

SILICON VALLEY: "The Good, the Bad, the Ugly"

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CHAPTER I

INTRODUCTION

Fifty years ago, Santa Clara Valley was not known for its silicon chips but rather for its thousands of acres of orchards. During that period, the valley dominated the world in the prune industry by producing almost half of the world's supply of dried prunes. Over the next decade, Santa Clara Valley's agricultural empire prospered and expanded. It no longer depended on the prunes, but also began growing plums, apricots, pears, and cherries. Soon this fertile land was recognized as one of the nation's most plentiful regions and was named "Valley of Heart's

¹
Delight." Within a few short decades, Santa Clara Valley's agricultural empire gave way to modern technology and fell. The discovery of silicon chips brought forth a new era. Santa Clara Valley was no longer known as "Valley of Heart's Delight", but rather as "Silicon Valley".

The intent of this paper is to discuss the rise and fall of Silicon Valley. The second chapter will be completely devoted to the history of Silicon Valley. This chapter will explain what the valley was like before the influence of silicon chips and how the valley was eventually transformed from a world of orchards into a world of high-tech buildings. The third and fourth chapters will illustrate both the positive and negative

aspects of a highly technological world. These chapters will show how dozens of cities in the Santa Clara Valley region prospered from the rapid developments of the silicon chips. However, chapters three and four will also be used to examine the numerous problems created by the discovery of these chips. One of the most serious problems encountered in chapter four will be the use of illegal drugs among the workers on the assembly lines. In chapter five, the paper will mainly deal with the decline of Silicon Valley. It will give reasons as to why businesses in the valley have been so poorly in the past three to five years and point out the effects the slump has had on the different types of businesses in the valley. The final chapter of this paper will deal with the future of Silicon Valley's ability to make a comeback.

All major sources of this research paper were selected magazine articles and newspaper clippings taken from the Silicon Valley Center and the California room in the San Jose Public Library.

CHAPTER II

THE HISTORY OF SILICON VALLEY

The term "Silicon Valley" was known to the business world long before the public discovered it. In 1971, a young publisher by the name of Don. C. Hoefler gave fame to the word

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by using it in a trade journal.

Today, Silicon Valley defines the area approximately twenty-five miles from Menlo Park all the way to Los Gatos. Its boundaries include over twenty cities and have a population of over 1.2 million people. In less than three decades, Silicon Valley has given rise to over 1,700 high-tech companies around the Bay Area and has also become the birthplace for electronic games, home computers, microprocessors, cordless telephones, digital watches, and pocket calculators. Although Silicon Valley isn't labeled on any maps, its presence is internationally known, for it is the electronics and chip

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manufacturing capital of the world.

The discovery of the silicon chip has drastically changed the computer industry. Its existence has allowed computers to become more sophisticated by increasing the computers' processing speed and also their memory capacity, otherwise known as RAM (Random Access Memory). Because the chips are made from silicon, the second most abundant element on earth, silicon chips are the most economical and practical computer chips being

used today. Even though only the size of a fingernail, this remarkable piece of intricate circuitry has made possible such things as guiding military unmanned missiles, the development of laser technology, and also the construction of supercomputers.

The origin of Silicon Valley can be traced all the way back to the little garage owned by David Packard and William Hewlett in 1939. It was there, in Palo Alto, that both former Stanford graduates David Packard and William Hewlett transformed what was then a small business venture into what is now the world's
4
largest maker of electronic measuring and testing devices.

Although it was their sheer determination that allowed them to establish Hewlett-Packard, David Packard and William Hewlett could not have done it without the encouragement and wisdom of their old college professor at Stanford University, for Dr. Frederick Terman was also their advisor in the early establishment of Hewlett-Packard. Dr. Terman encouraged many of his pupils to start businesses on the West Coast rather than the East, because no electronics industries existed on the West Coast at that time. For his inspiration, "Dr. Frederick Terman
5
was considered the Father of Silicon Valley."

With the success of Hewlett-Packard, many small electronics companies began to emerge in the Santa Clara Valley. Some of the more popular and successful firms were Atari, Apple, and Commodore, who were known for their personal computers. Because

of the sudden increase of business, there was a tremendous need for land in order to construct buildings for electronics companies and housing. Soon thousands of acres of orchards were cleared away in order to make room for construction. Today, of the original 100,000 acres of orchards, there are only 13,000 acres left.⁶ The rest became what is now known as Silicon Valley.

CHAPTER III

POSITIVE ASPECTS OF SILICON VALLEY

In just half of a century , Silicon Valley has become one of the greatest financial opportunities ever offered to the business world and to the people of Santa Clara Valley. Although much of the land in the valley has been exploited to suit the purposes of investors, many of them have compensated by providing employment for the men and women of the valley and by drawing job hunters from around the state to the many underpopulated cities of the 1950's. As more job hunters came, both the population and the overall economy escalated.

During the time of early development, the valley's economy was considered to be the fastest-growing and wealthiest in the

United States.⁶ The average family income in 1970 for Silicon

Valley was \$18,000 a year.⁷ Five years later, the family median

income rose to \$22,000 a year.⁸ And by 1980, the average

annual income was recorded to be at \$27,000.⁹ These figures rank among the highest in the nation for the average annual income for a single American family.

As the cities of the valley climbed to financial prosperity, Silicon Valley became more appealing to outsiders. More people began to migrate to the valley not only from California, but from the rest of the United States. Cities were

expanding at an incredible rate in order to make room for the sudden burst of population. During the 1950's, there were less than 300,000 people residing in Santa Clara Valley, but by 1980

the population soared to over 1.25 million people.¹⁰ In less than three decades, the county's population has increased four fold.

Since Silicon Valley was becoming more populated, the valley had to produce enough jobs to satisfy the new residents. To balance this need for jobs, many out-of-state businessmen began investing in electronics firms in Silicon Valley. These new firms created over 40,000 new jobs each year and also attracted other kinds of investors to establish business here. Soon bankers, brokers, and commercial people, hoping to capitalize on the valley's wealth, flooded Silicon Valley. With the establishment of these new businesses, the residents of the valley were given a wider variety of job opportunities, not just the jobs relating to silicon chips.

Because the welfare of the employees has always been one of the paramount concerns of any successful company, many corporations are offering their employees benefits and are trying to make the working atmosphere as pleasant as possible. Some companies allow the employees to decorate their working space any way they desire, while other firms have recreational facilities which are made available to the workers during their leisure time. At Rolm Corporation, for example, the company has

spent over one million dollars on their athletic facility. Now the employees can play almost any sport, from racketball to horseshoes, or just relax in the whirlpool spa. At Atari, the workers are also treated exceptionally well. Atari, better known for their computer games, have built a special game room for the employees to use during their break. Probably the best reasons why companies spend so much money to keep their employees happy are because these recreational facilities help reduce the stress level and also prevent workers from going to other companies with better benefits. This latter reason has caused hundreds of corporations to compete with each other to provide the best possible working environment so that employees will not be tempted to go somewhere else. Although the majority of the people in Silicon Valley have profited a great deal since the arrival of silicon chips, they are not the only ones who have prospered from it. Many foreign nations, such as Japan, France, and other European countries, have also gained by trading with the American computer chip industries and by taking some of Silicon Valley's ideas back home.

CHAPTER IV

NEGATIVE ASPECTS OF SILICON VALLEY

Everything has its ups and downs, and Silicon Valley is no exception. For years now the people of the valley have believed that nothing could go wrong, but obviously that notion was too good to be true.

Today, Silicon Valley's drug problem is one of the nation's most serious dilemmas. According to some of the users in the silicon industries, "...drugs are used by as many as half of the employees in some day shifts, and an estimated 80% at night."¹²

The main cause of the worker's drug abuse is directly related to his occupation. Many employees on the assembly lines consider their jobs dull and call it "robot work", while others, comfortable with what they're doing, are afraid of getting fired now that many companies are in a slump. The boredom and fear of losing their jobs have driven many assembly workers to the use of drugs. Today, Silicon Valley is so dependent on "speed" and "uppers", as one addict best describes it, "If you took all the drugs out of Silicon Valley, it would fall apart."¹³

Another crisis encountered by the residents of Silicon Valley is the high cost of real estate. As more outsiders move into the valley, the cost of housing has increased over twenty

fold in the last ten years. Silicon Valley was becoming one of the country's most expensive housing markets. One example is Sunnyvale. This city was developing three times faster than experts had anticipated. Soon, land to build houses became scarce, and couples with a joint income of \$60,000 or less could not afford to buy a home in Sunnyvale. Today, an average two bedroom house in Sunnyvale costs close to \$200,000. If Silicon Valley doesn't do something soon to help alleviate this situation, "By 1990 there will be 125,000 more jobs in Silicon Valley but only 70,000 more homes. Some employees will have to

live in another county."

Pollution from cars and factories in Silicon Valley is also a problem. As the hundreds of thousands of employees go to work each day, traffic congestion has become very common. In Sunnyvale alone, there are now about 106,000 people who already

live there, and another 100,000 arrive there to work each day. This has caused the smog level to rise dramatically. Even the water is no longer clean. Many residents are now turning to water purification systems to get their water supplies. Some large corporations have already accepted responsibility for their part of the pollution and are taking strict measures to clean it up. One such corporation is Hewlett-Packard. Already they have assigned a specific executive specially trained to deal with city pollution and energy reduction. Hopefully their example will encourage other companies to do the same.

Although Silicon Valley has brought many people great wealth, it is also the place where about half of all marriages

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fail. Many men often become obsessed with their work and leave their families behind. Because of this obsession which has caused so many families to break down, the valley is now

¹⁸
recognized as the home of the singles society.

CHAPTER V

DECLINE OF SILICON VALLEY

Since profits have been diminishing in the past four years, many companies in Silicon Valley have had to either cut back, shut down, move away, or lay off workers in order to compensate for the losses. These losses are caused by the tense competition with the Japanese computer chip industries, the high cost of operating in Silicon Valley, and the severe drug problems in Silicon Valley.

For many companies, cutting back and laying off employees seem to be the most effective options. Due to the cut backs, many advertising and public relations firms are the first to suffer. For many of these firms, much of their business depends on the success of the companies in Silicon Valley. As of now, most companies in the silicon industry spend only about half of what they usually spend or nothing at all on advertising or public relations. One company in the public relations business was reported to have plummeted 25% and fired fifteen people, nearly 20% of its workforce, in one quarter. To escape this slump, many of these firms are moving out of Silicon Valley.

Already dozens of companies have sold out or moved to another location. The high cost of living in Silicon Valley has made operating there too expensive. In order to continue to

operate in the valley, companies would have to pay their employees extremely high wages to overcome the high cost of living. No longer profitable to stay in Silicon Valley, some corporations have moved to foreign countries such as Mexico, Ireland, or the Caribbean, where they can find plenty of cheap labor. Other corporations, not wanting to abandon the U.S., are branching out to other states such as Arizona, Texas, Utah, and Idaho. Their objectives are to try to establish prototype Silicon Valleys in these states.

The corruption within the computer industries is also another cause of the decline of Silicon Valley. Companies would often try to steal trade secrets from each other or bribe executives for them. In Silicon Valley, inside trading is very common. Many executives can not resist the temptation of earning a quick dollar. These executives buy stocks of what they know are going to be profitable without first making the information known to the public.

The tense competition with the Japanese computer chip industries is hurting Silicon Valley. Many Japanese chip manufacturers buy American chips from the markets and then photocopy them to the exact detail. The purpose of this is to allow them to duplicate these chips, with a few added modifications of their own to avoid lawsuits and sell the refined chips back to the U.S. at a lower rate. But even with this, some Japanese chip manufacturers are not satisfied and try

to buy information from employees in Silicon Valley. "In 1982, nine Japanese employees of Hitachi and Mitsubishi were charged with attempting to buy stolen data concerning IBM's new superfast 3081 computer from FBI agents." ²⁰ This was just one of dozens of similar cases reported each year in Silicon Valley.

CHAPTER VI

CONCLUSION

Already Silicon Valley is making a comeback. With the aid of the higher tariffs placed on Japanese goods, some businesses in the valley are flourishing again. Companies are now dealing with the drug problem and are trying to correct it by offering drug rehabilitation to those who need it. More corporations are also taking part in cleaning up pollution. The valley does its share by offering more public transportation and by encouraging carpooling. The main problems still faced by the valley now are the high cost of living and the rapidly growing population. Once these problems are solved, Silicon Valley will again dominate the world in the computer industry.

NOTES

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3. Michael S. Malone, "The Biggest Computer Game of Them All," California Today (June 28, 1980), p. 11.
4. Johnston, Op. Cit., p. 468.
5. Bill Soeffer, "Why It's Happening on the Peninsula," San Francisco Chronicle (September 22, 1980), p. 13D.
6. Johnston, Op. Cit., p. 458.
7. Soeffer, Op. Cit., p. 13D.
8. Ibid., (same page).
9. Ibid., (same page).
10. Johnston, Op. Cit., p. 465.
11. Malone, Op. Cit., p. 13.
12. Ibid., p. 8.
13. Ibid., p. 9.
14. Edward K. Yasaki, "Stanford Gathers Silicon Valley Memorabilia," Times Tribune, (February 7, 1986), p. 6D.
15. Ibid., (same page).
16. Haynes Johnson, "The Perils of Paradise," Washington Post (October 19, 1980), p. 5D.
17. Ibid., (same page).
18. Ibid., (same page).
19. Steve Kaufman, "Slump is Troubling to Valley's PR agencies," San Jose Mercury News (July 10, 1985), p. 1E.
20. Johnston, Op. Cit., p. 473.

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