

Techno-Missionaries

Doing Good at the Center

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Introduction

The Silicon Valley region is widely known as a site of technological innovation and high tech industries, one where espoused values of efficiency, rationality and productivity are ubiquitous. Regional leaders emphasize formulating problems and finding their optimal solutions, typically through the exercise of teamwork and by using technology. Ironically, work in this place of instrumental pragmatism is grounded in acts of faith that place Silicon Valley at the center of a progressive force for global change. High tech work takes on significance that transcends the rhetoric of efficiency, productivity and “valued added,” as it is used to make lives meaningful by aligning them with progressive forces.

The goal of this paper is to sketch this larger social and moral endeavor, to suggest its causal factors, and to speculate as to its significance. It is based on a decade of participant observation in the region, as well as a specific three-year project, Work, Identity and Community in Silicon Valley (conducted with J. A. English-Lueck and J. M. Freeman). The latter is based on repeated semistructured interviews with 170 people situated at different positions (e.g. organizational levels, economic sectors, and functional responsibilities) in the region.

1. Silicon Valley as Technopole

Silicon Valley is a land of hyperbole and image, but it is a mistake to discount its technological and economic bona fides. Although Silicon Valley is inconsistently defined, we can use data from the San Jose Metropolitan Statistical Area as an indicator of its size and dimensions. Economic output in 1998 was \$39.78 billion, 37.17% of which was produced by its high technology industries, the second highest percentage of high tech economic contributions to the total economic output in any U.S. region. Over 279,000 people were employed in the region’s high tech industries during 1998, making it one of the largest high tech labor markets in the country. The breadth of Silicon Valley’s high tech industries is also significant: One recent analysis argues that 10 of 14 such industries can be found there (DeVol 1999: 55).

The regional concentration and breadth of high tech industries has significant implications for employment, so that a job in Silicon Valley's high tech industries is different than a comparable one elsewhere. An engineer at one large company explained, "The opportunities here are great for any kind of thing. If I get tired with Cisco, there's the opportunity to jump to another job if you choose. It is refreshing to have the ability to walk out and just hand my resumé to five places and not have to leave the area. It's kind of nice." Another commented,

I'm in a very rich soup and life does have uncertainties. If it were the case that I were to lose a job, whether it is Adobe or what not, my tool kit, knowledge, my strengths come with me. But if you're in a desert you'd have to travel a long way to find another place. But we're not: We're in this rich soup. Which means that I can feel safe in buying a home and knowing that even if I should be laid off, just around the corner could be another job.

This sense of a critical mass of jobs allows people to celebrate risk taking and entrepreneurship as values, since the costs of failure are not viewed as catastrophic; new opportunities are just around the corner. It also underlies the prevalence of technical knowledge in the wider community. For example, a municipal worker joked that at traffic commission meetings many people in the audience were typically conversant with the mathematics underlying the engineers' traffic impact simulations. That, she explained, shocked her colleagues at national conferences.

Thus, the size and concentration of high technology industries generates significant numbers of jobs, attracts people with broad commonalties in education and skills, and ultimately provides a context within which personal choice is exercised and civic life is conducted. It creates a sense in leaders and ordinary people alike that the region is, to some extent, a self-contained universe. One person remarked,

It's an area where technology oriented companies gather in sufficient numbers to produce the kind of critical mass, meaning that there are enough companies in one area that they form their own culture and subcultures supporting each other. So that you really don't have to go out of the region to run your business. In Silicon Valley, any technologically oriented company can find other companies that can supply all of its needs. I mean you do not need to go anywhere else for anything. You can get virtually anything done from the most complex integrated circuits designed, built, delivered, tested. The whole region is substantially independent from its market, which is outside.

2. Technoculture

Technological devices are ubiquitous in Silicon Valley, and many people create infrastructures of devices that mediate their relationships to each other and to other places. Although local fascination with such devices is visible and consequential, our interviews indicate that the region is not simply about consuming and using technology. The latter is embedded in a system of production in which many people directly participate, while others are affected by it through media coverage and conversations with family members and friends. This production system supports a "technoculture" in which technical knowledge can be viewed as surrounded by haloes of attached values and assumptions. The latter do simply enact and reflect the characteristics of devices, but they are affected by the nature of work in high tech industries and the location of Silicon Valley in a global system of production and consumption.

We see these distinctions in the observations about the region by ordinary people. A software engineer reflects about Silicon Valley,

It is buildings, it is products, it is jobs, but mostly it is culture. It is the reason you can't take all the buildings and the climate and whatever we have here and move it somewhere north of Mazatlan and suddenly have another Silicon Valley. It is a collective consciousness of people like me who do what we do, "we" being the corporation, the other corporations, the whole business climate. It is hard to define, but I know it when I see it. I participate in it, I guess.

Another high tech worker spoke of the fear of leaving a familiar culture: "My biggest worry about going someplace rural is that I would no longer live in the middle of this immense culture of people just like me. Variety's all very nice, but I want someone to talk to who won't think I'm weird because I like to talk about computers all the time." He jokes about the files of Silicon Valley jokes that circulate via email. "You know you're living in Silicon Valley if you think that leaving work early to go to Fry's is a perfectly good excuse, and your boss agrees." It's true: "See ya later, boss. I gotta go to Fry's" (laughs). It's really sad."

Yet another person commented on the common values and practices of his high tech colleagues. Both the ubiquity of devices and the importance of larger values can be seen in his remarks.

I'd say that high tech has so many different professions with, but overall I'd say that we're kinda one big group of people that is kinda thinking about next generation things as well. So a mind set in that it's not just here and now: It's where are we going. Always, where are we going, going, going. What is the future about and where are we going to be two years, five years, ten years from now with our world? How does that technology fit in, and in my particular instance because of the international, where are different regions going two, five, ten years from now? What's the direction and where are we going to be and where should we be spending our money and our attention and putting our focus on building our infrastructure, if you will, to get to these areas to support them. So I guess this future outlook and then also just being absolutely surrounded by living and breathing hardware, software, networking, whatever. We don't escape it at home: We all have ISDN lines. How embarrassing [laughs].

These comments reflect a broad sentiment that work in high tech industries involves more than technical knowledge or familiarity with devices. Although both the latter are important, work situates people in communities of practice that are marked by fundamental orientations to location in a larger social system, to values around time, and to moral judgements about the good life. Silicon Valley effectively becomes constructed as a center of a larger social movement.

3. Silicon Valley as Center

I would say we are the high-tech center of the world. Things may be built offshore, but as far as design, the majority of what's to come in the future is founded here. With the exception of Microsoft, the guts of computers are here and designed in the Bay Area and without that, I think, first of all there wouldn't be as many jobs without the computer industry and second of all, all the innovations that people are projecting into the future deal with computers and the high-tech industry: Silicon wafers which run every type of electronics are produced in the Bay Area, so I'd say technology or anything to do with technology that anyone knows in any part of the world comes from the Bay Area.

Lest we think this is simply the self-congratulatory posturing of a high tech insider, consider the comments of someone outside the high tech sector who claims Silicon Valley is:

the Mecca of the technological age. We have all heard of the industrial revolution where we were building cars and manufacturing things. We were a manufacturing country and now we are going into a time and era in life where technology is the cutting edge of jobs and society, and it is all based right here in this valley. So because of that many brilliant people are here, the top minds are here. This creates a lot of work; people want to be here. There's more people, but it creates lots of jobs, not only for the people in the technological industry but for the people in the service industry as well.

He concludes, "There is a lot of wealth in this valley because most of these computer companies are the largest ones in the world and they are based right here and they have lots of stock options and they get money and are able to remodel their house and hire people like me—painters."

This centering Silicon Valley involves two distinct claims. First, it is at the center of a global system of technological innovation, especially in the field of computing. Relevant industries are concentrated here, as are people who contribute to technological innovation. Second, Silicon Valley is reconceptualized not as a geographic place but as an industrial sector that is the driver of the regional economy. Thus, both globally and locally, Silicon Valley's high tech work is situated as central in relation to other places and activities. As Saxenian (1994) argues, Silicon Valley is less a site of distinct companies than one marked by commitment to certain kinds of work, thus reinforcing its organization as a single center. This perspective is embraced by interviewees who claim to work momentarily for specific organizations, but who really participate in a larger endeavor that transcends daily exigencies. Consider the following person's reflection on the differences between San Francisco and Silicon Valley. In the former, if you

went from Levi Strauss to Wells Fargo, you crossed territorial boundaries. But in Silicon Valley, what I claim happened is, it is all one company. There is the Intel division and there's the 3Com division, but it's all one large company. If you listen to people talk, it's as if they worked within the same company. 'Oh, you're now over at 3Com. What part of 3Com, blah, blah, blah'. You are in this thing which is all one company, OK?

4. Doing Good

High tech work in Silicon Valley is also deemed to be part of a progressive movement that is global in nature. Attributions of movement toward a better future are explicit in many descriptions of the place. One employee of a large high tech company quoted her psychologist neighbor: "We all seem to be on a sort of fast moving vehicle, all moving toward this really positive thing in the future, whatever it may be, and always looking at that next horizon. But forward thinking, future thinking, and looking for new solutions. I don't like to use the word technology necessarily, but solutions, I think more so. Improvements and solutions for lives in general."

Such a future is generally described as one in which benefits flow throughout society without regard to class. An employee of a forecasting organization remarked,

Silicon Valley is a link to a future. It is bringing new technologies so that we have a better quality of life that can reach all levels of society. It's not just limited to the upper income, upper class group,

it's something that's I think universal. If it's allowed to get into schools and things like that, which it's doing now, it simplifies life, it simplifies things. It's also allowing people to reach beyond what has been capable now and try new things.

This future oriented, progressive movement is all the better since it emerges from cultural diversity is harnessed to technological innovation. A software engineer at one of the region's preeminent high tech companies expressed a widespread sentiment:

It's comprised of several cultures from around the world and the amazing thing about the place is the tremendous pace at which progress happens now in this area in terms of technology. I'm attracted to the place just because it's really admirable how it's, how many innovations this place has really pioneered. Really come and pioneered and shown the way for the rest of the world. That the progress has spread out from this place in that sense.

That people seek a grander meaning to their jobs is certainly not new, but historically most such claims have argued that the work is valuable to society. What is perhaps distinctive in the accounts of work in Silicon Valley is that work transforms that society to the extent that others embrace its products, services, and outlooks. The process is essentially one of conversion to a new way of seeing and acting.

At issue here is not whether Silicon Valley high tech is "really" a progressive force, or even whether there is local unanimity that it is characterized by such goodness. Rather, regional identity is grounded in a particular kind of work and that work and its products are not viewed neutrally. They evoke visceral reactions and lengthy discussions, and the lines of contention are ambiguous. For every industry insider who proclaims Silicon Valley as the epitome of progress, there is another who has deep reservations and likely harbors plans to open a bed and breakfast or plant a vineyard—after exercising stock options. The salient issue is that high tech work is swept into a grand endeavor, one that has moral implications that most people must address in their own lives, in their own ways.

5. Movements Across Boundaries

Being a center implies a periphery, and movements between the two. Indeed, I argue that it is the act of boundary crossing that defines Silicon Valley and rejuvenates faith in its technoculture as a progressive endeavor. Silicon Valley is a global technopole (Castells & Hall 1994) and as such it attracts people from near and far. Journeys to it often assume the quality of pilgrimages to a sacred center. One otherwise matter of fact engineer mused,

Certainly, when I got my first Apple computer I sat there and looked at the manuals and saw the address: Infinite Loop, in Cupertino. That's where their headquarters is. So I've always thought about that ever since I was a young child and thought about what Apple was. Then a few years ago we moved to another apartment which was about a quarter of a mile from Apple's headquarters and so it was such an amazing thing for me to be so close to this thing that I had thought about all the way through my childhood and it was just something that had been a natural thing for me to want to be out here, I guess. I couldn't imagine being anywhere else.

Many people speak of this compulsion to come here to simultaneously hone their skills and test their abilities, all while working at jobs that are equivalent to graduate seminars. The linkage of economic opportunities

to interesting work is powerful, and continues to attract the techno-savvy from around the world. Indeed, while local rhetoric often celebrates Silicon Valley as a product of indigenous American know-how, the ubiquity of immigration (including from within the U.S.) is recognized by others as a driver of Silicon Valley. One employee of a large software company remarked,

The difference is that we are all immigrants and I think that makes a total, fundamentally different environment. Essentially, we are doing this stuff not on top of a previous culture but we are making up as we go along. I think that is one of the reasons for dynamism. It is also the reason for the chaos that comes with it and you know the people who say “unplanned,” I think, are understating the chaos [laughter]. This is a place in which there is a mix of broad intellectual effort in a lot of different areas that are pushing the boundaries of what we know in terms of many of the businesses and the professional areas and technology. I also think we are pushing the boundaries of what it means to be a human being.

Once here, work related travel often takes people to destinations, which ironically deepens their appreciation for life in Silicon Valley.

I’ve gone to various places at various times and I do something which I feel is fairly ordinary and it is so far beyond where they are that I usually leave. I’ve a couple of times left them in a precarious place because they’re not up to taking on what I have created or what I’ve done. The skill levels, the knowledge, the overall thing, it’s just not where they are. I wind up needing the interaction of peers. Even leaving this company and going to other companies in the valley, I have that experience (of working with peers).

Faith in the importance of work in high tech industries is constantly renewed by the flow of immigrants and sojourners to the region, as well as excursions taken elsewhere that are reminders that Silicon Valley is special. Faith is tested and renewed through this process, and people who depart for good provide opportunities for others to reexamine their commitment to the grand endeavor.

6. Driving Zealotry

We return here to the question of why high tech work in Silicon Valley, a global bastion of efficiency, productivity and instrumentalism, is rendered meaningful as a larger endeavor that assumes moral dimensions. Several factors may be relevant. First, despite the rhetoric of transformation that accompanies many discussions of high tech, its results are generally invisible to most people. While industrial centers of steel and automobile production required visible and distinctive facilities, Silicon Valley presents itself through non-descript buildings that conceal what goes on inside. Indeed, newcomers often joke about trying to find Silicon Valley in the absence of distinctive physical markers. This invisibility extends to the very products made and services provided. Many people we interviewed spoke of their work as contributing to the quality of everyday life in hidden ways, such as through microprocessors built into automobiles: The driver is blissfully unaware that he or she is driving a computer. Likewise, much high tech work is difficult to describe to the uninitiated. People often told us that they searched for a certain look in the eyes of family members or new acquaintances that indicated whether the person could understand, both cognitively and emotionally, the work of Silicon Valley. A judgement could usually be made within thirty seconds, and if necessary, the topic of conversation shifted to sports or the weather. From this perspective, the meaning of high tech work is related to making visible to self and others the work that underlies significant, even revolutionary technologies.

Second, although Silicon Valley is widely viewed as an important center, it is also deemed to be a fragile one. Location is part of the fragility; comments about being located on an earthquake fault at the edge of the Pacific Ocean are widespread. It is also grounded in the dynamic nature of high tech industries. One engineer mused rhetorically, “Technology wise, how many companies can I mention today and be pointing out the same companies ten years from now?” Finally, the very concentration of high tech industries makes the region highly sensitive to changes in national and global markets for technology. Although Silicon Valley’s high tech economy is far more diversified than it was, DeVol (1999) argues that it is still the high tech region that is most vulnerable to recession. From this perspective, situating high tech work as a grand progressive endeavor may simply reflect deeper anxieties about the robustness of the regional economy.

A third factor might be the banality of daily life in one of the world’s preeminent technopoles. Despite talk of being a modern day Florence, everyday life for most people is marked by increasing traffic and lengthy commutes brought on by a hyper-inflated housing market. Life in a virtual realm facilitated by a dizzying array of devices is accompanied by the harsh reality that the automobile is the dominant technological device of the region. Moving bodies through time and space still drives daily logistics, and it can be difficult to remember that one is bleeding on the cutting edge of innovation. From this perspective, discussions of the progressive nature of high tech work serve to obscure the frustrations, tedium and stress of work. Dark humor abounds about the cruel ironies of living in a place that prides itself on efficiency.

7. Significance

This paper has sketched an outline of work in Silicon Valley as a grand endeavor, and here it remains to pose several questions regarding the significance of its missionary function.

First, we must ask how high tech work affects patterns of cultural heterogeneity or homogeneity on a global level. It is easy to see Silicon Valley as part of a trend toward bland uniformity, but such a conclusion might be premature. In a brief comparative study of global workers in India, Taiwan and Dublin, we found both common perspectives and significant differences. Indeed, we often found a heightened sense of local culture as relevant to working across international boundaries, since it is used to obtain strategic or tactical advantage. Yet we are equally certain that if our interviewees were to meet and discuss their “globally connected” lives, that they would find much in common. Furthermore, Silicon Valley itself is a site of culture genesis that is often invisible to local residents, and just as old distinctions are being erased, new ones are being drawn. The empirical question then is one of how the explicitly universal assumptions and values of work in Silicon Valley will play out in other local settings.

Second, we must ask how the progressive social movement of which so many of informants speak affects markets for products and services. Many of the latter are described locally as “cool” solutions to problems of communication and computation, but they also drive the formulation of social life as a set of problems that can be managed with just the right device/solution. This dynamic is clearly reflected in the sense of the fragile center: What if people decide they don’t need this stuff and stop buying it? Silicon Valley thus creates itself as a community of a certain kind in order to model effective use of its own products and services. The social movement might be more about developing markets and the replication of capital than about a techno-utopia.

Finally, if we grant that Silicon Valley is at the center of a particular social movement, we must explore its connections to that which it is not. We have been repeatedly struck by the decidedly non-high tech basis of social life in the region, such as when elderly parents freeze meals for their offspring or collect the grandchild who got left

behind during a fast paced day. We see seemingly instant decisions made and celebrated, while the years of relationship building that make them possible are often invisible. And we watch those who proclaim it as the self-referential center of the universe escape it through regular vacations, involvement in hobbies, or other well-orchestrated “escapes.” Accordingly, descriptions of both Silicon Valley and high tech are often predicated on the assumption that each represents a radical transformation of social life. Instead, they may merely obscure the importance of familiar social forms and practices, even at the center.

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