

DCS Final Essay

Throughout this course, we have used a variety of computation tools to solve unique problems and introduce ourselves to interdisciplinary subjects. Though programming languages, such as Python, or social analysis tools, such as Gephi, seem to be high tech tools of the trade, they are not immune the passage of time. In only a decade, computational developments have extended past any threshold we could have imagined. So, with that in mind, what exactly are we going to keep consistent when doing this analysis throughout the years? More specifically, what topics and aspects of computational and digital analysis can (and should) remain timeless, especially in a course such as Digital and Computational studies? In my opinion, this course needs to keep exploring how the unique characteristics of *humans* affect their interaction and generation of technologies. While it is important to understand the basics behind Python coding or XML or fractal analysis, these tools are still being placed in the hands of us, the humans, so we need to understand what we bring to the table in a growing technological world. A course like this should *never* be reduced to simply learning the mechanics, benefits, and history of computation thinks and digital tools for analysis. We need to understand the behaviors of analysts and consumers as well.

One of the most obvious statements in this essay: humans have brains, and, to an extent, a powerful memory. However, that does not necessarily mean that, for an important event, that all accounts given by even the same person are going to be accurate. When we analyzed primary sources from Gettysburg, for example, it became pretty clear that no two accounts of the same event are going to be consistent (Rael). With that in mind, now add an additional dimension to this issue: humans are now analyzing these artifacts, as well as more modern sources, through technology. Humans often suffer from a curse of “automation bias;” we have a tendency of placing digital sources as a higher priority over human accounts (Carr). So what if, for example, a historian is trying to gather testimonies of soldiers from World War Two? Instead of directly interviewing living veterans, he or she might find it less time-consuming to gather accounts through digital databases. Because those testimonies can be digitally analyzed, does that really make them a better account? Humans have the tendency to regard digital data as more “accurate” than manual, human data, and we need to study how human interaction with this technology will effect our understanding of history. As technology progresses, the emphasis on understanding human memory will be more important than ever.

In addition to having memories, humans exhibit another trait: they are extremely biased and draw conclusions from the environment around them. Regardless of the technology being used, there will always be data to analyze and humans (with biases) analyzing it. However, if a particular dataset is limited, how will someone approach it? From incomplete data, more often than not, very wrong conclusions can be drawn, and these conclusions can perpetuate stereotypes or false assumptions about a particular group of people. As we saw in two computational studies, we often use technology to make (or mediate) assumptions based off of individuals based on their age (Mining the Blogosphere), or their gender (Man is to Computer Programmer as Woman is to Homemaker?). If someone was to determine my personality solely by my Bowdoin webmail data, they would consider me a far more isolated and antisocial individual than I am in real life. By only considering a limited sphere of data, people are able to draw conclusions that support existent stereotypes, resulting in people being “labeled” and

placed into separate groups. This is often seen when examining personalized ads or news feeds on Facebook. The algorithms that generate these notifications are created by people who are inherently biased. Therefore, it shouldn't be a surprise that a person who primarily interacts with non-minority peers online will have not likely seen much news covering a shooting of an unarmed black individual, nor many recommended articles addressing racial relations (Zuckerman). Though this person could be supportive of groups that promote racial justice on social media sites such as Twitter, Facebook continues to force its user(s) to "stick with" people that have their background. Human biases can already generate conflicts in *human* interactions, and these biases can be perpetuated online with absence of "all the facts."

A third unique aspect of humans is that not all of them come from the same culture, and the behaviors of certain cultures are vital in understanding how those groups will interact with technology. It is important to understand how an individual's culture shapes their online habits, as to then understand how we can better analyze technology from different points of view. A great example of this would be learning about the anonymization of Internet users in China. While many Americans generate data through limited, and traceable sources, Chinese Internet users communicate with non-revealing screen names and in untraceable locations, such as cyber cafes. In rural areas, the importance of a factory job over a college education is frequently touched upon on social media (McDonald). In sharp contrast, southeastern Italian technology users emphasize the importance of a liberal arts education while making sure to have many separate chat groups and post *just* the right amount of information on their social media (Nicolescu). These behaviors may give us insight to larger questions, such as the role of human history or the government in regards to online activity. By having and understanding of a certain cultures online behavior, we can better appreciate how technology can both connect and divide people in certain conditions.

In our final class, we discussed how, as liberal arts students, we are not limited to "marketing" roles in the technology industry. It is important to have an understanding of technology through multiple lenses, not just a technical one. While the characteristics of technology will constantly change, is it fair to assume that there will be humans around to use these technologies; humans that approach these technologies with their brains, biases, and cultures.