



## Technological inequality

# AI can widen the “digital divide”

***What is AI and how is it used? The question is highly relevant because the issue impacts established critical issues and the relationship between people and digital technologies. The present already exposes dangers and pitfalls. But also, positive aspects that could support a virtuous path. The passage is crucial: will the so-called democratization of technology have a chance, or will the usual elites benefit from it, thus coming to deny that very “democratization” announced? For the fate of the coming global balances, this is a macroscopic dilemma. Which especially the West cannot neglect, or it will contribute to***

“AI” stands, obviously, for artificial intelligence. The contemporary and colloquial use of the term at present is a bit of a misnomer in that artificial intelligence as a discipline within the realm of computer science has been around almost as long as the modern computer. On a macro level it referred to the calculations and correlations that the machines could do using large data sets. They could process at very high rates meaning that they could in some sense surpass the speed at which the typical human brain could do the same. For example, one of the earliest dimensions of artificial intelligence work involved the software constructions of chess games, which would then be pitted against grandmasters who were willing to engage the competition. The machines tended to do extremely well against the humans since they were able to consider all the mathematical possibilities for both past moves, pending moves, and the status of the board at any given point in time. At first, the human opponents held their own, but eventually and inevitably they were defeated.

This directly relates to the second evolution in AI and that was the concept of machine learning. The machines were not just capable of processing historical extant data or making decontextualized exponential models of what could occur in the future, but they could also learn from humans themselves by collecting and categorizing the moves and strategies of the humans.

I have argued that a lot of the contemporary discussion may have less to do with AI, narrowly speaking, and more to do with the consequences, potentialities, and limitations of “machine learning.”

### **After the “Asimovian” imperative**

So why, you could legitimately ask is a Black Studies professor and former chair, a trained social scientist, so intimately concerned with and involved with discussion over AI. Beyond one’s simple scholarly intellectual curiosity and the fact that in an earlier incarnation of my life, I was deeply engaged in the examination of the social implications of technology and digitalization and in programming and its relationship to mathematics. The interest in digitalization within my discipline flagged up some key positives and negatives.

The positives the potential for preservation of images and records of primary data in the Africana world. This was no small issue as many Africana communities did not have the resources to maintain primary materials in an optimal way. Digitalization then, could be a way of saving irreplaceable historical sources for future generations of scholars and communities. It could also provide new venues for access, particular to those who could not logically get access to such materials “on-site.”

Yet, the negatives involved the fact that the very same inequities in terms of resources meant that the decisions about what would be digitized “preserved” and who would get to take advantage of the broader access potential were likely to be made by those in higher economic classes with higher levels of educational attainment and so on. In effect the elites in the world and in the domestic realm would determine what data would be available to the masses and to what degree. The democratization theoretically promised by the diffusion of computer technology was in that sense at best, overestimated, at worse, a fraud.

Thus began a major debate about the so-called “digital divide.” An exploration that sought to grapple with all the implications of the movement of data to the digital realm in a process infused with the forces of the market and embedded with prejudices of ethnicity, language, geography, religion, and other elements of social stratification.

I realize now how little most people were following this debate and how most simply didn't see it as a major issue, especially in the most technologically advanced and well-off countries of the world. I realize that because for so many AI and machine learning is raising the same exact questions that digitalization and diffusion of and increasing dependence on computers as such raised before and the reaction, even by some of the purveyors and creators of the technology, is surprise.

### **Data... factual**

We begin with the same exact issues. First, “big data.” The human family, since the dawn of the computer era, has amassed unbelievable amounts of data. Extant are the questions about who has access, who controls it, what are the rules if any about access, what happens with market rationing of access, and are there social justice issues that arise from any of these or even the mere presence of some of these data sets which can expose individuals as well as groups to a whole panoply of dangers.

We add the character of the data sets. Embedded in the “big data” is the set of decisions that humans, particularly socially powerful ones, have made about what they should contain and how they should be interpreted. These are embedded into search algorithms and machine learning models. Just as those who design educational curriculum have significant positive or negative impacts on what students learn or do not, because of their decisions, so too do the powerful architects of “big data” decide what will be “there” for us to access and consider and how we will. Their prejudices and biases become ours by fiat.

If a decision was made not to consider the importance of Africana data in some aspect, it would not be in the data set to draw on, or maybe it will be there but in a marginal way, or perhaps ideologically rejected and undermined. Yet, students, faculty, and others are given the algorithm and reliant on the data they get. Moreover, there is the market which itself is going to determine on another level the most accessible data, the most important for generating profit.

Say you have a database of Africana materials that is complete and relatively accurate. You may be in a system where access to that is rationed by the market since your potential constituency is smaller, that access is less, or even at some point, discontinued outright as not as

“socially unproductive.”

All these questions were here before the “new” AI that everyone is talking about. What this adds is that for the first time on a mass scale, the machines and programs are going to be outright surrogates to human activity and thought. Historically, all these technologies were seen as bounded by a kind of Asimovian imperative that they could only facilitate and assist human endeavor.

The increased speed and accuracy and capabilities of the modern processors is such that now, the human part of the considerations about labor and thought are inefficient. The optimal from what appears to be both a logical and profitable perspective is to simply replace the inefficient human endeavor with the machine.

The trick in this implicit logic, or to reference the rock band the Police, the “ghost in the machine” is the fact that as much as this processing is fast and accurate, it remains constrained by humanity. The data, whatever it is, has been amassed from us, with all our shortcomings and foibles, mistakes, and intentional negatives. The algorithms go no further than maximizing our capabilities to parse through the data and construct machine generated output based thereupon.

### **Possible threat**

We are back again to all the aspects of the social justice problems of the digital divide. What happens to the artistic creation of the socially marginalized when their creations can be modelled and substituted by a machine generated rendering of the same? Certainly, this is a threat to ALL creatives, but particularly to the social marginalized who already have serious impediments to the marketing and commercialization of their goods and services. What happens when we generate models for medical practice, built on data sets that included dominant peoples and populations and did not include testing for others. We have this problem already but imagine how much worse it will be when this debated and contested exclusion is



sublimated as naturalized truth, having some from our perfect machines.

There is a risk that those who are already socially and economically marginalized, already victimized by the “digital divide” in terms of access to computers, to software, to the capacity to create culturally relevant technology and culturally appropriate technologies, to power and space to store and maintain these, will now be even more thoroughly excluded from the world, where everyone else has the comfort of the bubble of a machine generated AI world that they are not a part of in an existential way. The rich will get richer. The poor will get poorer. But the biggest danger is that suddenly the work of those of us who “stand at the watch” against such eventualities will itself be further delegitimated. They will say It’s not what the algorithm says. It’s not in “the” data.



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