Lessons from Steve Jobs

Thirty-six years ago this month, two young men introduced the Apple I personal computer to a group of hobbyists. One needed only to plug in a keyboard and TV monitor to make this computer work. The two men were Steve Jobs and Steve Wozniak. While Steve Wozniak designed and built this first fully self-contained personal computer, Steve Jobs handled sales and marketing. The product, retailing for $666.66 because Wozniak "liked repeating digits," launched what would become the most valuable company in the world, with a current market value exceeding $567.5 billion (NASDAQ, April 26, 2012).

With Steve Jobs' untimely death from cancer last October and subsequent publication of Walter Isaacson's acclaimed biography of Jobs, much has been written and spoken about Job's career and management style. A master biographer, Isaacson is well known for his accounts of the lives of Albert Einstein and Benjamin Franklin. Jobs' biography tells the business mogul's fascinating story and includes information from interviews of essential personalities in the evolution of the PC and digital devices that allow us to use a wide range of media from almost anywhere. The preface to the book speaks of how in 2004 Jobs actively sought out Isaacson to write his biography, a classic example of Jobs' chutzpah. At the time Isaacson politely declined, noting that he would normally write biographies about people who either have departed this earth or are at the end of their life and career. Then Jobs' wife, Laurene Powell, contacted Isaacson in early 2009 to say that if Isaacson was going to write the biography with Steve's input, he had better get started.

Having considerable management and business skills (experience as managing editor of Time magazine and chairman of CNN), Isaacson is a keen and experienced observer of the unique business skills that Jobs applied during his career. A superb example of such skills manifested itself during Jobs' second tour of duty as Apple's CEO, when Jobs rescued the company from bankruptcy, turning it into one of the highest-performing companies in the world. Isaacson recently wrote the article "The Real Leadership Lessons of Steve Jobs" for the Harvard Business Review (HBR). I believe that many businesses and scientific societies alike can use these lessons to advance their missions. Here are some of them.

Focus. When Jobs returned to Apple in 1997, he was able to direct senior Apple
managers and engineering staff to focus on a few perfect products that fit a two-by-two matrix, with
columns labeled "consumer" and "professional" and rows labeled "desktop" and "portable." The new
Apple product line quickly fell in place. Similar focus was applied to the concept of Apple Stores—a
venture that Jobs successfully pushed over the objections of Apple's Board of Directors. Apple Store
customers encounter aesthetic minimalism of Apple products (MacBooks, iPods, iPhones, and iPads)
and appropriately trained staff—quite a different experience from "big box" electronic stores. Apple
Stores are known to be the highest grossing retail outlets per unit of floor area.

Simplify. Prior to Apple 1, Jobs worked for the video game company Atari. The instructions for Atari's
"Star Trek" game were simple: (1) insert 25 cents; (2) destroy Klingons. All instructions should be
straightforward and intuitive, Jobs believed. At Jobs' direction, most Apple products have no need for
an instruction manual.

Put products before profits/push for perfection. A product can be over-engineered, and there are
points of diminishing returns. As a counterpoint, Isaacson tells the story of Jobs' obsession with every
feature of the iPhone until he felt that it was perfect. To what result? The product took over more than
a third of the cell phone market in a matter of months. This product-development path became the
Apple standard, continually yielding substantial returns on investment. There are lessons of tolerance
here for impatient boards and stockholders.

Combine the humanities with the sciences. Although Jobs was neither a scientist nor an engineer, he
was absolutely brilliant in tying together technologies that would enable consumers to write, listen to
music, talk to friends, and watch a video presentation with ease. One of the few courses that Jobs took
during his only one-year study at Reed College was typography. His love for beautiful typeface drove
Apple computer technology to include composition with attractive type. His love of music presaged a
similar innovation with the iPod, and his coupling the iPod with iTunes effectually saved the recorded
music industry and again boosted Apple's revenue.

Isaacson's article contains more key business lessons that could be widely applied to other businesses.
For example, trade publishers are learning from Jobs' take-it-or-leave-it arrangements with publishing
houses for delivering content on the iPad. If you don’t have time to read Isaacson’s superb biography,
take a few minutes to read the HBR article with its leadership lessons, some of which can be helpful
when applied to pursuits other than business, such as, for example, science communication.

¹ If you are lucky enough to still own one of the 200 Apple I's that were produced by Wozniak and Jobs,
you'll be pleased to know that one unit was sold by Christie's auction house in November 2010 for
$178,000. (See Ref. 11 of the Wikipedia article on Apple I.)

Publishing Matters

AIP representatives attend UKSG 2012 Conference

Director of Fulfillment and Marketing Lori Carlin and Vice President of Publishing John Haynes
represented AIP at the UKSG's 35th Annual Conference, held March 26–28 in Glasgow, Scotland. UKSG
is one of the few conferences that effectively spans the library and publishing worlds, bringing together
librarians, publishers, and technology vendors for lively discussions of the future of scholarly
communication. A record number of more than 850 delegates from 27 countries mingled and attended
sessions at the Scottish Exhibition and Conference Centre. This year, instead of setting up an exhibit, AIP representatives held individual meetings with library customers from across Europe and the Middle East.

The conference featured diverse plenary and breakout sessions. Speakers touched on topics such as how to create a culture of innovation and how best to measure journal success. The final plenary session featured a debate between Cameron Neylon, soon-to-be director of advocacy for the Public Library of Science, and Michael Mabe, CEO of the International Association of Scientific, Technical & Medical Publishers, about the future of scholarly journals. Despite the 9:00 am start time and the ceilidh the night before, many people turned out to hear the discussion on whether an industry transformation was already well on its way, or unlikely to arrive any time soon. Summaries of this and several other presentations can be viewed on the UKSG’s blog, and videos of the sessions are posted on the UKSG website.

Physics Resources Matters

New science based on old photographic plates

Forty astronomers from around the US, Canada, and Europe converged on ACP April 17–19 to plan the preservation of astronomical photographic plates and the continuing use of these plates in cutting-edge astronomical research. Foremost in their minds was the promise of 150 years of “heritage data” for new discoveries about galaxy and star formation, dark matter, near-Earth objects, and more. Many future discoveries would be impossible without proper conservation, cataloging, and scanning of the plates.

AIP’s historian Greg Good and archivist Joe Anderson provided advice and perspective. This project differs significantly from many undertaken by the History Center and Library & Archives. The standards required to preserve the scientific value of the plates are not those needed for historical documents, such as a scientist’s notebooks or letters. Nevertheless, valuable historical evidence will be kept available through the project, mostly in the metadata—the “who, what, when, where, and how”—of the photos.

Astronomers Wayne Osborn (Yerkes Observatory), Jim Lattis (University of Wisconsin-Madison), and Elizabeth Griffin (Dominion Astrophysical Observatory, Canada) worked with Good and Anderson to organize the workshop. Kevin Marvel and other members of the AAS staff worked with AIP’s Stephanie Jankowski to coordinate logistics. The workshop was funded by the National Science Foundation.
AAPT names Barbara Lotze Scholarship winners

From the AAPT eNNOUNCER: The Barbara Lotze Scholarship Committee has announced that the 2011 scholarship winners are David McArdle, Julia Carson, and Erin Marshall. The AAPT Executive Board offers scholarships for future high school physics teachers. These scholarships, supported by an endowment funded by Barbara Lotze, are available only to US citizens attending US schools. Undergraduate students enrolled, or planning to enroll, in physics teacher preparation curricula and high school seniors entering such programs are eligible. Successful applicants receive a stipend of up to $2,000. The scholarship may be granted to an individual for up to four years.

Coming Up

Monday, April 30
- EEO and harassment training (Melville, NY, and College Park, MD)

May 1–3
- STM Spring Conference (Washington, DC)
Wednesday, May 2

- ACP Blood Drive (College Park, MD)
  The American Red Cross Greater Chesapeake and Potomac Region supplies more than 60 hospitals and trauma centers in the Baltimore-Washington, Northern Virginia, and South Central Pennsylvania areas.

May 6–11

- OSA CLEO/QELS (San José, CA)

Monday, May 7

- Enrico Fermi Award Ceremony honoring former AIP Governing Board Chair Millie Dresselhaus and former APS President Burton Richter (Washington, DC)
  (See the AIP Matters article from January 23, 2012.)

Tuesday, May 8

- ACP Art Exhibit, "Flow & Fluctuation," 5:30–7:30 pm (College Park, MD)

Wednesday, May 9

- May birthday breakfast (Melville, NY)

Wednesday, May 16

- Brown bag lunch, "Programs and Benefits of the Social Security Administration" (Melville, NY)