

Bottom-Up vs. Top-Down Innovation – and Hot Air. Neil Seeman

“Hot Air” by Marjorie Priceman is a delightful children’s book about the first hot-air balloon – invented by brothers Joseph-Michel and Jacques-Étienne Montgolfier. In September, 1783 their *Aerostat Réveillon* reached 1,500 feet, its passengers being a sheep, a duck and a rooster. The Montgolfiers thought that smoke propelled the balloon. Years later it was discovered that hot air rises because it weighs less than cool air.

More than two centuries later, the debate over the source of innovation rages on: Does change come from daring researchers (the Montgolfiers)? From the throngs of people who cheer on the invention and send forth news of the sensation (in this case, to Paris)? Or from the monarch (it was King Louis XVI in 1783) who champions the invention?

Health policy wonks – especially those interested in the transformative power of health information technology (HIT) – are fixated on whether innovation comes from the “bottom up” (the patient/consumer) or the “top down” (government or the hospital).

Author Vijay Vaitheeswaran describes the bottom-up/top-down debate in the Economist Magazine’s current special report on [health care and technology](#). Denmark is perhaps most cited as the showpiece for top-down HIT innovation, with almost all Danes having regular access to an electronic health tool to manage their appointments, track medications, and to ensure they don’t take the wrong kind of medication, too much medication or drugs that should not be used simultaneously.

So here’s one top-down formula for the successful adoption of HIT: Mandate common security standards, data-sharing protocols, and consistent interpretations of privacy law.

On the other side of the debate, many “health 2.0” or “peer-to-peer” enthusiasts tend to believe in bottom-up innovation: Give patients the tools (e.g., their complete online medical records), and the doctors and hospital CEOs and government leaders will step into line. I used to believe this. I now understand things are a bit more complex.

Too much focus on the bottom-up/top-down debate misses the real goal: making sick patients healthier faster, or managing and preventing illness altogether. This may happen bottom-up, top-down, or, more often than not in my opinion, by combination or accident. In many cases (as with the hot air balloon) we don’t really know why for years to come.

The management and health policy communities tend to ignore the reality of the happy accident. We are trapped in a cognitive bias: we think that if quality or outcomes improve within any organization, this must be by dint of “process improvement” or because of a charismatic leader who “just got things done.” From the hot air balloon to Twitter to Viagra, history abounds with accident as the seat of innovation. Perhaps the most we can do is make the ground fertile for more accidents to happen: hire lots of smart, diverse people willing every so often to bonk senior management on the head to experiment.

I don't pretend to know the answer to why innovation and adoption of HIT takes off more quickly in some jurisdictions than in others. I am skeptical of those who think they know the answer to this very difficult question, given the deep socio-cultural differences among neighborhoods in the very same city, much less among countries or continents.

But I do say this: all the energy the academy, consulting firms, large companies and governments spend on debating this question could be channeled into something more productive: curiosity-seeking, idea-generation and free-form debate among patients and providers and others working in the system. Consider parking 15 percent of your organization's time into tinkering with how to improve healthcare for everyone.

Sometimes a competitor will steal your idea. (Some claim that the hot air balloon was invented some 74 years earlier by the Portuguese priest Bartolomeu de Gusmão.) Sometimes a monarch or government official will take all the credit. Never mind. If just once we soar high, then it will all have been worth it.

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