

The Future of Big Data: Bigger and Smarter

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We are just at the outset of the Big Data era. In the future all businesses are going to try to understand how they can become a platform for the collection and the analysis of data. And we'll be optimizing everything we do in society by taking more information and learning from it.

My name is Kenneth Cukier. I'm a data strategist and digital futurist.

Everything will be quantified automatically at every moment. Things that we never could even imagine collecting information on before, we will now collect.

There is a value in that data that is latent, a sort of new economic input, a new raw material of business.

So there's lots of technologies in Big Data but one of the most promising is an area of artificial intelligence called machine learning. The computer can make predictions or make decisions. It can implicitly learn from a large body of information what to do. We're already doing that we're going to do it better in the future.

The implication for business is huge. In terms of business strategy, a manager has to make a decision using imperfect information. An algorithm is going to do it better because it can crunch more data.

What we're talking about here is a degree of clairvoyance about how the world is working, because Big Data can spot trends that we could never spot before.



We may learn that there are signals that best predict some is actually going to repay a loan, or get into a car accident, that have nothing to do with that actual activity.

We have actually already seen Big Data change the world of business. Media companies are getting better at throwing in recommendations that if you've read one article, you're likely to read another article. Banks are getting good at saying that if you bought once commercial product, you're probably going to buy this other financial product as well.

This idea of learning at scale, at the population scale, what people like, and making predictions down to the level of the individual, their individual data, their surfing behavior, their biochemistry, their zip code, what they're likely to do, means that we're getting into an economy of prediction. We're getting into a universe in which we will forecast everything. And these forecasts will be uncannily accurate.

We're going to transform retailing, education, manufacturing.

The potential in the area of energy is huge. Exploration is critical and that's an information problem. Computers and AI love information problems..

In healthcare we'll see the biggest improvement. If we tell the computer, you figure out what best predicts cancer, not us, we can identify the cancer when it is the size of a grain of sand, and not when it's the size of a golf ball

With Big Data we can get rid of that problem of cross-generational transfer of knowledge. The knowledge is always being accretive. It's always accumulating in the algorithm, so that decisions are always going to be improving.

It's day one of the Big Data era. When we look ahead, economies are going to become a lot more productive, and we're going to understand our humanity even better. In everything that gets touched by Big Data we will be improving how we live.

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