

Cover, B-Tank, August 2018

LAND OF OPPORTUNITY OR BOULEVARD OF BROKEN DREAMS?



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SILICON VALLEY

***B-TANK* SPEAKS WITH OPPORTUNITY
SEEKERS IN THE VALLEY TO LEARN
ABOUT THE GOOD, BAD, AND UGLY**

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On a flight from Seattle to San Francisco, computer scientist Haixun

Wang chatted with an elderly couple from Texas. When the Texans learned that Wang worked in the Silicon Valley office of e-commerce and cloud computing giant Amazon, they told him they were worried about California's plans to secede from the United States.

"Even after speaking with my seatmates for an hour, I couldn't allay their fears about California leaving the country and taking Silicon Valley's wealth with it," says Wang, 46, now vice president of engineering at workspace behemoth WeWork.

The Texas couple does not have to lose sleep over the "Yes California Independence Campaign," a 2018 secession initiative on the California state ballot that garnered only 14 percent of voter support. What their anxiety legitimately points to, however, is

an awareness that California's high-tech economic sector exerts a special influence not only over California but over the entire country. Indeed, their assumption that Silicon Valley, the world's most famous tech hub located in the southern San Francisco Bay Area, is all about making money is also borne out in observations with Valley residents themselves.

"For better or worse, the people who say the Valley is obsessed with money are right," Wang says. "Almost everyone here is thinking about his next move to get 'financially free' — to become wealthy and retire — as early as possible."

As a computer scientist now focused on artificial intelligence, Wang has worked the past two decades at IBM, Microsoft (in Beijing), Google, Facebook, Amazon, and WeWork, and he is uniquely qualified to comment on the differences between tech life in Silicon Valley and elsewhere.

"I first visited Silicon Valley in 2007 for a conference," Wang recalls. "I was still

with IBM and I was eager to see friends working at Yahoo, Facebook and some key start-ups. In my one week there, I felt strongly that people were motivated to chase after any new opportunity that would make them rich fast.”

Back a week later at IBM's research lab in Hawthorne, New York, Wang says he could feel how much slower the pace was compared to the Silicon Valley companies.

Other Silicon Valley scientists concur.

“I can't talk about what it's like to work at the more established companies in the Valley, but if you are working at a fledgling start-up, you burn,” says Nathaniel Fernhoff, 37, cofounder of Orca Biosystems, a biotech startup that develops stem cell therapies for patients with cancer and autoimmune disorders. “The start-up mentality is just, like, get it done at all costs. No excuses. No ‘I have a gig with my garage band.’ Work comes first.”

You can see why when there is so much at stake.

“In Silicon Valley entrepreneurial scientists always talk about ‘de-risking things,’” Fernhoff says. “You need to minimize or eliminate risk of all kinds if you want to get venture capital funding, without which no newbie start-up will make it out of the gate. Let's say we can be a \$3 billion-a-year company that saves the healthcare system money while also curing disease. Immediately any potential investor starts thinking about the risk associated with that

number. Will our clinical trials make it through the FDA's rigorous evaluation process? Will our technology be robust enough? Have we gotten our partnerships right?”

Fernhoff says that if you successfully innovate in the therapeutics space, investors stand to realize massive financial rewards, either through an initial public offering, where the public can buy your company stock, or through a buy-out, where a larger established company will either merge your operations into theirs or acquire a majority stake in your now relatively mature company..

“Anyone can have a great idea, but unless you manage all the risks inherent in your project, you will never get off the ground,” Fernhoff says.

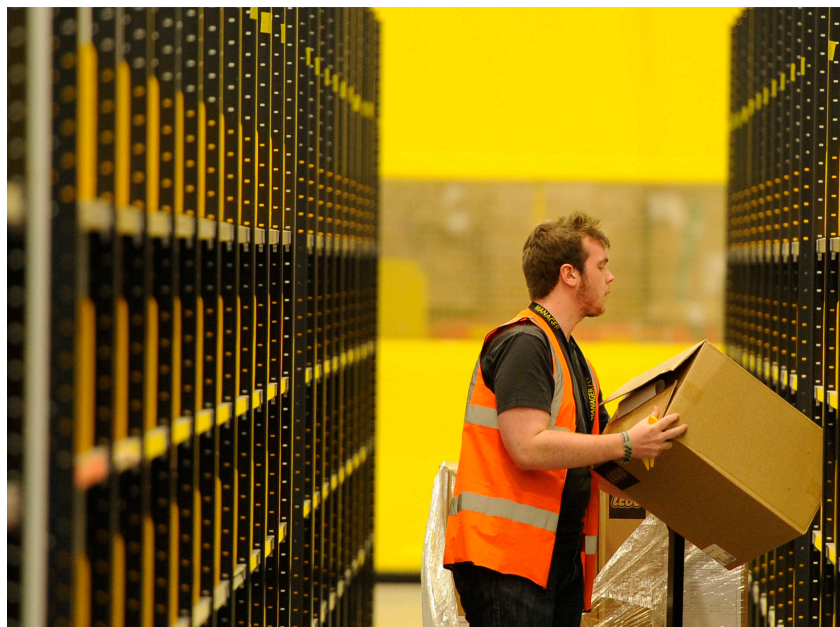
A plethora of work opportunities

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Arguably, Silicon Valley is the California Gold Rush of the twenty-first century, and hundreds of thousands of entrepreneurs, software architects, data scientists, product designers and marketing mavens have risked moving to the Valley to strike it rich.



UBER



After driving for Flex and talking to Amazon workers in warehouses, you realize that for every app or tech device that comes out of Silicon Valley, there is someone on the production or delivery end who is not benefiting.

Valley to strike it rich. The fact is that Silicon Valley — named for the chemical element used in making electronic circuits — boasts as great a concentration of venture capital investment as the Boston-New York-Washington Corridor. The potential for wealth in the Valley has attracted not only a global high-tech cream of the crop but also people with solid employment skills in computing and marketing.

“After college I was eager to get out of San Francisco, where I had lived with my parents and brother since emigrating from Belarus in 1989,” says Juliya Rubin, 33, a software development product manager. “I moved to Boston, slogged through a gig there and then headed to New York. To my dismay, I had trouble finding a job. I was forced to settle for contract work I considered low pay for the 60 to 80 hours I was expected to put in.”

Rubin moved back to Silicon Valley and discovered there’s no place like home. “I found that the Valley has a place for people like me who are great at making presentations and selling products,” she says. “With my bachelor’s degree in cognitive science and artificial intelligence, I was hired again and again.”

Indeed, Rubin hit employment pay dirt at five different Silicon Valley firms. During her stint at San Francisco-based Palamida, Inc., the company was acquired by software solutions developer Flexera, and Rubin walked away with some modest cash benefits. In Silicon Valley, employees that begin working at a start-up in its early days often receive stock options or other economic incentives. Some analysts determined that software pioneer Microsoft created three billionaires and as many as 12,000 millionaires by 2005.

“I didn’t join Palamida because I thought it would go big one day,” Rubin says. “It was just such a great place to work. When the acquisition happened, I was in the right place at the right time. That can happen in Silicon Valley.”

Work has been plentiful too for Assaf Kipnis, 36, who recently took a job at Facebook as an e-crime investigator. With a computing degree from Hoboken, NJ-based

Stevens Institute of Technology, Kipnis began his work life in New York by interning at two cybersecurity companies. Using his social and business networks, he landed comparable jobs in Silicon Valley at VMware, a cloud computing company; Workday, a financial management and human capital management software vendor; and networking website LinkedIn.

“I work 8 to 4,” Kipnis says. “Very normal hours. When it comes to work life, SV is the best.”

The wealth of employment opportunities comes up frequently in conversations with Silicon Valley employees.

“When I joined IBM in 1973, the expectation was that I now had a lifetime job,” says Ron Fagin, 73, a computer scientist who has received the prestigious Gödel Prize, the W. Wallace McDowell Award, and the Edgar F. Codd Innovations Award for the Management of Data. “The IBM research lab in Silicon Valley then was an exciting place for me to begin my work in relational databases, and it remains wonderful to this day,” says Fagin, who is also an IBM Fellow — the company’s highest technical honor. “Nowadays, of course, people come to IBM expecting to leave after five or ten years. The job-switch timetable is short here. And why not? It’s easy to find good jobs in Silicon Valley. You never have to go to the trouble of moving and selling your house because there’s always another job just down the road.”

Hopscotching from information technology (IT) job to IT job has proved advantageous for Wang, who is tasked with turning WeWork into the smart workplace



My Eye-Popping Hour at Facebook

Barbara Finkelstein

In my sixteenth year as an IBMer, my old friend Haixun Wang took me on a tour of Facebook. Haixun had gone to work there as an engineering manager after an 11-year stint at IBM Research and two shorter ones at Microsoft and Google. My own experience of the IT world was limited to IBM, and I was thrilled that — if only for an afternoon — I would set foot in Silicon Valley's inner sanctum.

I had heard that Facebook and some other Valley companies gave their employees free food and bean bags. Could these little perks siphon talent away from a venerable tech company like IBM?

Nobody at Facebook seemed to be thinking about venerable.

The place was half college student center, half funky Brooklyn food co-op. Hundreds of young employees were hard at work in their open-space offices, staring into big flat-screen monitors, navigating a spaghetti mess of computer cables. Occasionally they stared up at the rafters and pipes overhead, taking in Facebook's factory-farmhouse ambience.

I didn't see any bean bags. Just really comfortable blue sofas where ear-budded technocrats could curl up to listen to Arcade Fire on their devices.

Haixun led me around the campus, past the indoor bicycle repair shop, the Mondrian-like stone sculpture, the dry cleaner's, and the giant chalkboard with "What's on your mind" in black Helvetica across the top. The many pastel murals and the soft-rock music piped into the common areas said, "Hello, world! We are young, skilled and bold, and we will — we will — rock you!"

Out of the blue, Haixun said, "Oh, look, there's Mark."

There he was: The famous Harvard dropout outfitted in his famous grey T-shirt and jeans. Mark — I feel I can call him that now too — sat down at a computer terminal, smack in the middle of the vast Facebook workspace, surrounded by scores of his people. A "reggalah poysen."

You know how many times I saw the three consecutive CEOs at IBM? Never. Unless you count the times I saw their talking heads on closed-circuit TV screens. My colleagues and I used to make fun of them. They looked, how do you say, so Politburo.

Facebook, Zuckerberg, the throngs of Facebookers strolling around the campus eating free ice cream, wearing free T-shirts, recharging their electric cars — awfully hard to make fun of so much wonderfulness. Why would anybody want to?



of the future. “I have entered a computing playground where I can explore the use of blockchain technology to create secure contracts,” Wang says, commenting on the freedom WeWork gives him to explore how new technologies can extend the company’s original mission of renting office space for short-term projects. “I can also apply my training in machine learning to develop robots that will badge you into your workspace and serve you breakfast. When you switch jobs in the Valley, sometimes the sky’s the limit.”

Employment is all but ensured in Silicon Valley largely because California prohibits the use of the non-compete clause, a law preventing employees from working for a competitor for a specific period of time in a prescribed geographic area. Anupam Chander, visiting professor at the Georgetown University Law Center, argues further that the internet industry in the 1990s worked out an agreement with the copyright industry that internet service providers would not be held responsible for copyright infringement when hosting materials they themselves did not own. With this agreement in place, industries in Silicon Valley could thrive. Chander adds that Congress’s unwillingness to pass legislation protecting the privacy of web users meant that IT entrepreneurs would have a free hand in maximizing profits by publishing users’ photos, videos, and text without compensating the owners.

And in a sign that “as California goes, so goes the nation,” the *Wall Street Journal* reported in July that “job-hopping is happening across industries including retail, food service and construction, a sign of broad-based labor-market dynamism.”

Like snowflakes, no two Silicon Valley companies are the same.

Haixun Wang believes that while the pressure to excel

in the Bay Area is unrelenting, workplace culture varies by company.

“You have to be careful when you talk about ‘Silicon Valley culture,’” Wang says. “At Amazon, for example, executive management is focused on pushing products out the door. As a result, they end up doing not very good design, and they create a lot of duplicated projects. But that style of development works for them. Facebook believes in hacking — coming up with quick solutions to a problem that gets the job done albeit in an inefficient, even un-optimal way. They will hire young people who will either do something unique or end up reinventing the wheel. In Silicon Valley, anything is possible.”

Indeed, what passes for Silicon Valley culture today is vastly different from the region’s previous cultural incarnations. Historians point to the Bay Area’s geographical advantages, especially San Francisco’s port and open skies, which helped attract the early telegraph and radio industries. In 1933, the U.S. Navy purchased an airfield and turned it into a joint military-civil airport — an ideal property for the developing aerospace industry. The National Aeronautics and Space Administration (NASA) established its Ames Research Center in 1939. Given the growth of so many military-civil scientific organizations in the area, William Hewlett and David Packard (who later developed the Hewlett-Packard Company, or HP) set up shop that same year and began producing radar and artillery technology.

A cascade of technology companies appeared over the next decades, including Intel and venture capital fund Kleiner Perkins.

After the Stanford Research Institute became a node in the ARPANET — the government-funded forerunner of the internet — a flurry of companies joined the Valley’s tech party: Atari, Apple, Oracle, and other computing companies saw the light of day in the 1970s.



Yahoo, eBay, PayPal, and Google arrived in the 1990s. What better locale than this ever-evolving tech hub for Facebook, Twitter, Uber, and Tesla to enter the high-tech fray?

Down and out in Silicon Valley?

While this tech magnet is estimated to be worth \$2.8 trillion, not everyone living there is sipping caffè macchiatos and building start-ups valued at a billion dollars. Despite starting salaries in the six figures, thousands of Silicon Valley employees live paycheck to paycheck.

Cyber-threat investigator Assaf Kipnis says he could not be happier with his work at Facebook, citing the company's relaxed work atmosphere, constructive feedback, and comfortable work-life balance.

"But because of the crazy cost of living, my wife and I have tossed around the idea of relocating to Colorado," Kipnis says. "We would love to stay — as far as work-life is concerned, I think SV is the best — but the financial pressures are real, and they are challenging."

Housing has long been a serious problem in San Francisco because Bay Area tech companies frequently place their headquarters in areas without nearby affordable housing. The median sale price of a house in the Bay Area climbed to \$850,000 in April 2018. More typical is the modest Cambrian ranch house selling for upwards of a million dollars.

"San Francisco is so expensive that households making over \$100,000 a year qualify for low-income housing," *Business Insider* reported in June 2018.

"You can feel the resentment for the tech bro in Silicon Valley," says Alana Semuels, whose first-person piece about delivering packages for Amazon Flex appeared in *The Atlantic* in June 2018.

"After driving for Flex and talking to Amazon workers in warehouses, you realize that for every app or tech device that comes out of Silicon Valley, there is someone on the production or delivery end who is not benefiting. The more time I

spend here, the more attention I pay to that."

Semuels has spent much of 2018 tracking the impact of Amazon on housing. One article focuses on the company's refusal to support an affordable housing measure in Seattle and on workplace conditions. Another article documents the "grueling and high stress" warehouse jobs that "few people are able to stay in . . . long enough to reap the offered benefits."

"I have a lot of friends that work in the tech industry, and for a lot of people the stock options part is especially appealing," Semuels says, referring to a much sought-after company benefit that gives highly-valued employees an opportunity to buy company stock at a discounted or fixed price and then sell it when they see fit. "But there's this whole other group of people that is often not written about, the workers whom tech has enabled to make a living, but not a good enough living. These are the Uber and Lyft drivers, the Flex drivers. For whatever reason, they're not who we read about in stories about Silicon Valley."

Semuels says she cannot look at the many homeless people in San Francisco without considering the dark side of the tech industry.

"Tech is kind of promising to change the world," she says. "But in a lot of cities that tech calls home, these tech giants can't even change the city they're living in. What does that say about technology? What does that say about Silicon Valley?"

Perhaps the Texas couple Haixun Wang met on his flight back to California would be surprised to learn that behind the wall of Silicon Valley wealth and high-tech innovation lies a social challenge — and that every individual will struggle to make sense of Silicon Valley's internal contradictions. Isn't that the way of the world beyond Silicon Valley wall too? ■

Barbara Finkelstein has contributed to B-Tank since 2017. She is at work on a book about mental illness and housing in the Bronx.