



Connect. Quantify. Automate. *Who? What? Why?*

Ethics and the Digital Revolution

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Views are my own.



When E. M. Forster wrote “Only connect!” he wasn’t thinking about social media. But we live in a world in which social media connects people, and the “internet of things” connects more and more people to more and more things (fridges, cars, toys, toothbrushes, turbines, pacemakers, pacifiers, light bulbs, weapons...)





A provocation?

“The ugly truth is that we believe in connecting people so deeply that anything that allows us to connect more people more often is **de facto** good. It is perhaps the only area where the metrics do tell the true story as far as we are concerned. ...”

Andrew Bosworth, Facebook VP (from internal memo circulated in June 2016, leaked to media and published in March 2018)



“.. We connect people. Period. That’s why all the work we do in growth is justified. All the questionable contact importing practices. All the subtle language that helps people stay searchable by friends. All of the work we do to bring more communication in. The work we will likely have to do in China some day. All of it.”

Andrew Bosworth, Facebook VP (from internal memo circulated in June 2016, leaked to media and published in March 2018)



People you may know?

“People You May Know, or PYMK, as it’s referred to internally ... mines information users don’t have control over to make connections they may not want it to make. ...

Even if you don’t give Facebook access to your own contact book... [i]f Facebook sees an email address or a phone number for you in someone else’s address book, it will attach it to your account as ‘shadow’ contact information that you can’t see or access. ...

Kash Hill, from “People You May Know: A Controversial Facebook Feature’s 10-year History



“... That means Facebook knows your work email address, even if you never provided it to Facebook, and can recommend you friend people you’ve corresponded with from that address. It means when you sign up for Facebook for the very first time, it knows right away ‘who all your friends are.’ And it means that exchanging phone numbers with someone, say at an Alcoholics Anonymous meeting, will result in your not being anonymous for long. ...

When you start aggressively mining people’s social networks, it’s easy to surface people we know that we *don’t* want to know.”

Kash Hill, from “People You May Know: A Controversial Facebook Feature’s 10-year History”



Whom do we want to connect with? Who do we want to know?
How well?

And do we still have the autonomy to make those choices?



“Most of us don’t ‘get online’ anymore, and younger generations will never truly be ‘offline.’ Even when we are physically separated from data connectivity, ... our digitized remnants and data trails still flow and pulse through the veins of the network.

Through 1s and 0s, data representing fragments of our lives and those of our social connections and families will be stored, aggregated, and processed. ... Many of the most important, if not downright essential, parts our lives now exist indefinitely within the network, and our devices will buzz and beep to remind us of this the moment we connect.”

Jonathan Albright, “Web no.point.0”



Amid all the connections, much data is collected—so much of it that some people forget that such collections still reflect only a subset of our multifaceted reality.

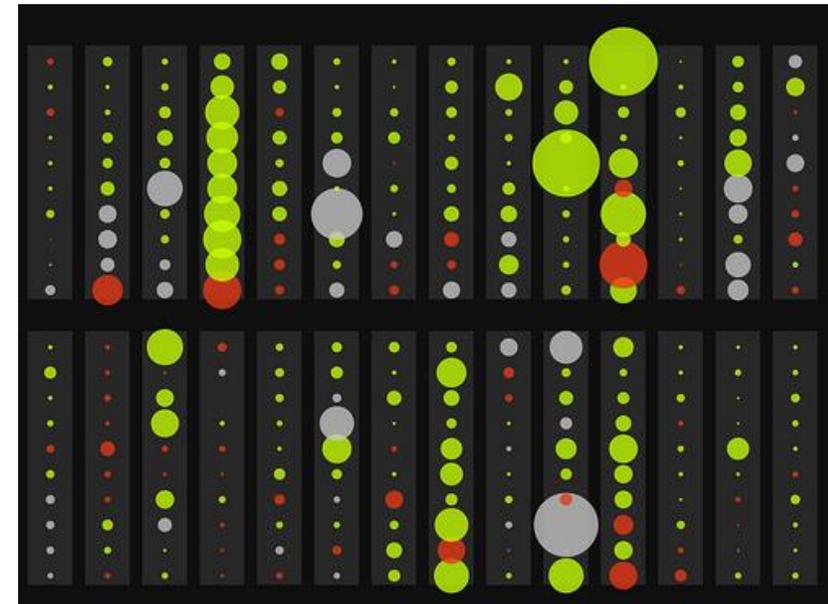
Data = Choices

Data = Limitations

What do we choose to measure?

What data do we choose to collect?

What data do we choose to keep?





And what about aspects of our lives that are not amenable to being turned into numbers?



“Quantiphobia?”

“... both neural and self-report evidence show that people tend to represent morals like preferences more than like facts. Getting back to the issue of quantiphobia, my sense is that when numbers are appended to issues with moral relevance, this moves them out of the realm of preference and into the realm of fact, and this transition unnerves us.”

Adam Waytz, “Quantiphobia and the Turning of Morals into Facts” (*Scientific American* blog, 2014)



The process through which “numbers are appended to issues” is itself subjective — expressive of preferences.

Should we “append” numbers to love? To creativity? To freedom? To friendship? To faith?



Dickens, from *Hard Times*:

“Fact, fact, fact, everywhere in the material aspect of the town; fact, fact, fact, everywhere in the immaterial. The ... school was all fact, and the school of design was all fact, and the relations between master and man were all fact, and everything was fact between the lying-in hospital and the cemetery, and what you couldn't state in figures, or show to be purchaseable in the cheapest market and saleable in the dearest, was not, and never should be, world without end, Amen.”



More from *Hard Times*:

“It is known to the force of a single pound weight, what the engine will do; but not all the calculators of the National Debt can tell me the capacity for good or evil, for love or hatred, for patriotism or discontent, for the decomposition of virtue into vice, or the reverse, at any single moment in the soul of one of these its quiet servants.... There is no mystery in it; there is an unfathomable mystery in the meanest of them, for ever.”



Allison Parrish, From “Programming Is Forgetting”:

“The process of computer programming is taking the world, which is infinitely variable, mysterious, and unknowable ... and turning it into procedures and data. And we have a number of different names for this process: scanning, sampling, digitizing, transcribing, schematizing, programming. But the result is the same. The world, which consists of analog phenomena infinite and unknowable, is reduced to the repeatable and the discrete.”



“... In the process of programming, or scanning or sampling or digitizing or transcribing, much of the world is left out or forgotten. Programming is an attempt to get a handle on a small part of the world so we can analyze and reason about it. But a computer program is never itself the world. ...

Programs aren't models of the world constructed from scratch but *takes* on the world, carefully carved out of reality.”

Allison Parrish, From “Programming Is Forgetting”



Additional issues:

Data and bias

Who is missing from the data?

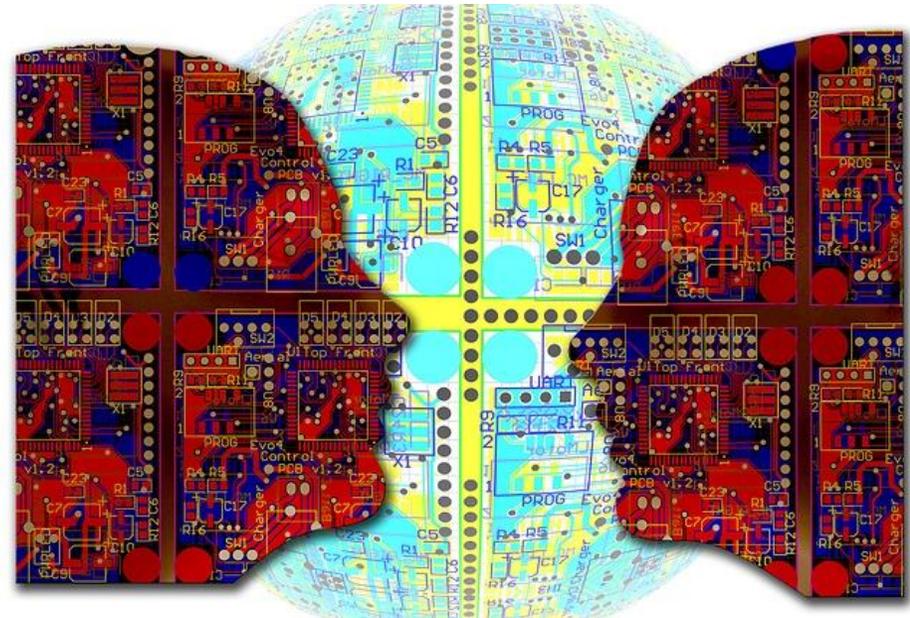
And do we always want good data? (Ex.: facial recognition)



Increasingly, too, in our data-collecting connected societies, many decisions that had been previously entrusted to human beings are now being automated.

What should we automate? What should we not? And why?

Parenting? Prayer?
Literature, music, other art?





"I think it's reasonable to ask if parenting will become a skill that, like Go or chess, is better performed by a machine."

John Havens, executive director of the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, quoted in "Hey Alexa, What Are You Doing to My Kid's Brain?"



Dave O'Hara, from "The Ethics of Automation: Poetry and Robot Priests":

"As I am a Christian, an ethicist, and a philosopher of religion, this is something I've been pondering for a few years: is there a case to be made for automating the work of clergy?

... can a meaningful confession be heard by someone who cannot sin, or does confession depend on making a confession to a member of one's own community and church? Can a machine be a member of a church, or does it have something more like the status of a chalice or a chasuble – something the community uses liturgically but that does not have standing in the deliberations and practices of the community?"



Yuval Noah Harari, from “Why Technology Favors Tyranny”:

“Humans are used to thinking about life as a drama of decision making. Liberal democracy and free-market capitalism see the individual as an autonomous agent constantly making choices about the world. Works of art... usually revolve around the hero having to make some crucial decision. To be or not to be? To listen to my wife and kill King Duncan, or listen to my conscience and spare him? To marry Mr. Collins or Mr. Darcy? ...

What will happen to this view of life as we rely on AI to make ever more decisions for us? ...



“... It’s not so hard to see how AI could one day make better decisions than we do about careers, and perhaps even about relationships. But once we begin to count on AI to decide what to study, where to work, and whom to date or even marry, human life will cease to be a drama of decision making, and our conception of life will need to change. ... Imagine Anna Karenina taking out her smartphone and asking Siri whether she should stay married.... Or imagine your favorite Shakespeare play with all the crucial decisions made by a Google algorithm. Hamlet and Macbeth would have much more comfortable lives, but what kind of lives would those be? Do we have models for making sense of such lives?”

Yuval Noah Harari, from “Why Technology Favors Tyranny”



We should question, much more, some of the assumptions underlying certain aspects of the digital revolution. And we need to consider our choices. The conception, design, building, deployment, adoption, marketing, and regulation of technology (especially technology that automates decision-making, and especially technology that aims to make predictions about human behavior) are all areas rife with decisions that require ethical decision-making.

Are we (technologists, salespeople, regulators, citizens of democratic technologies) prepared to identify the ethical issues and to make those decisions?



What do we need in order to be better prepared?

- Lots of ~~consumer~~ citizen education around the nature and implications of new tools, products, opaque ecosystems
- Technologists involved at every level—becoming public speakers, helping to educate regulators and judges, etc.
- Ethics training in colleges/universities/bootcamps/MOOCs for engineers, UX designers, etc. (From the recently revised ACM Code of Ethics and Professional Conduct : “Professional competence also requires skill in communication, in reflective analysis, and in recognizing and navigating ethical challenges.”)
- Ethics training and opportunities for ethical evaluation within technology companies
- Informed and well targeted laws and regulations to reign in unethical practices and attempt to create incentives better aligned with human well-being.



When E. M. Forster wrote “Only connect!” he wasn’t thinking about social media, or the Internet of Things, or machine learning finding patterns in data. “Only connect the prose and the passion,” he wrote.

The digital transformation, too, has come with both prose and passion—data sets and algorithms, but also claims about knowing us better than we know ourselves, or de-biasing society, or other ways of changing the world...

That last one is not just an impassioned claim, though. The digital revolution *has* changed the world—and continues to change it.



Given the impact (both good and bad) of the digital transformation on human flourishing, we need an updated call to action:

Don't "only connect"—or quantify, or automate.
Question assumptions. Make careful choices.

Do connect the technology and the ethics.



Thank you!

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