Tracing Some of Big Data's Big Paradoxes

By Randy Bean | Columnist | May 12, 2015

As we push ahead to fulfill the promise of Big Data, we should bear in mind that there can be perils that reflect a dark side if we fail to act responsibly.

I recently attended a talk on the topic of intellectual privacy by Neil M. Richards, Professor of Law at Washington University in St. Louis, and author of the recently published book, Intellectual Privacy: Rethinking Civil Liberties in the Digital Age (Oxford University Press). The underlying message of his talk was bracing and cautionary. Privacy breaches, unethical hacking, and other invasions of data privacy so often lead to the establishment of guardrails and restrictions that limit our ability to experience greater convenience, enjoy more personalized consumer experiences, benefit from greater customer self-service, or learn from data that we now have access to. We don't want to surrender our freedoms. We want the freedom to do with "our data" whatever we damn well please. Our intentions are good — upward and onward for the greater benefit of mankind, or for users of the next personalized mobile application.

Professor Richards called attention to what he calls the "Three Paradoxes of Big Data," and began his presentation with a cartoon depicting a patient at a doctor's office. The doctor asks the patient, "Would you mind if I transplant this GPS device under your skin? It will be painless." The patient reacts in horror with a painful grimace, eyes filled with fear, and perspiration flying off his face, and cries out, "No, that would be an invasion of my privacy!" In the next frame, the doctor replies, "The devise will also have a camera, store your music and photos, provide access to the Internet, and allow e-mail and texting." The patient looks greatly relieved, and eagerly responds, "Great! How quickly can we get started?" Ha! This illustrates the paradox according to Professor Richards – we are willing accomplices to trade off our privacies if we perceive that we are getting a meaningful benefit in return. But, how far does this extend?

Professor Richards identifies the three paradoxes:

- **The Transparency Paradox.**   Prof. Richards cites our movement past the Internet of Things to the "Internet of Everything". Cisco Systems Inc. projects that 39 billion intelligent devices will connect to the Internet by 2020. So, to quote Prof. Richards, "Big Data promises to use this data

to make the world transparent, buts its collection is invisible, and its tools and techniques are opaque, shrouded by layers of physical, legal, and technical privacy by design." Wow!

- **The Identity Paradox.** Prof. Richards observes that while Big Data seeks to identify, it also threatens identity, by removing anonymity and our "right to be left alone." He cautions that the power of Big Data can also be the power to use information to "nudge, to persuade, to influence, and even to restrict our identities." Hmm.

- **The Power Paradox.** Prof. Richards reflects on how Big Data enables us to develop a more informed picture of the world, and cites the Arab Spring as a positive example of the power of information. He cautions though that "Big Data will create winners and losers, and it is likely to benefit the institutions who wield its tools over the individuals being mined, analyzed, and sorted." OK. Maybe I need a drink now.

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