

Almarie Mercado

Professor Durie

Art 106 Section 01

7 September, 2021

Reading 1: Chapter 1 & 2 of “Natural-Born Cyborgs”

CHAPTER 1:

The first chapter of “Natural-Born Cyborgs: Minds, Technologies and the Future of Human Intelligence” by Andy Clark, defines what a “cyborg” is and who may be considered as one. The book has provided examples of such cyborgs as people and animals with integrated electronic devices that help them “repair” any handicap they may have. This included a rat with an osmotic pump and people with cochlear implants and/or pacemakers. However, the book also includes cyborgs that have an implemented device that do not necessarily repair a part of the body; they are just additions to the body. For example, there are pets with microchips and then there’s Professor Kevin Warwick’s implant which helps him open doors and turn the lights on and off automatically. However, Clark also mentions that a cyborg can be living organisms without the implementation of an electronic device. In particular, he reveals the symbiotic relationship of humans and machines; technology is a part of our everyday lives, helping us do the most basic of chores, while we help maintain their “wellbeing” as well as provide upgrades for them to perform even better.

The main thesis of Clark’s book would be the general definitions of what a “cyborg” is. Andy Clark states that Manfred Clynes and Nathan Kline’s definition of a “cyborg” is any living organism with an electric component implemented into their body. However, Clark restates that

it could be a living organism without the penetration of a device in their body. As an example, humans use technology in their everyday lives (such as with their phones, cars, and stoves) almost as if they were essentials.

Two non-biological self-regulating systems are toilets and furnaces. In the process of a toilet being flushed, the ballcock in the tank drops, opening a valve, and refills the toilet bowl and the tank until the ballcock rises to a certain level of water. This in return also closes the valve to stop it from overflowing. As for furnaces, they rise to the temperature it's been set to on its control panel, stop once it reaches it, and keeps the entire house/apartment at that temperature until it's been turned off. On the other hand, two biological self-regulating systems are our respiratory system and our digestive system. The respiratory system takes in oxygen and releases carbon dioxide to help regulate our lungs in order to help us breathe. In addition, our digestive system helps us break down food, turn it into energy, and release it so it doesn't get trapped in our system.

A "cyborg" I can think of that is in popular media is Cyborg from the Marvel Comics Universe. He has machinery that replaces his limbs that he lost in an accident, but they take shape as normal "human" limbs. They also can transform into weapons to what he sees fit. Cyborg is also able to fly, have laser vision, and have superhuman strength. This example shows that a cyborg not only has integrated technology in the body, but also can enhance the body to "superhuman" capabilities.

CHAPTER 2:

The second chapter of "Natural-Born Cyborgs: Minds, Technologies and the Future of Human Intelligence" by Andy Clark, reveals that there are transparent and opaque technologies.

Clark explains the differences between the two by providing examples, but he also explains that there are instances when a technology can be both. To further explain, when we create new technology, they are considered as “opaque” technology but as we figure out our way on how to use it, they become “transparent.”

Opaque technology are tools that are difficult to use at first, in which the user learns the necessary skills to master them. In other words, they are tools that humans are not naturally compatible with. As an example, we don’t know how to use electronic devices until we gain the necessary knowledge to do so. On the other hand, transparent technology are tools that are integrated into human life that they seem “invisible;” They are tools that humans have no trouble using that they are used as a part of their everyday routine. For example, we automatically know how to use our hands to touch and grab objects.

Personally, I think cars and the washing/drying machine should be more transparent because once they break down, I don’t know how to repair them. Cars have too many components underneath and in their hood (and sometimes I don’t have the money to have someone else fix whatever problem I have), so it would be nice to know in a simpler way how to fix it. As for the washing and drying machine, the same problem about having too many components makes it difficult to understand where exactly the problem resides when it breaks down. On the other hand, a technology that should be more opaque would be my laptop and phone so that no “side lurkers” or “thieves” can access whatever I put inside it.

I agree that the concept of time is transparent because we were able to understand “time” due to the rise and fall of the sun and moon. I also could see why analog clocks may seem more opaque than digital clocks; Analog clocks have multiple “hands” and “tick marks” that tell what hour, minute, and second it is. In contrast, digital clocks already show the numbers on its display.

As for the example of the dictionary, it can be transparent by easily looking up words on our devices. However, it could be opaque since it may take a while to find a specific word and its definition in a physical dictionary.