*?

In response to **Q3**, we can consider two answers that sit at the extremes:

The More Mediated View: Experiences that are modified by technologies are *better* than "natural" experiences. Let's live in a virtual world!	**The More Natural View:** Experiences that are modified by technologies are *worse* than "natural" or "direct" experiences. Let's live in the natural world.
Example 1: Technologies allow for an increased breadth and access to knowledge. It allows for us to escape the limitations of our particular culture. **Example 2:** Early music recordings aimed to reproduce what a spectator might hear in the audience of a live recording. But technology (through the use of multiple microphones, modulation, and mixing) allows us to produce sound that no live spectator could hear (p.190-191). It allows you to hear more of what's going on. **Example 3:** Grand Canyon (p.195-196). Why get on a donkey and go to the bottom of the Grand Canyon when you can see and hear it all from every angle in 3D on the IMAX!!! **Example 4:** Avoid the harshness of life, in a virtual world you are not bounded by nature. You can do whatever you want and be totally free!	**Example 1:** Technologies allow for the possibility of inauthentic experiences where people pretend to be someone else, e.g. prank calls, Harassing emails, computer hackers **Example 2:** The logical conclusion of the optimistic view is dystopian. Consider E.M. Forster "The Machine Stops", The Matrix, Dark City, etc. **Example 3:** There is something valuable about the harshness of nature, something valuable about having constraints in your life so you cannot do what you want. It teaches humility. **Example 4:** A completely virtual reality strips away privacy. It allows for increased oversight by governmental agencies and potential infiltration by others.

We might reject both the **more-mediated** and **more-natural** views by trying to find a middle position. The difficulty with finding a middle position, however, will be identifying a principled way

to say which technologies *increase the quality of our experiences* and which *decrease the quality of our experiences*.

One way to do this is proposed by Borgmann, who distinguishes technologies that **engage us with the world** and those that are just **used by us**. Technologies that **engage us** are those that make demands on us, that require some skillful behavior, that require conscious attention. Technology that we simply **use** are those that work in the background and do not require skillful interaction (they just do things for us).

CDQ: List some technologies that engage us and some that we "just use".

Technologies that engage us	**Technologies that we just use**
Saw, hammer Wood burning stove	Furnace and thermostat Air conditioning Pacemaker computers

CDQ1: Pick a technology that particularly engages you and then answer the following question: What about this technology makes demands on your attention, how much do you know about how much this technology works; if this technology were a *person* would it respect you, fear you, or be totally oblivious to you?
CDQ2: Pick a technology that particularly you just use and then answer the following question: How much do you know about how much this technology works; if this technology were a *person* would it respect you, fear you, or be totally oblivious to you?

Given the above distinction, one argument for a kind of middle ground position is this:

AN ARGUMENT FOR TECHNOLOGIES THAT ENGAGE US.

P1	Technologies that we **just use** disengage us from the world by letting the machines do the work. They turn us into *infants*.
P2	Technologies that **engage us** require our attention and require the human being as an active participant. They allow us to remain *independent*.
P3	Technologies **we just use** denigrate human nature and freedom, while technologies that **engage us** promote human freedom and involvement.
C	Therefore, we should only use technologies that engage us.

O1: P3 is false. Yes, some technologies we use disengage us from the world by letting the machines do the work, but not all of these denigrate human nature or freedom. Furnaces make our lives easier, they allow us to avoid the brute labor of life. They allow us to focus on "more human" activity, e.g. reading, talking, inventing, etc.?

CDQ: Another way to approach Q3 is through thinking about what makes for an *ideal* world. First, rank the following items in terms of *most important* (1) to *least important*.

Equality of Resources	
Happiness (Pleasure)	
Intellectual Development	
New Experiences (even if they are bad)	
Respect for Human Freedom	
Social Interconnectedness	
Living a virtuous life	
Having "real" experiences	
Personal Privacy	
Other:	

Next, take a look at a set of different ways the world could be, ranging from more technological to less technological. Using your ranking above, which world do you think we should live in?

More Technological Experiences!
Out of Nature! Into Virtual Reality! All experiences are generated through a machine. We live in a world of virtual reality.
Organisms = Machines! We modify our genetic code and integrate machine parts into our bodies.
Organisms & Machines! Integrate detachable machine parts into our bodies. Allow for us to link into centralized informational networks.
Divide, Conquer, and Preserve! Preserve *some* technologies but maintain areas that allow for direct contact with nature.
A Simpler Life! Live more naturally. Depopulate cities, live in smaller, more natural habitats. Eat organic food, subsist with simple tools.
Back to Nature! The total elimination of complex, centralized technologies.
Less Technological Experiences!

CDQ: What, if any, criticisms do you have of the *Out of Nature!* World? What, if any, negatives do you have of the *Back to Nature!* World?