What We Can Learn From Steve Jobs

Synergy and Innovation in Ophthalmology

By Stephen Coleman, MD

In his biography of Steve Jobs (1955-2011), Walter Isaacson masterfully decodes the visionary and creative genius to reveal a complicated yet understandable man. Isaacson, CEO of the Aspen Institute, rises to the challenge of humanizing Jobs. There is something for all readers to appreciate.

THE POWER OF COLLABORATION

When you pull back the curtain surrounding the success of Apple, Inc., it becomes clear that two men—not one—were responsible. Jobs and computer engineer Steve Wozniak shared a synergy that produced true innovation. According to Mr. Wozniak, "Every time I'd design something great, Steve would find a way to make money for us."[1] Whether it is an industry colleague, a life partner, or a doctor in your practice with a completely different skill set from yours, it is never too late to find your "Woz."

THE EPIC PRODUCT LAUNCH

Jobs was the king of flashy, unforgettable introductions of forward-thinking products. The potential worldwide and long-term impact of his garage-made computer was immediately clear to him. Much as the invention of Jobs' computer marked a historical development in engineering, laser cataract surgery represents a monumental innovation in ophthalmology. The depth and breath of its significance will depend not only on how we introduce laser cataract surgery into our practice, but also on how we position it outside of ophthalmology on a broader world stage.

A FRESH PERSPECTIVE

Fired in 1985 by John Sculley, CEO of Apple, Inc. from 1983 to 1993, Jobs returned to Apple 11 years later with a new perspective. Consider your attendance at professional meetings as a microexample of Jobs' hiatus from Apple. As the oldest organized specialty in medicine, ophthalmology truly lives up to this distinction in the setting of frequent educational symposia. Last year, only 35% of AAO members attended the annual convention. Step away from your practice, attend a meeting, and steep yourself in the camaraderie of your peers. It will pay great dividends going forward and provide you with a fresh perspective when you return to the office and OR.

KNOW YOUR CUSTOMER

Jobs' best lesson for ophthalmologists is perhaps found in his response to a question at the 1997 Apple Worldwide Developers Conference, well before the company's meteoric rise to success. On the importance of knowing the customer, Jobs said, "One of the things that I've always found is that you've got to start with the customer experience and work backwards to the technology. You can't start with the technology and try to figure out where you're going to try to sell it." Enough said. This is lesson No. 1.

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1. Isaacson W. *Steve Jobs*. New York, NY: Simon and Schuster; 2011.

Next-Generation Cataract Surgery: Technology Integration

By Stephen S. Lane, MD

On the jacket of his biography about Steve Jobs, Walter Isaacson writes, "At a time when America is seeking ways to sustain its innovative edge, Steve Jobs stands as the ultimate icon of inventiveness and applied imagination. He knew that the best way to create value in the twenty-first century was to

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connect creativity with technology."[1] This is precisely the lesson I believe ophthalmologists can learn from Jobs. By connecting technology to creativity, we can achieve true innovation that will ultimately result in superior outcomes and meet both patients' and surgeons' expectations.

HOW DO WE GET THERE?

As with most great ideas, connecting technology to creativity in ophthalmology will require out-of-the-box thinking, inventive implementation, and innovators to stand up against a highly vocal group who has no interest in moving past the status quo. The history of ophthalmology is replete with examples of this challenge: phacoemulsification, refractive surgery with the excimer laser, flaps created with a femtosecond laser for LASIK, and most recently, laser cataract surgery.

Today, many ophthalmologists argue that the cataract procedure we currently perform is good enough. In the spirit of Steve Jobs, I would say this is not so. Modern phacoemulsification with the implantation of IOLs is, without a doubt, one of the true miracles of modern medicine. However, when only about 65% of patients achieve ±0.50 D of the targeted refraction with all types of biometry considered (Warren Hill, MD, personal communication, April 2012), we need to do better. We accomplished this kind of improvement with corneal refractive surgery, as 95% of patients now achieve ±0.50 D of the targeted refraction (Warren Hill, MD, personal communication, April 2012). It is no longer good enough for cataract surgeons to come "close" to targeted corrections. The longer it takes us to realize that prescribing a pair of glasses for our patients after cataract surgery is a refractive failure, the longer it will take us to meet our patients' goals. We need to seek ways to get from good to great.

TECHNOLOGY INTEGRATION

Connecting technology to innovation—what I like to call *technology integration*—will herald the next generation of cataract surgery. In the future, cataract surgery will be performed at a workstation that will integrate diagnostic technology with procedure-related surgical technology, all of which will be tied to the patient's electronic health record. Many of the tools for this approach are already available and in use such as real-time, on-the-table aberrometers; image registration for the precise placement of an IOL; and IOLs that correct ametropia and presbyopia. Let's imagine all of the preoperative testing we now do performed intraoperatively and with more precision. At the conclusion of surgery, a real-time check on the table will corroborate the final result and allow for any adjustments that would improve the outcome.

This workstation concept is easy to envision. Technology will continue to march forward despite the obstacles of interference and regulations from the government. The integration of surgeons' needs into a single workstation that is housed in a sleek, ergonomically efficient encasement (minus the apple) and incorporated into the patient's health record is, in my opinion, the future of cataract surgery. True innovation will require our knowledge as physicians and clinicians of how best to utilize, refine, and implement all of the various technologies into viable, practical products. We must not allow the greatest obstacle to be ourselves but instead embrace the principles that drove the genius who was Steve Jobs.

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1. Isaacson W. *Steve Jobs*. New York, NY: Simon and Schuster; 2011.

Blending Technology and Design

By Stephen G. Slade, MD

It was not long after I started reading Walter Isaacson's recent biography of Steve Jobs that I began to think of how well Jobs blended and developed technology and design for his customers and how this applies to ophthalmology. In my opinion, the parallels are obvious.

PARTNERSHIP

Jobs, of course, began a computer company and produced the first personal computer. That alone would have ensured him a place in history, but then he did something that changed all of our lives forever. He delivered technology to us, the people. Interestingly, Jobs was

not the lead engineer behind the technology; that was Steve Wozniak. Jobs, however, mastered his own role of designing, refining, and inventing technology that we, the customers, loved and continue to love.

He partnered with engineering much like we partner with industry to deliver products to our patients. Little of what we use in our offices today could have been developed in a doctor's garage. We need the ophthalmic industry and the technology it creates as much as the ophthalmic industry needs us. Our partnership with industry works well and has delivered huge value to patients, just like Wozniak and Jobs did for their customers.

ADOPTION OF TECHNOLOGY

Jobs developed disruptive technologies such as the iPad and iPhone (Apple, Inc.). These innovative products certainly did not upset our lives. Essentially, we do the same in ophthalmology. We adopt new technologies that initially throw off our practice patterns, like lasers for cataract surgery and myopic correction and imaging systems, but these disruptions are invisible to patients and ultimately make surgery easier for them.

CUSTOMERS' EXPERIENCES

Jobs said, "One of the things that I've always found is that you've got to start with the customer experience and work backwards to the technology. You can't start with the technology and try to figure out where you're going to try to sell it." He did not believe in focus groups, and he did not believe consumers knew what they wanted when they had never seen if before. He simply intuited what consumers would like. I think we, too, innately know what our patients want. After all, we have an advantage over Jobs in that we know each and every one of our customers.

"Oh, and one more thing," as Jobs would say—Jobs delighted in customers' experiences. He wanted to exceed their expectations and produce products they loved. Do we ever hear anyone say he or she "loves" his or her PC? Everyone from our kids to our colleagues, however, will say that he or she "loves" his or her Mac products. This is because Mac products provide value in an extremely appealing way. That is exactly what we ophthalmologists do and should continue to do. How loveable are high success rates, low-risk, nearly instantaneous results, and immediate gratification? Indeed, what could be more valuable than a surgery that gives the gift of sight to be used every waking moment of every day? ■

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