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Sixties Soul in the Wireless Personal Computer: Go Ask Alice

Jeffrey C. Bauer, PhD

An intriguing new book advances the proposition that the digital revolution is a direct result of 1960s counterculture. Personal computing, according to John Markoff in *What the Dormouse Said* (Viking Press/Penguin Group, 2005), was made possible by the communal spirit of “power to the people,” the free speech movement, hippie drug culture, anti-war activism, and other radical activities of college students seeking an alternative to the rigid conformism of their parents’ generation.

Markoff produces strong and fascinating evidence that the first personal computers were conceived in the mid-1960s by creative free spirits who founded groups like the People’s Computer Club and the Homebrew Computer Club in San Francisco. Subsequent development of the networked computer industry (for example, Apple and Sun) immediately south of the Bay area is advanced as further proof of the fundamental importance of countercultures based in Berkeley, Haight-Ashbury, and Palo Alto.

If personal computing had been the brainchild of traditional leaders in the

computer industry, Silicon Valley would have emerged next to Armonk (IBM) or Boston (DEC). Because of its unconventional geographic birthplace, the PC is effectively defined as a radical departure, not as a gradual evolution, from the mainframe computer represented by Big Blue.

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Being a product of the 1960s myself, I never could have imagined the coming evolution of the computer. My summer job from 1964 through 1969—collecting and analyzing data for severe storm models at the National Center for Atmospheric Research—introduced me first-hand to one of the world’s first supercom-

puters. NCAR’s mainframe was a collection of refrigerator-like components filling a room the size of a tennis court. Reservations to use it had to be made days in advance.

From Science Fiction to Reality

Only science fiction writers of the 1960s were able to envision a powerful, always available, wireless computer like the personal digital assistants (PDAs) we now use. The *Star Trek* television pilot series in 1966 foretold the arrival of today’s handheld technology, but not until the 23rd century. We truly have traveled at warp speed to a communications frontier where no man has gone before. Is it merely a coincidence that we aspire to Enterprise solutions in our IT planning?

Of course, the wireless computer has not yet conquered the strange new world of healthcare. Most practitioners use cell phones for their personal business, but relatively few can use wireless devices to access a fully integrated healthcare information system. Many who tried in the pre-wireless era dropped out after struggling with the time-consuming ritual of “plug in, turn on, boot up, log on.”

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On this point, Markoff's intriguing analysis brings to mind the 1960s mantra of Timothy Leary: "tune in, turn on, drop out."

The good news is that recent technological advances like the PDA, not LSD, have dramatically simplified connectivity. Health professionals no longer lose valuable time accessing a network. Roaming freely—in a virtual sense, at least—is another interesting way in which dreams of the 1960s have materialized in technologies developed during the past four decades.

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However, unprecedented mobility on a flashy new machine does not automatically make everything groovy, which was the point of "Easy Rider." Many physicians and nurses have recently found the trip a lot easier, but they do not like the destination. Using computerized provider order entry (CPOE), electronic medical records (EMRs) and other vehicles on the information highway is not fun for most first-time users. Data entry takes too long. Pull-down menus are too confining. Touch screens offer too many choices. And the problem list goes on and on.

Despite disappointment with the destination, predominantly in the realm of software, we must not lose sight of the progress that has been made. Hardware was the bottleneck

until recently. Users could not get to the software to encounter its deficiencies. Today's problems with data entry will be as transitory as yesterday's problems with short battery life, clunky laptops and dial-up Internet access. There's big money to be made in solving these problems; they will be solved sooner rather than later. Connectivity was perceived to be a fatal flaw only two or three years ago, and we practically take it for granted today.

Working and Changing Together

Back to the 1960s...we flower children also imagined a different world, one that was free of the hierarchies that stifled our parents. "Everybody get together" was a common theme, with folk songs and rock anthems proposing new ways to get us there (for example, from the Beatles, the Who, Bob Dylan and "Hair"). If today's computer networks were shaped by the 1960s counterculture, as plausibly argued in Markoff's new book, their next contributions will be nurturing team-based approaches to healthcare and changing the way things are done.

Post-1960s experience in healthcare clearly suggests that professional silos are a problem. Clinical specialization, with all its benefits, nevertheless creates a system where no one is responsible for seeing the "big picture." Its hierarchical structure also creates dysfunctional relationships between professional groups. Fortunately, a team-based approach to care is emerging as one of the most promising antidotes for persistent problems with cost and quality.

From the proven concept of a virtual ICU to promising models of perioperative surgery management and hospitalist care, significant improvements are being produced by

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processes that get healthcare professionals to work as a team. The common denominator for these successes is networked personal computers that enable all members of the team to share the same information. Wireless connectivity enhances the synergy. We have not entered the Age of Aquarius, but an IT-supported team is a vast improvement over uncoordinated practitioners using paper records.

Finally, counterculture fervently pursued new ends, not new means to old ends. Today's concept of clinical transformation is perfectly in step with the vision of free spirits who saw networks and computers as transformational tools. Like hippies, we know that we will keep getting what we always got if we keep doing what we always did. Improvements will result when IT implementation is accompanied by progressive changes in the

way healthcare is delivered. We can thank the 1960s for spawning the information age and showing us that revolution need not be violent. Peace, brothers and sisters in IT.

About the Author

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