

SECRETS OF SILICON VALLEY

STUDY GUIDE

By Alan Snitow and Deborah Kaufman

Introduction

Welcome to the study guide for "Secrets of Silicon Valley." This guide is aimed primarily for use by community groups and college classes in sociology, labor studies, economics, business, humanities, computers, globalization, and American Studies. The guide provides background information, subjects for discussion, activities, and additional resources.

"Secrets of Silicon Valley," a one-hour documentary film, tells the stories of two young activists grappling with the social impact of the high tech revolution and globalization on their work, their health, and their communities.

The film is also about different ways of viewing the world—different not just because of a person's cultural or racial background, but also because of that person's economic or "class" position in society.

Most of what students hear about globalization comes from the perspective of big winners like billionaire venture capitalist John Doerr whose voice opens the film. "The new economy is global," says Doerr. "It's all about speed and change, customization and choice. It's a win-win situation." In "Secrets of Silicon Valley," we hear a different story. Viewers get a chance to see the story of high tech through the eyes of temporary assembly line worker Raj Jayadev and community activist Magda Escobar. It's a world of low wages and insecurity—just down the street, but still far away, from what Magda calls "the frictionless world" of wealthy business people and the media.

"Secrets of Silicon Valley" leaves it up to teachers, students, and other viewers to analyze and discuss social changes and how we can live responsibly in a global society. This study guide aims to help teachers and community leaders facilitate those conversations.

Background

Silicon Valley lies at the southern end of the San Francisco Bay and includes the city of San Jose and surrounding communities. It has come to symbolize a global economy based on computers and the Internet. Cities around the world are following Silicon Valley's example from Silicon Alley in New York to Silicon Wadi in Israel to Multimedia Corridor in Malaysia.

However, fifty years ago, before the coming of high tech, the place now called Silicon Valley had a different name. It was called "Valley of the Heart's Delight" because of its rich soil, fruit trees, and farms.

World War Two and the Cold War brought big changes. The military started the area's first high tech boom. The farms gave way to fields of concrete at the massive U.S. Naval Air Station at Moffett Field and at the Lockheed aerospace complex. Former farm workers now started going to work in factories where they received higher wages and job security.

Stanford University developed outstanding science and engineering programs closely linked to local defense industries and government contracts. Stanford researchers discovered not only new technologies, but also new ways to profit from their discoveries. Hewlett-Packard, Cisco, and others all emerged from this hothouse of scholarship, business, and government money. As the Cold War drew to a close, a new high tech boom was sparked by advances in semiconductors, personal computers, and the Internet.

Today, risk takers of the world over are drawn to Silicon Valley each year, hoping to make it big or just hoping to find a job. They are engineers and janitors, entrepreneurs and factory workers. The long-term jobs once found here have given way to a flexible and fast-paced work life of temporary and contract employment. But one thing remains the same: Silicon Valley's high tech industry is one of the most anti-union industrial areas in the world. Very few high tech workers have been able to join unions, and industry leaders say they intend to keep it that way.

In the 21st Century, many cities hope to replicate Silicon Valley, but few people know of the valley's many contrasts. There are sudden millionaires and also "permanent" temporary workers, casual outdoor lifestyles and toxic waste dumps, gated mansions down the street from overcrowded apartments, Internet networks and extremely low levels of civic, social, and philanthropic involvement.

For further information on Silicon Valley:

Joint Venture Silicon Valley
www.jointventure.org

Center for Science, Technology, and Society at Santa Clara University
<http://sts.scu.edu>

South Bay Labor Council, AFL-CIO
www.atwork.org

Synopsis of the Film

Questions for discussion before viewing the film

Ask students what their impressions are of Silicon Valley. What have they heard? What high tech leaders have they heard about in the news? How would they define "technology"? What technologies do they use every day? How old are those technologies? What is the Internet? Do they know anyone who works in a high tech industry? What jobs do they do?

"Secrets of Silicon Valley" begins with pictures of early 20th century industrial machines and the voice of billionaire venture capitalist John Doerr, who praises the wonders of the "new economy" over the old industrial economy represented by the machines.

The film then introduces the two main characters. Magda Escobar runs Plugged In, a computer training center in East Palo Alto, a low income community just a few miles from high tech's wealthiest neighborhoods. We meet her as she raises money for Plugged In at the Sand Hill Challenge, a charity soap box derby race put on by venture capitalists, the big investors in high tech start-up companies.

Raj Jayadev is hired by Manpower Inc., one of the world's largest temporary agencies, to assemble Hewlett-Packard printers in a San Jose factory. When his paycheck is shorted, Raj successfully brings together workers to protest. When he raises safety and health issues, he is laid off for "stirring up trouble." He testifies at legislative hearings on economic inequality in Silicon Valley, and eventually wins a Labor Commission ruling that he was fired unlawfully because he raised safety and health issues on the job.

Magda's training center is facing a crisis. East Palo Alto is being gentrified. Escalating rents and high tech development are driving out residents, and Plugged In itself is being evicted. Her effort to relocate is brought to the attention of President Clinton, who comes to Plugged In to deliver a major policy speech about the "digital divide", just as bulldozers come to demolish the old neighborhood.

Questions for discussion after viewing the film

How has the film changed the students' impressions of Silicon Valley? What was new to them? What questions does the film raise and what questions does the film answer? What questions are they left with?

Discussion Theme Number 1: TEMPORARY WORK

One of the main characters in "Secrets of Silicon Valley" is a temporary worker. Raj Jayadev is an employee of a staffing company called Manpower, one of the world's largest employers. Manpower sends Raj out on a work assignment to assemble printers for Hewlett-Packard, another mega-corporation.

This is the world of "flexible work" in the "new economy". Each individual acts in the economy like an independent contractor. As one entrepreneur sees it, "You're the CEO of your own life."

This isn't really a new idea. For most of American history, individuals had no job security and no health or pension benefits. They were employed or fired at the whim of the employer and had no rights while at work.

That changed during the Depression and World War II when more and more people in the workforce joined unions and demanded greater control of their working conditions and wages. As a result of the growth of organized labor and President Franklin Delano Roosevelt's New Deal laws to protect working people, many Americans got used to the idea that a job with health benefits could be theirs for life and that they could retire with a pension. Until the mid-1970's, temporary staffing agencies and contract work barely made a dent in the workforce.

But since the mid-1970's, global corporate competition, outsourcing, declining union membership, and government de-regulation have changed the conditions of work in America. Young people coming into the workforce today are likely to start out as temps. Many may never hold permanent jobs.

Temporary agencies are now the largest private employers in the world. In 2000, Manpower, for instance, operated in 59 countries with over 2 million employees.

When full time permanent workers are laid off nowadays, companies often replace them with temporary workers. Every kind of work and every industry is affected. In the 1990's, the number of temps working in manufacturing tripled. By 2001, 3.9 million people were hired out through temporary agencies in the U.S. Many more work in meat packing, fast food, box store, and day labor jobs that often aren't classified as temporary, but which also lack job security and benefits. Even many college and university teachers are now temps, traveling academic itinerants who call themselves "Road Scholars."

The trend is international. In European countries, for example, companies evaded legal protections for permanent workers by hiring so many temps that in the 1990's, nine out of ten new jobs were either temporary or part time!

Many economists have praised this flexibility and the idea that each person is responsible for his or her own destiny. The Staffing Industry Association says temporary work often leads to permanent employment, lowers

unemployment by more rapidly matching workers and jobs, and provides social and work skills for young people and people coming off welfare. The temp industry says these jobs also help companies adjust to rising or falling demand with short-term hires and low-cost layoffs.

Critics ask in response: “Low cost to whom?” The National Alliance for Fair Employment (NAFFE), a national coalition of more than 50 community and labor groups concerned with temporary work, says companies use temp jobs to increase profits by lowering pay and benefits. On average, temps in private industry earn 45% less than full time employees. NAFFE says the impact is huge: after accounting for inflation, the American worker on average earns less now than 30 years ago.

For groups like NAFFE, the problem isn't that temp jobs exist, but that such jobs are becoming the norm, replacing stable, high-wage jobs, de-skilling work, eliminating health benefits, and silencing workers who want to complain about health and safety or who want to organize unions.

Raj Jayadev’s story clarifies these issues and raises cogent questions about the new economy:

Questions for discussion:

- Who gains and who loses from the “flexibility” of the new economy and the high tech work structure?
- How do you create stable communities and stable families when people are in constant flux, following jobs like migrant workers?
- What roles should organized labor, government, corporations, schools, and community groups play in ensuring job security and fairness at work?

For further information on temporary work:

National Alliance for Fair Employment:

www.fairjobs.org

Silicon Valley De-Bug:

www.siliconvalleydebug.org

Discussion Theme Number 2: The Digital Divide

The city of Palo Alto in Silicon Valley is one of the most expensive suburbs in the United States. It is home to Stanford University, the Hewlett Packard Corporation, and many of Silicon Valley's leading high tech financiers, the venture capitalists who make millions of dollars during high tech booms. Palo Alto public schools are well endowed with recreational programs and computer labs. The overwhelming majority of the population is wealthy and white.

Bordering Palo Alto is the low income community of East Palo Alto, known in the early 1990's as "the homicide capital of the nation." East Palo Alto has almost no financial resources. The city's tax base is so small that the city can barely afford to have a police force, much less recreation programs for kids or computers in the schools. The overwhelming majority of the population is low income, African American or Latino, people who are being left out of the high tech revolution.

One of the many disparities between communities like Palo Alto and East Palo Alto is called "the digital divide." The divide exists when low income people and minorities don't have access to computers and the Internet which are necessary tools for participation in the new economy.

"Secrets of Silicon Valley" profiles Magda Escobar and her organization "Plugged In" as they try to bridge the digital divide in the heart of Silicon Valley.

Magda raises money from Silicon Valley's wealthy elite to support education and computer training for low income people in East Palo Alto. She tells high tech leaders that giving East Palo Altans access to computers is a good investment in future workers and consumers and that it gives low income people an opportunity to make it in high tech.

At the height of the high tech boom in the late 1990's, the issue of the "digital divide" became a catchall phrase used by the media, government, and corporations to refer to virtually all social problems. In Silicon Valley, there was a growing faith that high tech education could level the playing field, provide opportunity, and "raise all ships" on a wave of prosperity. In Silicon Valley, overcoming the digital divide became synonymous with overcoming the problems of racism, poverty, and under-funded public schools. But when the high tech boom collapsed, all the social and economic problems remained.

A 2000 report on the digital divide, *From Access to Outcomes*, concluded, "It's time to stop focusing so intensively on the technology divide, for the real differences we should seek to narrow are America's core social divides: the grave disparities in economic opportunity, education, health, safety, housing, employment, and even transportation."

Questions for discussion:

- Can technology overcome social problems...or does technology itself simply reproduce existing social and racial divides?
- How could your community or school use technology to provide students with opportunities they don't have now?
- If your school had to choose between reducing class sizes by hiring more teachers or buying computers for each classroom, what would the students advocate?
- What roles should government, corporations, schools, and community groups play in ensuring computer and Internet access for working families and communities?

For further information on the digital divide:

Plugged In:

www.pluggedin.org

Community Technology Centers Network:

www.ctcnet.org

Discussion Theme Number 3: TOXICS, SAFETY & HEALTH

In “Secrets of Silicon Valley,” Raj Jayadev gets fired from his job at the Hewlett Packard assembly plant after complaining about health and safety problems. In another part of the film, we see computer parts being recycled and melted down to recover some of the valuable metals that went into their production.

These stories and images contrast with the public image of the computer industry as a place where skilled employees work on “campuses,” where manufacturing takes place in “clean rooms,” and where the workers dress in protective body suits from head to toe. What few people realize is that the suits and respirators are worn to protect the products, not the workers.

The electronics industry is one of the most chemically intensive, toxic industries in human history. More than 700 chemicals are used in the production of a computer workstation. Many of those chemicals, such as arsenic and cadmium, are extremely toxic. Others have never even been tested for health effects. No one knows the health effect on workers of being exposed to a chemical soup of many of these chemicals at the same time, but we do know that high tech workers have had unusually high levels of cancer, miscarriages, and children born with birth defects. Critics say the industry is a massive experiment using human beings as guinea pigs.

The film also shows the other end of the lifecycle of a computer, the scrapheap. By the late 1990’s, 12,000,000 computers, amounting to over 300,000 tons of toxic electronic junk, became obsolete each year. Much of this scrap languishes in people’s garages, attics or basements because there is no coordinated and safe way to dispose of it. Some of it is shipped to China, Pakistan, and India where it is burned, releasing into the air vast amounts of highly toxic chemicals such as dioxins and benzene.

Most consumers just throw their old computers in the garbage. Out of sight and out of mind, these old computers become an environmental nightmare. Almost half the weight of a computer monitor is lead, which causes mental retardation and other health problems in children. When the monitors are dumped, the poisonous lead can seep into the water table. In response, some states, including California and Massachusetts, have made it illegal to dispose of monitors in municipal landfills. Most manufacturers have been unwilling to set up efficient takeback programs or to pay for safe recycling.

The results of these production and disposal problems can be seen clearly in Silicon Valley itself. The Valley has more Superfund toxic contamination sites than any other area in the country. Most of the contaminated sites are located in low income communities where high percentages of immigrants and people of color live, giving rise to charges of “environmental racism.”

Questions for discussion:

- How many students knew about the dangerous chemicals in computers?
- Do they know people who have gotten sick or been injured because of their jobs?
- What do they think government, corporations, unions, or communities can each do to ensure safety and health?

The Silicon Valley Toxics Coalition and other environmental justice organizations have developed principles to guide communities and corporations toward a just and sustainable high tech industry. These principles assert:

The Community's Rights:

- *to be safe from harmful exposure*
- *to have access to pollution prevention programs*
- *to participate in decisions that affect them*
- *to protection and enforcement*

The Responsibilities of Corporations:

- *to create a toxics use reduction program*
- *to develop health and safety education programs*
- *to establish standards that are enforced in the US and abroad*

For further information:

Silicon Valley Toxics Coalition:

www.svtc.org

Discussion Theme Number 4: WORLD VIEWS

Most people nowadays are fascinated by computers not as a technology, but as a tool for email, instant messaging, games, and inevitably far down the list, for work, homework, and research. Few people spend much time thinking about where computers come from or what the Internet means for how our society is organized.

The high tech industry has spawned a generation of pundits and business philosophers who say that technology has totally transformed the world we live in, that economic laws no longer apply, that national boundaries are meaningless, that all wealth is created by entrepreneurs, that unions are a thing of the past, that each individual is “CEO of his or her own life.”

The characters in “Secrets of Silicon Valley” make revealing statements about these issues and how technology affects their philosophies of life and work. Their views differ sharply.

- 1) Temporary worker and organizer Raj Jayadev says that he keeps a picture of his grandmother from India near him because it is important to him to stay in touch with “the values that I came from.” He emphasizes continuity of values, advocacy for the oppressed, and community resistance to unwanted change.

Industrialist and venture capitalist Avram Miller says that he has changed his views since his days as a bearded peace activist in the 1960's. He now believes that “greed is not a bad thing if it makes people do good things.” He also says “Things are changing so quickly, there is no time to think, there is no time to analyze.” He emphasizes change, speed, competition, and globalism.

Magda Escobar of Plugged In wonders “Wow, we’re moving so fast. Things are changing so quickly. What have we done? And can we go a little bit slower?” In her work, she is trying to create an “anchor of stability” in a rapidly changing community. She emphasizes pragmatism, adjustment to change, and taking advantage of opportunity.

Compare and contrast these philosophies. Who do students identify with and why?

- 2) Raj relies on a kind of intuition that his organizing work in the Hewlett-Packard plant is important and not hopeless. After telling the story of Krishna and Arjuna from the Hindu religious text, The Bhagavad Gita, he tells himself, “Just fight the battles. That is what you need to do right now. In doing that, you’ll connect with something greater.”

How do viewers feel about Raj’s story? Do they think he will “connect to something greater”? What do they think that “something greater” might be?

- 3) When Magda is hosting President Bill Clinton at Plugged In, she tells the young people in the crowd, “Don’t be content to be the next pair of

eyeballs, to simply use computers to become better consumers, but use these wonderful new tools to produce, create, and build your dreams.”

Why do students think Magda is telling them not to be content? How can computers and the Internet be tools to “build your dreams”?

- 4) The film’s two main characters, Magda and Raj, are both college graduates who have chosen to be “activists.” They represent two different approaches to community organizing. Magda and Plugged In are engaged in community service, providing training and computer access to those excluded from technology’s benefits. Raj is engaged in workplace organizing. He would like to see a union in the factory, and he mobilizes other workers to voice their needs for better pay and safer working conditions.

Are these strategies compatible? How do they compare? What kind of messages do viewers hear about unions from their families, at their jobs, or in the media? Why do they think that Raj and Magda decided to pursue this kind of work? By doing so, what are Raj and Magda giving up? What are they gaining?

Activities and Projects

Personal Writing

- Which characters in the film stood out? What kind of risks did they take?
- What are some of the myths about high tech, and what are some of the realities behind the myths?
- Have your views about high tech changed since viewing the film? How?

Research Your Community

1) Project on Temporary Work

Interview someone from the nearest AFL-CIO labor council about the growth of temporary work in your area. In what industries or areas is temporary work growing fastest? How is temporary work affecting young people? How has the growth of temp work affected your local college/university? What percentage of teachers are “adjunct”? Compare the wages and benefits of adjuncts with permanent employees at your college/university. How does the use and constant turnover of adjuncts affect the quality of your education?

2) Project on Computer Access

Visit a computer technology access center in your area. (Many local centers are listed at www.ctcnet.org. Often, local public libraries provide similar services.) Who is using the facility? How does the center reach out to the community? Who is funding the center? Is there enough financial support to sustain the center? What kinds of services does the center offer? Have services grown or changed over time? In what way?

3) Project on Computers and Toxics

Do you have any old computers or monitors at home? Are they recycled or thrown away? What does your school do with its old or broken computers and monitors? Investigate where you can recycle computers in your community. Investigate where there are Superfund or other toxic waste sites in your community. What is in them, where is it from, and what is being done to clean the sites up?

Media Analysis

Collect newspaper articles about high tech over a one month period. How is high tech portrayed? Who are the people quoted in the articles? Who is not quoted? What do you think may have been left out of the stories? Do you think the coverage is biased? If so, how?

Speakers and Interviews

Identify community leaders working in high tech and in organizations responding to the problems of high tech. Invite them to your classroom, church or community group to make presentations and to take questions about the impact of their work. If you invite a corporate public relations officer, ask if the company uses temporary workers and if it recycles its products. If you invite members of trade unions or organized labor, discuss their organizing strategies, their past successes and failures, and their current campaigns.

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Snitow-Kaufman Productions
2600 10th St. #253
Berkeley, CA 94710
Tel: 510-841-1068
Email: secrets@igc.org

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Academic Advisors:
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To purchase a cassette:
Bullfrog Films
www.bullfrogfilms.com
1-800-543-3764

For further information about the film or for an online version of the study guide: www.secretsofsiliconvalley.org

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