



Just Out of It

David Alan Grier

Modernity seems to have done nothing to weaken our desire to be part of a group. If anything, it seems to have strengthened it.

t was a threat—simple, understated, unmistakable. Les had been trying to get the staff to adopt a new piece of software but faced nothing but quiet, passive resistance. No one had made the slightest effort to learn the new system. For his final effort, he told the group that there would be consequences. "Here's the deal," he said. "If you don't use this app, you're just," and then he paused to drive the point home, "out of it."

He looked at us and continued. "In less than a year, you won't be able to communicate with anyone. Soon enough, you'll be an old fart sitting in the corner, and no one will know who you are." I left the meeting thinking that he had squandered an opportunity, but I quickly saw that I was wrong. Within a month, everyone had embraced the new system. No cajoling, no bribery could have made the change happen any faster. No one wanted to risk being excluded from the inner circle.

Two decades ago, this kind of fear clearly hung over the rush to connect homes and businesses to the Internet. Many were concerned that network connections would limit their privacy, reduce the security of their records, and damage the integrity of their machine. Yet, few were willing to let those concerns dictate

their actions as others began to put their system online. They agreed that websites were free to leave cookies on their drives so that they wouldn't be left "out of it."

I must confess that I'm not immune to such pressure. Last week, I agreed to talk to a reporter about the Web of Things, a subject that wasn't of much interest to me. However, this reporter was one of the "cool kids" and wrote for a news outlet that could still afford the luxury of a paper edition. Anyone who was anyone was quoted in it.

The reporter said he was looking for context and a good quote to focus his article. From the start, he warned me that he knew a fair bit about the Web of Things and that he needed no exaggerated claims or wild speculations about the future—just an honest discussion of the technology and its prospects.

I quickly summarized the recent IEEE literature on the Web of Things. It's the natural evolution of the Internet of Things, applying the ideas of Web services, middleware, and similar technologies to networks of sensors. For example, it might enable data collection for a program that manages a building's HVAC system, giving it a detailed picture of the climate inside and outside the building by querying sensors in

offices, hallways, on the street, and even in neighboring buildings.

With this example, the reporter asked the question that plagues the Web of Things: Why would anyone agree to let a sensor in their office or home to provide data to others?

The answer to this question isn't straightforward, but we can see the broad outlines of the response. When applied to homes and people, the Web of Things is a technology of urbanization. It lets people live in close proximity, either through the close relationship of websites or the close virtual communities on networks. When we live close to our neighbors, we need to share things with them—infrastructure, markets, information. Primarily, we see benefits in sharing information or face penalties in not sharing it. However, sometimes, we share information because we're afraid that if we don't, we'll be excluded from the community—we'll be out of it. C

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