CHAPTER 1

Introduction

It was Saturday morning, and Melissa was making a stop at her local Walmart to pick up a few things. As usual, she parked as close as she could and walked the familiar pavement up to the well-lit store entrance. Upon entering, her eye was drawn to something unfamiliar in the lobby. Standing against what used to be an empty wall was now a large, colorful, slightly unusual-looking vending machine. Intrigued, Melissa approached it—and immediately noticed a couple of things. For one, the machine was completely stocked with only one product—bright green Cascade dishwashing detergent samples made by Procter & Gamble (P&G). Second, in place of the normal mechanism by which you would insert coins or bills to make a purchase, there was a large, rectangular, color LCD screen that welcomed her with the line, "Press here to get your free sample!" Her finger instinctively reached out and pressed the screen where instructed. The screen promptly displayed:

> Using your smartphone, please visit our product's Facebook page. After you log in, go to this URL—http://cascade.facebook.com.
> If you Like our page, we'll vend you a free sample of our new Cascade dishwashing detergent right here, right now!

Melissa was hooked. She retrieved her iPhone from her pocket . . . and paused. Was this strange new transaction worth it? By pressing that "Like" button, she would be telling all her Facebook friends that she, in fact, liked this promotion. After examining the machine some more and thinking about the companies involved, she pressed the "Like" button with her pinkie. Two seconds later the vending machine whirred and dropped a sample into the tray for her to pick up. Melissa let out a quick laugh, looked around to make sure it wasn't some kind of trick, and reached in to grab the sample. She would try it tonight,

she decided, and noticing the coupon on the back of the packaging, pondered whether she might just pick up a whole box of it while shopping then and there.

Welcome to *social machines*, a world in which social networks include not just other *people* but Internet-connected electronic *devices*, *machines*, and *contraptions* of all kinds. It's a world where your next Twitter follower could be your refrigerator and your new Facebook friend your brother's Mustang. It is a *business ecosystem* of people, companies, and machines collaborating in surprising new ways and opening up innovative possibilities to create real value.

Let's examine all the people and groups that benefitted from this simple interaction at Walmart.

- *Melissa* received an immediate, tangible benefit in the form of a useful product sample and coupon.

- *P&G* gained more than it might have by blindly passing out samples on a street corner. By virtue of the Facebook Like, the company gained access to not just the person *liking* its page but to that person's entire social graph—information that P&G can now use to more effectively target promotions. Melissa's friends can immediately see what she's just liked and, potentially, go visit Walmart themselves and get their own sample, thereby giving P&G access to yet another social graph. Talk about the network effect!

- *Walmart* got more foot traffic in stores because of all the activity and social buzz around the vending machine. This, combined with the coupon on the back of the packaging, could equate to higher sales at that location.

- *The vending machine sellers and operators*, instead of just providing a piece of electromechanical dispensing machinery, can now tout that they are providing innovative new ways for brands to interact with their customers and prospects.

- *The wireless carrier* sells another data plan. Every carrier in the world today is interested selling data plans, and they are thrilled when they can do so on devices other than smartphones. A vending machine (and by association, kiosks, digital signs, etc.) represents a whole new category of device to support and capitalize on.

That's a lot of beneficiaries from one simple idea and interaction. It's especially impressive when you consider that it all sprang from combining two distinct, previously separate and unrelated worlds—the online social network and the stationary vending machine, the digital and the physical. It's a combination you will see much more of in the coming years.

If this sounds entirely too futuristic to you, consider this. The whole concept of *social machines* is simply an extension of the social contract most of us have already made with a powerful electronic device we carry every day—our mobile phones. If you are like most people, you could not imagine your life without it. Our lives have been inalterably changed by the absorption of this communications technology. It is so engrained that it has become virtually invisible. In fact, the Finnish have coined the term *kanny*, which roughly translates into "extension of the hand," to describe not only their mobile phones but their implied relationship with them. Like the watch on your wrist, its use has been completely enmeshed in your daily life. But make no mistake; it is indeed a *machine*. And it represents just the tip of the iceberg. Companies like Nike, with their successful Nike+ product line that combines fitness metrics with social networking, are unmistakable harbingers of what is to come.

As we will see, human cultures have been building relationships with machines for millennia. Stanford professor Clifford Nass recently conducted research that shows that it's not uncommon for us to attach very human qualities to our personal computers (which may explain the emotional reaction you feel

when it crashes on you![1]). And although it is not this book's goal to delve deeply into cognitive science, it's worth noting that the whole concept of social machines as logical next step in the evolution of our relationship with technology is, in fact, supported by scholarship. Professor Andy Clark notes in his book *Natural Born Cyborgs*, "what is special about human brains, and what best explains the distinctive features of human intelligence, is precisely their ability to enter into deep and complex relationships with nonbiological constructs, props and aids." In other words, machines can teach us many things. We just need to include them in the discussion.

The obvious question arises: Is this just another uber-geeky concept that sounds cool on paper but fails in real life? The short answer is *no*—and the following are some good examples of why the concept stands a very strong chance of succeeding. Imagine a world in which:

- Your car shares valuable geographic, operational, and/or safety data with its "friends"—in this case, the other cars that are "following" it on Twitter—resulting in better gas mileage, ride-sharing opportunities, faster travel times, and the ability to find open parking spaces.

- Your house communicates with its occupants and other Facebook "friend houses" to share heating and cooling information, security data, utility usage metrics, and environmental measurements, resulting in improved energy efficiency and healthier, more secure homes and neighborhoods.

- Communities of elderly people securely and privately share health information that originates from various monitoring devices with one another, their caregivers, and their loved ones, resulting in lower medical bills, fewer hospital visits, better quality of life, and longer lives.

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[1]http://www.cfo.com/article.cfm/6820151

- Retailers are willing to monetize your presence in their stores via discounts and promotions in exchange for the location data and/or purchase history on your smartphone.

- Literally hundreds of applications, services, and products that could be developed to capitalize on and support all the benefits listed here—which is just a brief snapshot of the potential areas for innovation. The social framework provides a completely new way of entering markets, demonstrating value, and driving adoption.

The best part is that none of these examples are fantasies. They are all possible today. The technology necessary to make them real exists and is getting cheaper every year. But ironically, the framework for understanding how we can harness these technologies has nothing to do with technology at all. The path forward for the utopian visions of home automation and smart cities is based on something far more mundane. It is a force that has driven countless revolutions before it: the inherent need we humans have to communicate, share our worlds, help one another, and improve our collective lot in life. In a word, this new universe of possibility is based on everything becoming *social*. As Clay Shirky mentions in his book *Cognitive Surplus*, "the use of social technology is much less determined by the tool itself; when we use a network, the most important asset we get is access to one another." We now must consider what it means to include machines in that mix.

As strange as it may sound, the concept of imbuing an inanimate machine with social characteristics is not only a logical, cultural stepping stone but it also makes sound *business* sense. The example at the start of this chapter is a real one, with real business value—and it's the first of many we will introduce in the coming pages. The fact is that by combining the best of what we've learned about sharing, collaborating, and cooperating via online social networks with everything we know about powerful, secure, potentially mobile, physical devices, we can create a stunningly

rich new ecosystem for innovation. It is a new category for exploration that's part business and part consumer, maybe some hybrid beast called *M2C*—machine-to-consumer. Whatever acronym fits best, the concept rests firmly on the promise of breaking down the artificial barriers that exist between networked humans and machines.

After all, wouldn't we be happier with fewer mindlessly blinking DVRs, squawking car alarms, and inane error messages confusing the situation? Wouldn't it be better if we welcomed, instead of feared, the technology in our lives? Aren't there wonderful examples of big, successful businesses being built on making technology easier—the canonical example being Apple? To make this happen, we need to make machines a real, trusted, and more integrated part of our community, part of our *society*—which, coincidentally, leads us back to making things *social*.

To capture and discuss this new universe of possibility, we need a new dialectic that puts humans and machines on an equal social footing, insofar as it is related to improving the world and all those who inhabit it. That is the purpose of this book—to provide the framework, concepts, and vernacular to assist in the exploration and development of this exciting new world of communication.