

When It Comes to Innovation, Geography Is Destiny



Christophe Vorlet
By G. PASCAL ZACHARY
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IN our celebrity-studded world, where we make a cult of genius and individual achievement, the mind rebels at the notion that geography trumps personality. Yet the inescapable lesson of the [iPod](#), [Google](#), [eBay](#), [Netflix](#) and Silicon Valley in general is that where you live often trumps who you are.

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Just ask Sim Wong Hoo. About seven years ago, I met Mr. Sim in Singapore, where he was born and was then living. He talked about the rising creativity of Singaporeans and with a flourish, as if to dramatically make his point, he pulled out a prototype of a hand-held music player that he insisted would replace [Sony](#)'s famous Walkman.

Mr. Sim's device was breathtaking, possessing all the elements of what we now know as the MP3 player. Yet today, a Silicon Valley icon, [Apple](#), dominates the market for MP3

players with the iPod. In recognition of its emergence as a music powerhouse, last month Apple dropped the word “computer” from its name.

Some months after my Singapore encounter, I visited the thriving code-writing communities in Tallinn, Estonia; Reykjavik, Iceland; and Helsinki, Finland, three Nordic cities that were being transformed by advances in cellphones, mobile computing and the Internet. Their tight-knit network of engineers seemed poised to create the tools required to make good on a much-hyped prediction: the death of distance. After all, if necessity is the mother of invention, no one had more need than the hardy Estonians, Icelanders and Finns, living on the frozen edge of Europe, when it came to killing distance as a barrier.

Yet these Nordic innovators were blindsided by two Silicon Valley engineers whose tools we experience whenever we “Google” the Web. Their company, Google Inc., posted a quarterly profit of \$1 billion on Jan. 31.

Google’s astonishing rise and Apple’s reinvention are reminders that, when it comes to great ideas, location is crucial. “Face-to-face is still very important for exchange of ideas, and nowhere is this exchange more valuable than in Silicon Valley,” says Paul M. Romer, a professor in the Graduate School of Business at Stanford who is known for studying the economics of ideas.

In short, “geography matters,” Professor Romer said. Give birth to an information-technology idea in Silicon Valley and the chances of success seem vastly higher than when it is done in another ZIP code.

No wonder venture capitalists, who finance bright ideas, remain obsessed with finding the next big thing in the 50-mile corridor between San Jose and San Francisco. About one-quarter of all venture investment in the United States goes to Silicon Valley enterprises. And, according to a new report from Joint Venture: Silicon Valley Network, a regional business group, the percentage has risen, to 27 percent in 2005 from 21 percent in 2000.

Many times in the past, pundits have declared an end to Silicon Valley’s hegemony, and even today there are prognosticators who see growing threats from innovation centers in India and China. Certainly, great technology ideas can come from anywhere, but they keep coming from Silicon Valley because of two related factors: increasing returns and first-mover advantage.

These twin principles, debated in head-scratching terms by professional economists, essentially explain why [Intel](#) maintains a lead in high-performance chips, why Apple sustains a large lead in music players and why Google’s search engine remains a crowd pleaser.

On a gut level, we all can understand how these two factors work. Who wouldn’t want to play for a perennial contender? For the same reason that [Andy Pettitte](#) signs with the

Yankees, the best and the brightest technologists from around the world make their way to northern California.

“All that venture capital attracts a lot of ideas — and the people who are having those ideas,” said Stephen B. Adams, an assistant professor of management at the Franklin P. Perdue School of Business at Salisbury University in Maryland who has studied the rise of Silicon Valley.

Newcomers plug into an existing network of seasoned pros that “isn’t matched anywhere else in the world,” says AnnaLee Saxenian, dean of the School of Information at the [University of California](#), Berkeley, and author of “Regional Advantage,” a book about the competitive edge held by tech centers like Silicon Valley and the Route 128 suburbs near Boston. “That allows people to recombine technical ideas much more quickly here than anywhere else,” Professor Saxenian added.

“In terms of creativity, the Valley remains as far ahead of the rest of the world as ever,” she said. “People in the Valley generate new ideas and test them much more quickly than anywhere else. They aren’t a super race; it’s their environment.”

Silicon Valley is not invincible. The logic of increasing returns and the first-mover advantage can be overdrawn. Other clusters in the United States and around the world will commercialize great ideas, and the Valley will endure down cycles again, as it has in the past. Remember how the Japanese conquered memory-chip manufacturing in the 1980s, until then a staple of the Valley’s business? And, of course, the dot-com bust of five years ago remains a painful reminder of how success breeds hubris and humiliating failure.

Americans naturally harbor many fears about losing their edge, especially with the nation mired in war, the dollar’s value sliding and the health care system strained. Rivals, notably in India and China, see Silicon Valley’s pre-eminent position as a prize that they will inevitably take. Yet they face an elusive foe. Every time Silicon Valley recovers from failure, it seems to grow more durable, almost in the same way a person becomes “immune” to a disease after a brush with it.

Fifty years ago, chips were the engine of Silicon Valley. In the late 1970s came the personal computer and data-storage drives, then software, and more recently the dynamic vortex of the Web, new media and online commerce. (EBay, Netflix and, of course, Google and [Yahoo](#) are among the names that come to mind.)

These serial renewals are a marvel.

SIR PETER HALL, the British scholar of urban clusters, asks in “Cities in Civilization,” his history of geography and business innovation: “What makes a particular city, at a particular time, suddenly become immensely creative, exceptionally innovative? Why should this spirit flower for a few years, generally a decade or two at most, and then disappear as suddenly as it came?”

Sir Peter's words highlight an enduring human mystery. In the case of Silicon Valley, the world rightly waits for the flame of creativity to burn out. That's fair enough. To each, a season (or maybe a few). Living long and large, Silicon Valley surely will wither like a dead flower someday. My advice, though, is: Don't hold your breath.

G. Pascal Zachary teaches journalism at Stanford and writes about technology and economic development. E-mail: gzach@nytimes.com.

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