5 The boom and the bombshell

The New Economy bubble and the San Francisco Bay Area

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> In the known world, this 49-square mile patch of land is Ground Zero of the Internet. The whole world is watching what we're doing.
>
> Derek Gordon, DigitalThink, San Francisco (Seligman 2000: A14)

The attacks of September 11, 2001, that brought the destruction of the twin towers of the World Trade Center forever changed the urban landscape of New York. That event was sudden, violent, monstrous. Yet the economic forces at work in all great cities are just as inexorable in reworking the lay of the land from generation to generation. Anyone who lives in the modern world comes to a realization that the landscapes we inhabit are built on sand. Known and familiar buildings, streets, storefronts, homes, and factories have a way of disappearing without a trace, and often memory fails to recreate the image of what used to be. This relentless redevelopment of cities moves to the rhythms of capital accumulation. The manic logic of capitalism is capable of spectacular bouts of building that surpass anything in the past, and equally capable of laying low skyscrapers, blocks, city centers, and factory districts in short order (Harvey 1982).

Such was the case in the San Francisco Bay Area in the 1990s. An economic boom of unparalleled ferocity hit the place like a bombshell. The city was picked up, shaken until it rattled, and then dropped into a new configuration. Although other observers have chronicled what took place (Solnit and Schwartzenberg 2000, Beitel 2003, Carlsson 2004, Olsen 2004), I nonetheless have four reasons for plowing the same ground. First of all, most of the attention has been confined to San Francisco, when in fact the boom and the bubble was centered in Silicon Valley not San Francisco and affected the whole Bay Area. Second, the boom by the Bay has been too much interpreted in local political terms and insufficiently linked to larger movements of finance capital, which in this instance were volcanic. The eruption in the Bay Area was, ironically, linked directly to the financial wizards of Wall Street, many of whom were housed in New York's Twin Towers, and who oversaw the greatest financial bubble in history. Third, the connection of the New Economy to Silicon Valley has not been adequately appreciated. As the world center of high-tech in the emerging internet age, the Bay Area became the paragon of the New Economy and the iconic space of the neoliberal 1990s. Finally, all this renders the Bay Area of the 1990s a perfect case study for scholars of the geography of the capitalist economy and the dialectics of place (Cox 1997).

Ground Zero of the New Economy

John Doerr, the venture capital kingpin of Silicon Valley, is credited with being the first to utter the phrase "the New Economy" to describe what was going on in the Bay Area during the roaring nineties (Miles 2001). The Bay Area's economic strength and innovative energy was the solid base on which the hyperbole of the New Economy, American revival, and dot-com dottiness were constructed. It was Ground Zero of the New Economy.

The domain of high-tech

Silicon Valley was already the principal global center of electronics when the internet age struck. It led the world in electronics and information technology, which had become the leading industrial sector at the end of twentieth century. Many a book has been written lauding the Valley's exceptional mix of technical talent, business acumen, and openness to new ideas (Hanson 1982, Freiberger and Swaine 1984, Rogers and Larsen 1984, Caddes 1986). By the 1990s, the high-tech economy had come to dominate the whole Bay region (Bay Area Economic Forum 1996, 1999).

Technologically, the new thing of the 1990s was the internet. By the end of the decade, everyone was agog about the possibilities unleashed by this astonishing system linking up computers everywhere at the blink of an eye. The Bay Area was the heartland of the World Wide Web as it became commercially operational, with the densest wiring, most domains, and most intensive population of users (Zook 2000, 2001, 2002). New York, London, Washington, Seattle, and Los Angeles followed. The geography of the network society – so called by Castells (1996), the sociological siren of the brave new world of IT – began and ended in Silicon Valley. Moreover, Bay Area high-tech companies were seen as exemplars of business organization for the new era. They were celebrated for their open, diversified, and strategic systems of doing business (Peters and Waterman 1985, Peters 1992, Packard 1995). In the early 1990s, "the virtual corporation" became the buzzword to capture the ongoing shift from manufacturing to product and system design, marketing, and branding that was taking place in the high-tech industries (Davidow and Malone 1992). By the end of the decade, no other sector better illustrated new methods of integrating global networks of subcontracting and contract manufacturing (Dedrick and Kraemer 1998, McKendrick *et al.* 2000, Sturgeon 2005).

At the same time, the idea of industrial districts was flourishing, with its compelling vision of interactive firms, flexible specialization, and external economies. Silicon Valley became the prime example of the post-Fordist industrial region, replete with dense linkages among high-tech manufacturers, designers, suppliers, and business services (Saxenian 1994, Kenney 2000, Patton and Kenney 2005).

Added to this were venture capital and a free-wheeling culture of start-ups, which nurtured technical innovation and entrepreneurial liberation (Kenney and Florida 2000, Zook 2002, 2004). Ironically, the Bay Area had, in the meantime, grown more Fortune 500 blockbuster corporations than anywhere else except New York City.

The New Economy also rested on new forms of work and employment. Silicon Valley has long been noted for its utilization of a highly educated technical labor force enjoying an exceptional degree of freedom to work and create within the capitalist enterprise (Rogers and Larsen 1984). It has sucked in some of the world's best talent (Saxenian 2002) and made the most of their collective labor in a consummate "learning region" (Storper 1997). With the rise of the web world of the internet, San Francisco came to epitomize the liberty and libertine lives of this "creative class" of workers (Florida 2002). Of course, not all workers are so favored in high-tech. There are many ordinary workers of modest skill, whose wages barely budged in the 1990s despite the boom (Benner *et al.* 1999, Greenwich and Niedt 2001). The new age of labor relations has given companies maximum flexibility in hiring, firing, deploying, and overworking all workers. It is, furthermore, a place where temporary agencies are used for every type of labor and independent contractors offer their skills on the open market – where, in short, long-term employment relations are rare. In the 1990s, the use of "contingent labor" approached the unprecedented level of one-quarter of the local workforce (Benner *et al.* 1999).

As the USA rebounded smartly in the 1990s, its bounce came, above all, from high-tech. Computing and information technology led the USA to a long-awaited revival from the profit and productivity doldrums of the 1970s and 1980s (Gordon 2000, Brenner 2002[1]). High-tech, representing 8 percent of gross domestic product (GDP), accounted for no less than one-third of US economic growth in the second half of the decade (Brenner 2004). If you wanted to bet on the future of capitalism, the Bay Area was double zero on the roulette wheel.

Firewater in the Valley

Silicon Valley fever is not a new syndrome (Freiberger and Swaine 1984, S. Levy 1984, Rogers and Larsen 1984). In the 1990s, however, the "fire in the valley" hype surpassed anything previously imagined. The ballyhoo over the New Economy allowed enthusiasts far and wide to join in a kind of "imagined community of nerds" enthralled by the internet revolution (Bronson 1999, Miles 2001, Frank and Mulcahey 2003). The Bay Area was the Never-Never Land of the New Thing (Lewis 2000). San Francisco became the cultural capital of the virtual world. Semidelusional ideas were the ordinary provenance of the young gnomes hooked to The Well, Salon.com, and Craigslist in the early 1990s, and spread far and wide over the rest of the decade via the city's new media mavens at *Wired, Red Herring* and *The Industry Standard*. Soon techno-babble had become the everyday cant of the rich and powerful around the country (Perkins and Perkins 1999, Miles 2001, Henwood 2003).

People spoke of the New Gold Rush, and they were not far from the mark. John Doerr claimed that Silicon Valley was "the largest legal creation of wealth in the history of the planet" (Miles 2001: 9). The roaring nineties threw up a whole new generation of millionaires at Netscape, Yahoo, and other high-flyers of the internet era, thanks to Silicon Valley's insider trick of granting stock options to all its key technical employees.[2] The Bay Area zoomed past New York and Los Angeles to lead the country in the number of super-rich on the Forbes 400 list (forty-three compared with thirty-eight for New York in 2001).[3] The super-rich were the princes of the New Economy (Micklethwait 1997, Wilson 1997).

The local hype intersected decisively with the nationalist cant of American economic revivalism. American business and the state were engaged in a fearsome competition with Europe and Japan over economic supremacy in the new global capitalist order. Things had gone badly for the USA in the 1970s and early 1980s, and it was eagerly trying to prove that "America is back," as Ronald Reagan put it. Another recession in the early 1990s cost George Bush his job and put Bill Clinton in office on the premise that "it's the economy, stupid" (Pollin 2003). Fortunately for American boosters, Europe and Japan remained sluggish throughout most of the decade, while the USA seemed to be breaking into a run (though its performance would later be shown to have been artificially enhanced) (Brenner 2002, Henwood 2003).

As the USA peddled its neoliberal wares, proclaiming the wonders of capitalism and free markets, governments around the globe wanted to know how to get some of that vaunted American technology, entrepreneurship, flexibility, and thrill of capitalism. What better model than Silicon Valley? Wherever the myth of US supremacy and capitalist renewal went, the legend of Silicon Valley was not far behind (Massey *et al.* 1992, Saxenian and Hsu 2001, Bresnahan and Gambardella 2004). The New Economy of the Bay Area was the Great White Hope for the restoration of American global primacy and for revival of the entrepreneurial myth in America.

Dot-com delusions

If Silicon Valley was the supernova of the New Economy, San Francisco was its neutron star twin. Although the city has slipped in economic power vis-à-vis the upstart Valley, San Francisco nonetheless retained a thriving intellectual, artistic, cultural, and political milieu, of which Silicon Valley – indeed, most American cities – could only dream (Solnit and Schwartzenberg 2000, Carlsson 2004). The old central city still attracted a dynamic array of young people seeking outlets for their energy and imagination. What happened, beginning in the 1980s, was a synergy between such people's talents and the growing electronics wizardry of the Valley, with a big dollop of Hollywood thrown in. By the mid-1990s, people came to speak of a new phenomenon, "multimedia," taking place South of Market (SoMa), including movie special effects, video games, and electronic publishing. By 1995 there was a robust cluster of over 15,000 employees in the new sector. Then the era of the "dot-coms" – new internet-related companies – hit, and by

1999 employment in the sector had ballooned to 40,000, in over 1,000 companies, with a payroll of US$2 billion; in 2000 that payroll reach an eye-popping US$5.7 billion (Saracevic 2000). The workforce was overwhelmingly young, informal, and enthusiastic.

The whole culture of San Francisco was inflected by a rapid influx of young "dot-commers" hoping to change the world, or make a million bucks – whichever came first (Ledbetter 2003, Lowenstein 2004). The dot-com frenzy raging around the Bay Area represented a significant shift in the classic character of high-tech. In a few quick years the internet graduated from the fantasy of a few techno-droids to a fantasy of mass sales over the World Wide Web. The American technological sublime (Nye 1994) embraced America's money culture, had joyous intercourse, and gave birth to the hellspawn of the dot-coms. This commercial castle was built on profitless clouds, however, and would ultimately fall to earth (Perkins and Perkins 1999, Frank and Mulcahey 2003, Henwood 2003).

In the meantime, the Bay Area was primed to be the darling of the wheelers and dealers of hot-house capital in the 1990s. It would be the primary object of affection for the financiers of the American empire as their cups ran over with money. Financialization and futurism would collide on the eve of the new millennium, and the resulting stock market tsunami would clobber the heartland of the New Economy.

The financial tidal wave hits the bay shore

If the New Economy was being bottled and sold like firewater, the hype would still have meant little without a powerful surge of finance capital that made everything seem possible. Financial markets run amuck would propel the boom by the bay into a bubble of monumental proportions.

Surfing waves of risk capital

The rosy dawn of the New Economy and of the internet bubble was signaled by the 1995 launch of Netscape, the most successful launch in stock market history. Netscape was the first commercial search engine for the World Wide Web, and its financial father-figure was venture capitalist John Doerr. As Netscape went ballistic, it minted the first of thousands of New Economy millionaires created during the boom (Lewis 2000).

The Bay Area gave birth to the financial means of its own expansion. The current form of venture capital developed in the 1960s in Silicon Valley, born of a former New York banker and special funds earmarked for start-ups by the founders of Intel. Once east coast financiers got wind of what was happening, they began pumping money into specialized venture firms located on Sand Hill Road behind Stanford. By the 1980s, there was nothing like it in the world – a multi-billion-dollar pool of risk-taking capital searching out new ideas (Florida and Kenney 1988). In the 1990s, Silicon Valley venture capital became legendary, and highly sophisticated in its creation of whole management teams for start-ups (Kenney and Florida 2000, Zook 2002, 2004). By the end of the decade, the number of venture firms had grown to over 800 and venture capitalists numbered over 8,000 (Shinal 2003).

The start-up culture of Silicon Valley also gave birth to the modern fad for IPOs (initial public offerings of stock). Although Wall Street dominates American investment banking, a trio of specialized investment houses arose in San Francisco's financial district in the 1980s to become major players in moving high-tech start-ups into the stock markets: Montgomery Securities, Robertson Stephens, and Hambrick and Quist. They specialized in electronics, biotechnology, and high-end retailing, developing an expertise that none of the distant Wall Street giants could match. By the late 1990s, the local bankers were doing so well that the financial giants of New York and Europe crashed the party, buying out the boutiques. This opened up new conduits from Wall Street and global financial markets straight into the heart of the Bay Area, down which eager investors could pour the accumulated wealth of the world.

As a consequence, the Bay Area could tap into an unparalleled amount of capital eager to make a killing off the New Economy (Kenney and Florida 2000, Patton and Kenney 2005). As total venture capital investment in the USA rocketed from US$30 billion in 1998 to US$60 billion in 1999 and to over US$100 billion in 2000, the Bay Area went along for the ride, with venture capital peaking at US$33 billion in 2000 (Abate 2004). Of all the venture investments in the USA in the 1990s, the Bay Area was creaming off one-quarter to one-third, by far the most of any place (Zook 2002).[4] IPOs were less concentrated on the Bay Area than was venture capital; nevertheless, at the peak of the bubble in 1999, one-quarter of all IPOs in the USA occurred here, accounting for one-sixth of the total IPO stock value. The average gain that year was 350 percent or more, twice the levitation of IPOs issued elsewhere in the country, for a total value of over US$300 billion (Hua 2000, Sinton 2000).

Riding the NASDAQ

The stock markets began their long rise in the 1980s, propelled by the neoliberal revolution of the Reagan administration. After a nasty shock in October 1987 and the recession of 1989–92, stocks began to soar again in the 1990s. By 1996, Federal Reserve Chairman Alan Greenspan was already taking public note of the "irrational exuberance" of the markets. But the Asian financial crisis of 1997 put a scare into the world's financiers, and led Greenspan to lower interest rates. For the next two years, the Federal Reserve continued to fill the stock markets' sails to keep the ship of state moving ahead. The managers of American capitalism had been converted to "stock market Keynesianism" to keep the economy buoyant (Schiller 2000, Brenner 2002, Henwood 2003, Pollin 2003, Lowenstein 2004).

The NASDAQ was the principal vehicle of stock speculation in the 1990s (Figure 5.1). Its rise was more precipitous than that of any other market in the world during that decade (Ingebretsen 2002). The NASDAQ index rose from around 500 in 1990 to 1,000 in 1995, at the time of the Netscape launch; it surpassed 2,000 in 1998, then skyrocketed above 5,000 in early 2000.[5] The venture capital and IPO booms closely tracked the rise of the NASDAQ (Zook 2002).

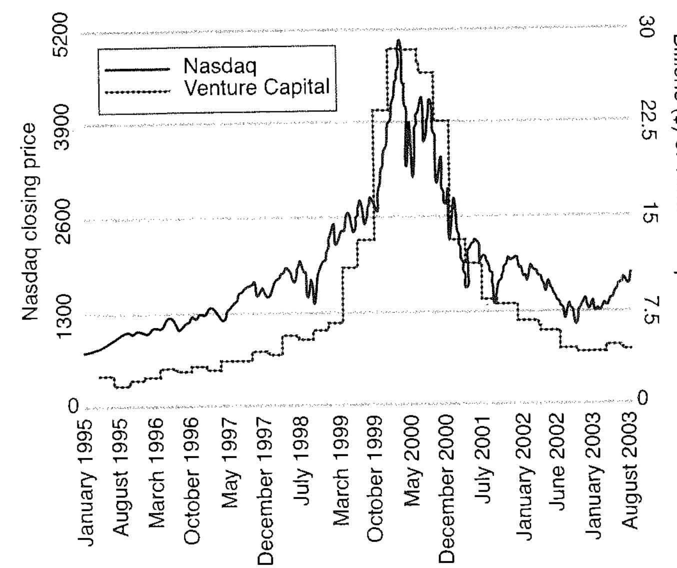

Figure 5.1 NASDAQ index vs. US venture capital, 1995–2003. Sources: NASDAQ Exchange, PriceWaterhouseCoopers, Moneytree survey and Matthew Zook.

Although the stock market bubble has been much commented on, the radically skewed geography of its money flows has hardly been noticed. Economists are too wedded to thinking in national units and geographers are unused to thinking about stock markets.[6] In fact, the Bay Area was the eye of the storm in the stock market bubble of the 1990s. The Bay Area was more closely tied to the NASDAQ and the world of electronic stock trading than any other region. Most electronics companies, such as Microsoft, Oracle, and Cisco, prefer to list on the NASDAQ rather than the New York Stock Exchange (NYSE). In their early days, these companies also liked the NASDAQ because it kept IPOs afloat better than conventional markets. Their rise to prominence among US corporations in the 1980s propelled the NASDAQ from an exchange for also-ran companies to a rival to Wall Street (Ingebretsen 2002).

Alongside the increasing popularity of the NASDAQ came the low-margin stock trading revolution begun by Charles Schwab in San Francisco in 1974 (Kador 2002). Schwab rode to prominence in national stock trading in part because of the widely dispersed wealth of California investors. The first fully internet trader was the 1994 start-up, E*trade, in Palo Alto, with eSchwab following in 1996. E-trading exploded on the back of the internet (Kador 2002, Henwood 2003, Lowenstein 2004).

There are no certain figures on the influx of bubble money into the Bay Area, but there are several indicators. The most spectacular might be the way in which stocks of individual star companies rocketed into the stratosphere. In

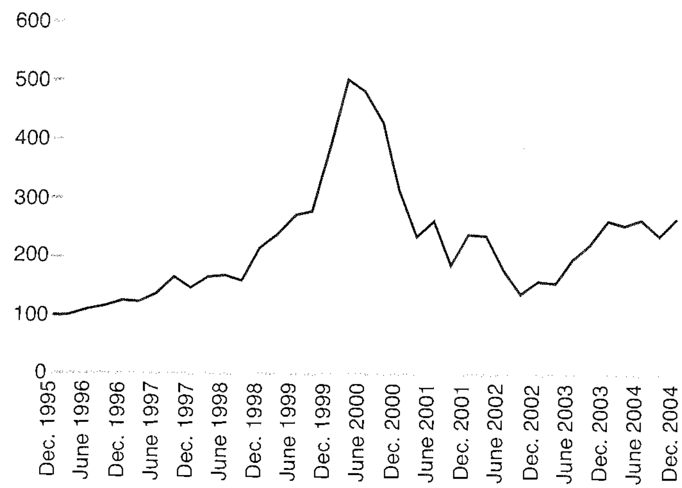

Figure 5.2 Bloomberg San Francisco index, 1995–2004. Source: Bloomberg LP index of 232 Bay Area stocks.

1998, San Jose's Cisco Systems, maker of internet hardware, became the fastest company to reach US$100 billion in total stock value, a record surpassed in 1999 by Sunnyvale's Yahoo. More astounding, Cisco Systems overtook Microsoft briefly to become the most hyper-valued company in the world – at over US$555 billion in mid-1999. Overall, Bay Area stock performance was nothing short of miraculous. The Franklin 250 California growth index shot up from 250 in 1990 to 1,300 in mid-1999 to a peak of almost 2,900 in March 2000. The Franklin's gain of 1,200 percent exceeded the NASDAQ's 1,000 percent and the S&P's 300 percent. The Bloomberg San Francisco index gained over 500 percent between 1995 and 2000 (Figure 5.2). The *San Francisco Chronicle* report on the top firms in the Bay Area for calendar year 1999 defies belief: the total value of the region's 500 largest public corporations nearly *tripled* in one year, from US$1.3 trillion to US$3.5 trillion. By contrast, the NASDAQ doubled in the same period, while the Dow Jones index rose by only 6 percent (Sinton 2000).

Wipe-out!

At the same time as the world was discovering the New Economy in the Bay Area, surfers discovered that the world's largest waves were not in Hawaii or Australia but just south of the Golden Gate, at a place they called "Mavericks." Winter storm winds blowing across the northern Pacific can push walls of water upwards of ninety feet high (similar to the Indian Ocean tsunamis of December 2004). The waves are wickedly dangerous and have claimed the life of more than one world-class surfer. So, too, did surfing the financial mavericks of the 1990s turn out to be a risky enterprise for many an entrepreneurial genius.

The speculative wave broke in April 2000. The NASDAQ fell 1,500 points in a nonce, then slid below 3,000 by June; after a brief recovery in mid-summer it went into a long, steady slide that dragged the index below 2,000 by April 2001 and on down to a low of 1,119 on October 9, 2002 – putting it back where it was in 1997. That comes out as a loss of more than 77 percent of stock values. By late 2000 the Dow index, too, was falling and would continue downward for another two years, losing over 30 percent of its value; the S&P 500 index fell 40 percent in the same period. The three-year decline would prove the worst since 1929–32 in the USA. By the end of 2002, the combined markets had vaporized US$7 trillion out of the US$17.8 trillion gained during the long run-up. The Bay Area was Ground Zero of the financial implosion of 2000. The Franklin 250 California stock index collapsed, cascading down over 1,000 points in the month of April 2000 – a plunge of over one-third. The year 2000 witnessed the pricking of the dot-com bubble in an astonishingly short time (Kirby 2000, Saracevic 2000). Nine-tenths of the dot-coms in San Francisco would be gone by the middle of 2001. Wags began referring to the "dot-gones." But beyond lay a deeper sickness that would lay low the elephants of the high-tech game parks. By the end of the year 2000, the Chronicle 500 had evaporated an astronomical US$2.2 trillion, to US$1.28 trillion. After a calm in 2001, the storm hit again in 2002, and the Chronicle 500 shrank back to 200, some US$409 billion poorer than before – another annual loss of one-third of total stock values, The overall losses added up to a breath-taking 75 percent since early 2000 (Fost 2003).

The Bay Area suffered by far the largest hit of anywhere in the country in the meltdown. A report in 2001 showed the top 100 corporations in the Bay Area having evacuated nearly US$2 trillion in value from their 2000 peaks, compared with a national loss for the Wilshire 5000 of US$4.45 trillion (Liedtke 2001). That would mean that Bay Area firms accounted for at least 45 percent of all the stock losses for the USA in the first round of the markets' collapse. The Bay Area's total loss of US$2.63 trillion on the Chronicle 500/200 amounted to well over one-third of the national total. That is a spatial distribution that should impress even the most geographically obtuse economist. Amazingly, it took investors a while to wake up to the crisis. Even after April 2000, venture capital continued to flow in record quantities to risky San Francisco start-ups (Abate 2004) and IPOs continued to raise hundreds of millions for Silicon Valley companies (Minton 2001). By the end of the year, New York and Boston capitalists had finally seen the light. Venture investment fell off the cliff in the first quarter of 2001, dropping by 40 percent from the previous quarter (Emert 2001); it ended up 60 percent lower for the year, at under US$40 billion, and then fell to a pitiful US$7.8 billion in 2002 (Shinal 2003). The investment banking houses in San Francisco had closed their doors by 2002.

Why the great fall in stock values? Certainly not the acts of September 11, 2001, since the crash had come six months earlier. The reasons lay in the normal abnormality of business cycles and financial enthusiasms. In retrospect, the markets had overshot any reasonable assessment of corporate profits as early as 1996, and bore no relation to classic evaluations of price–earnings ratios thereafter (Schiller 2000, Brenner 2002, Lowenstein 2004). Electronics and telecommunications were the worst offenders in this regard. When the dust had settled by 2003, total losses incurred in those sectors were equal to all the profits rung up in the boom years (Brenner 2004). Hence, stock values fell back to where they had been in 1996–97, before the absurd run-up of the bubble. But in Silicon Valley the debacle was worse: in one year the top 150 companies lost a combined US$90 billion, wiping out all the profits they had made in the previous eight years (Sylvester 2002).[7]

Rocketing real estate

So far we have established the Bay Area's importance in the age of the New Economy and its place in the record-breaking financial speculations of the late twentieth century. Industrial capital and finance capital are thus accounted for. But for the urbanist there is always a vital third piece of the capitalist puzzle: property development and real estate markets (Harvey 1985, 2003). The Bay region has, overall, the priciest real estate of any metropolitan area in the country, including greater New York and Los Angeles (Walker *et al.* 1990). But the run-up of prices that occurred in the time of the bubble exceeded anything previously imaginable.

Prices take off

Real estate values in the Bay Area started to motor upward in the early 1970s and hit their stride in the 1980s, as Silicon Valley roared into prominence and downtown San Francisco business and finance thrived. Downturns in electronics and banking in 1985 threw the regional real estate market into a doldrums from which it did not recover for almost a decade. Then things turned back up and local businesses started filling space and bidding up rents on commercial properties. As the boom accelerated, vacancy rates fell to microscopic levels and prices spiraled ever upward.

An outrageous spike occurred in commercial rents in San Francisco and Silicon Valley in 1999 and 2000 (Figure 5.3). A classic bottleneck had developed as vacancies fell below 1 percent in central San Francisco and buildings were being leased before they were off the drawing boards (Seligman 2000). In a CB Richard Ellis global survey of class A office rents in late 2000, Silicon Valley's US$87.48 per square foot ranked fourth in the world, behind London, Tokyo, and Hong Kong. San Francisco's US$73.75 per square foot came in seventh, just behind Paris and Mumbai – and ahead of midtown Manhattan (Morrissey 2001). Bay Area realtors and landlords crowed, and enjoyed a moment of unparalleled power over tenants. At the height of the dot.com mania in San Francisco, landlords were being given stock options in tenant companies as a move-in bonus!

As commercial real estate skyrocketed, housing could not be far behind. Apartment rents hit unprecedented levels, with San Francisco leading the charge. Rents rose by more than 225 percent from 1996 to 2000, as the city became the nation's most expensive rental market. The rent on a two-bedroom apartment by 2000 was typically over U$2,000 per month, or three times what it had been in

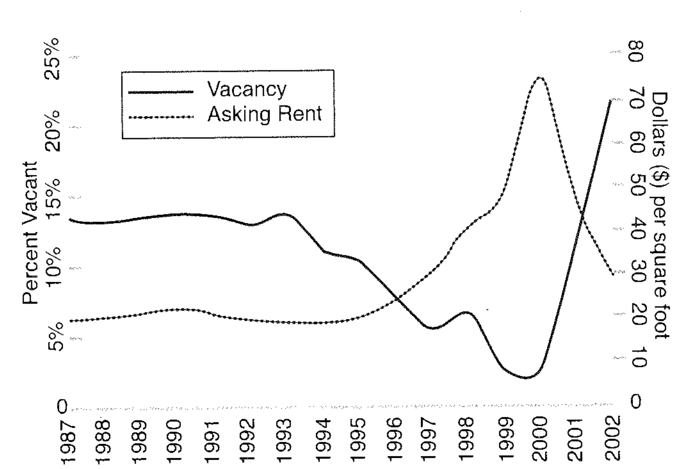

Figure 5.3 San Francisco office vacancies vs. rents, 1987–2002. Source: San Francisco Planning Department (after Olsen 2004).

1993 (Beitel 2003). House price rises also accelerated. The median price of a home in the Bay Area rose from US$215,000 in 1995 to US$364,000 in 2000, jumping 20 percent at the peak of the bubble in 2000. By 2002, Bay Area housing was almost three times the national average, that is, the median house sold for over US$400,000, compared with a California median of US$260,000 and a national standard of US$144,000 (Zito 2002). In 1999 the West Bay (Silicon Valley to Marin) had eight towns with median house prices higher than in Beverly Hills and Malibu.[8] Why such absurd prices? On the commercial side, the Bay Area was generating new companies by the score in the boom and filling their coffers with easy money. Office rents tracked the NASDAQ very closely throughout. As for residential real estate, the explanation is not that the Bay Area is short of land. Most important, the region is filthy rich, boasting the highest per capita income and wealth in the country over most of the last generation (Walker *et al.* 1990). Second, the Bay Area is saturated with finance capital, so mortgage loans are easy to obtain – and became easier in the bubble times (Zito 2002). Third, very fast growth creates a bottleneck effect in housing markets that squeezes prices upward.[9]

It is not easy to trace financial flows into the Bay Area for the purposes of mortgage lending and property development. Developers were raising fast money by turning themselves into real estate investment trusts (REITs), as the Bay Area became one of the largest centers of REITs in the country (Shilton *et al.* 1996). Other important sources of finance were insurance companies and pension funds, which also favored the region (Kaufman 1998, Rosen and Anderson 1999). The scale of property companies grew so fast that they came to be valued in the billions, and numbered among the largest real estate operators in the nation. Here again, the pipelines of capital investment and speculation had been opened wide.

Building blasters kick in

In every building cycle, rising prices and falling vacancies trigger new construction. Normally, there is a time lag of a year or two between price rises and new building projects as the time from conception to completion of any major commercial project is considerable, time needed to secure options on land, round up financing, draw up architectural plans, win city approval, and arrange for prospective tenants.

Because the Bay Area had become badly overbuilt in the last real estate cycle, peaking in the mid-1980s, there was lots of underused space to absorb before the full force of the price wave could be felt. In Silicon Valley, for example, some 30 million square feet of industrial and R&D space remained vacant in 1990, 18 percent of its total of 169 million square feet.[10] Moreover, new arenas of office space were opening up in the former industrial zones in SoMa, in Downtown San Jose, and over in Oakland because of intervening changes in the outlook of business, which had previously avoided such places like the plague.

But as the economic boom built up momentum, construction took off, creating millions of new square feet of commercial space around the region. San Francisco would add 10 million square feet of offices, an increase of about 16 percent. Silicon Valley would expand its supply of office space from 39 to 47 million square feet between 1990 and 2000, a jump of 20 percent, and its industrial/R&D space to 197 million square feet, an increase of 22 percent in a decade.[11]

Into the wide open spaces

The real estate bubble was punctured by the same shot that brought down the New Economy. Like venture capital and investment banking, it took the commercial real estate market a while to see the writing on the wall, so it levitated over the NASDAQ crash of spring 2000. Then reality hit realty in 2001. As companies withered on the vine, vacancy rates in commercial space vaulted upward and prices plunged. 'For Rent' signs sprouted like mushrooms on rotting logs. This was by far the worse disaster to befall San Francisco real estate since the Great Depression. Downtown office vacancies went from 4 to 16 percent in one year, and prices fell from US$78 to US$38 per square foot. Vacant class A office space remained at over 20 percent from 2002 to 2004, with a peak at around 24 percent.[12] Rents slumped badly, bottoming out at less than US$30 per square foot – more than a 60 percent drop from the 2000 peak – about where they stood in 1995 (in real terms). South of Market the carnage was worse: vacancies shot up from 10 to 46 percent and rents fell from US$67 to US$22 per square foot (D. Levy 2001); vacancies remained at nearly 40 per cent for the next three years (D. Levy 2002, 2003a,b, 2004).

Silicon Valley's plight was more severe than the city's. Commercial vacancies soared to almost 30 percent across Santa Clara and San Mateo counties (D. Levy 2003a). Prime office space in the Valley fell from US$70 per square foot to US$28,[13] while industrial/R&D space fell below U$5, and remained at these rates as late as 2005.[14] The wide open spaces are still easy to spot in the see-through

buildings formerly occupied by thriving companies such as Excite@Home in Redwood City.

A paragon of New Economy excess was the international terminal at the San Francisco Airport (SFO) (Figure 5.4). During the boom, traffic at all three Bay Area airports grew rapidly, but none more so than SFO; passenger traffic was the fifth highest of any airport in the country. Flights became so numerous that delays threatened to overwhelm operations at peak hours. Airport planners, ever ahead of the curve, set their sights high and designed one of the grandest of international air terminals in existence. Finished in 2002, it boasted a vast canopied space 500 feet long, 100 feet high, and backed up by sweeping new freeway interchanges, two huge garages, an inter-terminal people mover, and a BART (Bay Area Rapid Transit) station. But air travel had collapsed – well before 9/11. For its first three years, the international terminal felt like a mausoleum – a suitable monument to the passing of the New Economy.[15]

Residential markets behaved more strangely. Apartment rents fell as expected in a business downturn. In March 2001, average rents peaked at US$1,628 for the central Bay Area and at US$1,956 in Silicon Valley, then both began to sag downward with the departure of hordes of dot-commers and their fast bucks. By 2002, San Francisco rents had fallen 12 percent and those in Silicon Valley by 18 percent; by 2003, they were down 18 and 34 percent respectively; and both stayed flat through 2004 (Rosen and Bishop 2002, Zito 2003a,b, Liedtke 2005). House prices, on the other hand, never stopped booming, creating a secondary boom and bubble in the midst of recession.[16]

Reconfiguring the urban landscape

The face of the city bears the scars of every epoch of capitalist development. Urban space is created according to the technologies, tastes, and profit calculus of every generation, then reworked into new configurations as the social order

... at the San Francisco airport in 2004 changes. One era is layered onto the next, like an artist building up the oil paint on a canvas into new forms, colors, and textures. Only the process is less clearly thought out or harmonious than that. Instead, greed, conflict, and political maneuvering intrude to shape the city into a collective product that no one person can ever quite get a grip on (Harvey 1985, 2003). The bubble by the bay put its mark all over the urban landscape, with the greatest impact on the inner cities of San Francisco and San Jose. Although every business cycle does its work on the city, this one was more dramatic than most. As Solnit and Schwartzenberg (2000: 34) put it, "... the earthquake that has come at the millennium has been a temblor of capital and its unstable distribution, altering San Francisco more than could almost any natural disaster."

Lofty spaces of San Francisco

San Francisco's landscape was thoroughly reworked by the bubble. The dot.com boom was centered in the SoMa area, achieving at a stroke what had been fought over for fifty years: expanding downtown deep into territory along the southern waterfront and around Mission Bay once held by industry and the working class (Hartman 1984, Walker 1998). The bubble economy unleashed a kind of urban bulldozer by means of financial speculation rather than the state, leaving the SoMa district radically transformed and the Mission district on the verge of wholesale displacement. There were several dimensions to how this urban renewal by market means played out. The first element in the transformation of SoMa was the conversion of warehouses and industrial space into dot-com offices. This began at the foot of the Bay Bridge on Rincon Hill around South Park, the techies' favorite meeting spot, and continued all the way out through the Inner Mission, the city's principal Latino district. The last vestiges of manufacturing were swept aside, along with artist spaces, non-profits, and relict bars. By the time the bubble burst, the tide of conversions had washed up all the way to the heart of the Mission Street commercial district (Cohen 1998, Solnit and Schwartzenberg 2000, Beitel 2003).

The second facet of SoMa's makeover was the quick build-out of residential lofts, or live/work units (Figure 5.5). Lofts began as an alternative space for artists and bohemians in former industrial districts, for which city planners had been willing to allow variances from housing standards. But then the hip ran smack into the hop in the real estate market and a crowd of young dot-commers with lots of cash to spend on nifty digs close to work. Add to the mix the political pop of the developers, who saw live–work lofts as a fantastic way to build quickly and profitably, and hundreds of new buildings went up (Solnit and Schwartzenberg 2000, Beitel 2003, Olsen 2004). A third aspect of the reworking of SoMa was the high-rise explosion on its eastern flank, east of Third Street. This part of the city has been converted into a little Sao Paolo with a radically transformed skyline of office and apartment towers. Here, the old city's landscape has not just been made over, but virtually erased. This has been continued to the present because of unrelenting demand for housing, which is being met by high-rise apartments and condominiums (King 2004).

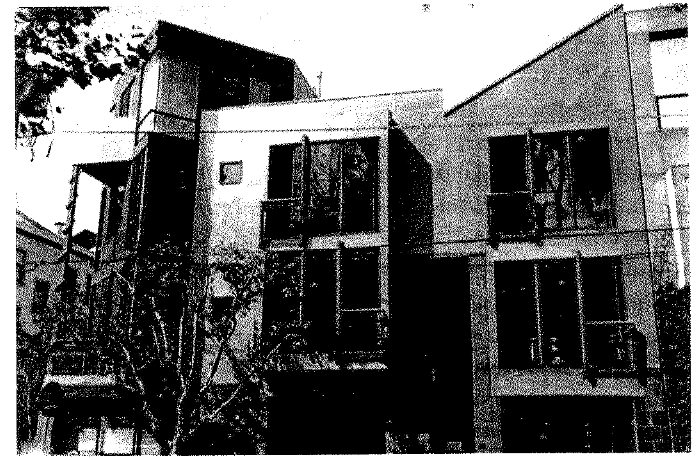

Figure 5.5 SoMa loft.

Meanwhile, the residential neighborhoods of the Mission district, packed into mid-rise Victorian houses and flats, felt the heat of gentrification in the late 1990s. Dot-com adventurers were seeking out homes near their warehouse workplaces and the trendy clubs and restaurants sprouting along Valencia Street. Tenant expulsions for wholesale building conversions were rampant. Simultaneously, many locals were losing their jobs as warehouse conversions eliminated blue-collar manufacturing jobs and social service agencies (Godfrey 1997, Solnit and Schwartzenberg 2000, Beitel 2003). The last piece of the conversion puzzle was to clear the way for the gigantic Mission Bay project on the southern flank of SoMa, on eighty acres of former Southern Pacific rail yards. This is by far the biggest new land development in the city in fifty years. Once too far from downtown to feel connected, Mission Bay is now accessible by a new light rail system and just a shout away from the lofts of SoMa. The key to winning approval was to anchor the project with a University of California San Francisco Medical School research campus. The hope is that this will attract biotechnology firms (Beitel 2003, King 2004, Olsen 2004). Thus is the ground prepared for the next New Thing.

Not that all this is bad. Downtown San Francisco is quite small by the standards of world cities and the new SoMa developments have added a surprisingly vigorous new layer of density and high style to the urban core. The lofts and warehouse makeovers of the late 1990s often feature techno-modern designs, combined with a good deal of eclectic retro elements (Lloyd 1997, Sardar 2000, Johns 2004). These can be quite good because of the money available to pay for first-class architects. Similarly, some of the high-rise offices are better than the post-modern edifices of the 1980s because they are fitted out in modernist revival glass and metal exoskeletons (King 2004). San Francisco's dowdy reputation in design has undergone a retrofit, as Silicon Valley futurism overtook classically conservative San Francisco tastes in architecture.

On the other hand, the triumphant march of gentrification through SoMa and tures in the arts, politics, and immigrant life, replacing it with a shallower cult of techno-capitalism. Beitel (2003: 172) captures the defects of the new city of what the locals derisively called "the silicon implants":

> [The] recasting of entrepreneurialism as a type of transgressive practice … reach[ed] its extremes in the fantasies of a self-styled avant garde of anarcho-capitalists … [in which] the central city is (re)presented and imagined as a site within which these new impulses are circulated through a dense network linked by microchips, high speed digital connections, and rapidly formed partnerships perpetually dissolved in a fluid flux of change and transition. The semiotics of "industrial chic" pervades the living and work environments of SF's digital economy through which the industrial wasteland is reappropriated as a playground for entrepreneurial capital and the techno-salariat … [where] the techno-gentry dines and cuts business deals surrounded by the stylistic chic of the digital cutting edge – polished galvanized pipes suspended from the high wooden beam ceiling, [and other refurbished bits of machinofacture] compose the space within which the "New Economy" is reproduced.

Fortunately, the cultural and ethnic cleansing of the area was not as thorough as many people feared at the height of the bubble. It was cut short by the puncturing of the New Economy bubble. Civic life, like a ravaged forest, proved to be more resilient than expected and with a surprising capacity for recuperation.

A capital city for high-tech

In a remarkable reversal of the historic pattern of metropolitan dominance, San Francisco lost its place atop the urban hierarchy to San Jose and Silicon Valley during the bubble years. During the recessions of the early 1980s and 1990s, the old-line corporate powerhouses of San Francisco fell like redwoods before the ax, leaving only a couple of megaliths such as Chevron and Bechtel still standing (Walker *et al.* 1990). Meanwhile, electronics companies from the South Bay littered the Fortune 500 list. San Francisco lost virtually its entire manufacturing base, while Santa Clara County held the most intensive concentration of manufacturing in the country (Bay Area Economic Forum 1996, 1999). In the 2000 census, San Jose counted 900,000 souls and San Francisco only 775,000. The US Census Bureau recently designated the region as, officially, the *San Jose*–San Francisco–Oakland Consolidated Metropolitan Statistical Area.

The New Economy building boom had a dramatic effect on Silicon Valley, although the vast spaces of the South Bay disperse the impact compared with compact San Francisco. The most pervasive effect of high land values in a growing city is densification, and Silicon Valley is no exception. The Santa Clara Valley is no longer the suburban sprawl of our imaginations. It is home to a true city, and a dense one by American standards. By the 2000 census San Jose Metro had become the third densest urban area in the USA, after – surprise, surprise! – Los Angeles and San Francisco–Oakland.[17] What this means is that the New York metropolitan region is more sprawling today than either LA or the Bay Area – quite the reverse of expectations.

To accommodate the Valley's tremendous growth it has been necessary to build upward. This shows up in hundreds of mid-rise housing complexes, especially along the major transportation corridors. The number of apartment, condominium, and townhouse units in San Jose passed 50 percent by 2000, compared with less than 30 percent in 1970.[18] Some of the new developments offer spectacular new urbanist concoctions that mix residential, office, and retail space, as in the Santana Village complex in San Jose (Calthorpe and Fulton 2001). Almost every town center in the Valley, long neglected as farm towns were transformed into suburbs, has been rebuilt to attract residents and shoppers, and infuse a bit of urban life into the sterile suburban landscapes.

The boom put a new face on the electronics industry, as high-tech companies started using their immense wealth to project an image of corporate stature. High-rise headquarters began to appear in the 1980s and became the norm in the 1990s, replacing the low-rise, slap-up look of the previous generation for which the Valley was notorious (Banham 1980). As a result, architecture took a turn for the better. This can be seen in the comely designs of corporate headquarters and office complexes. Some of the newer buildings have even been designed by name architects (although Silicon Valley remains largely a no-man's land of design fame). Even in speculative buildings, architecture improved. While these are still suburban high-rises rather than city skyscrapers, they measure up favorably as exercises in post-modern and techno-modern styling, thick with colored glass, metallic sheathing, and curved surfaces.

The most astonishing transformation of the landscape of Silicon Valley in the 1990s was the vast makeover of downtown San Jose. Long the country cousin to San Francisco – and eclipsed even by Palo Alto and Stanford as the key center of the Valley – San Jose began parading itself as "the capital of Silicon Valley" in the 1980s. It has never quite achieved this lofty goal, but it did make a stunning bid for the honors by recreating itself as few American downtowns have. A redevelopment program was put in place to tear down and rebuild the city's derelict downtown. It got off the ground in the boom of the 1980s, and came to fruition a decade later. Downtown San Jose now sports a bevy of gleaming new skyscrapers and civic buildings. All this has been paid for (or leveraged by) the richest redevelopment agency in California, using tax revenues drawn from the vast electronics belt cutting across north San Jose. More than US$1.5 billion has been siphoned from the industrial lands to the downtown over twenty years (Rhee 2006). Downtown San Jose now has 9 million square feet of office space.

In short, the Bay Area's urban landscape was in violent upheaval through the 1990s as a result of the New Economy boom and financial bubble. Real estate values shot up, and so did new buildings, at a markedly higher density than before. This came at a real cost in displacement of people and disarray in cultural life. The great urban beast arose and shook off many a poor soul like so many fleas. By the time it settled down again, the region would never be the same.

The rubble of the bubble

The aftermath of the boom and the bubble has done more than left the Bay Area geographically reconfigured. It has meant serious unemployment, dislocation, and despair among workers. It threw the state of California into fiscal chaos at all levels of government. It stilled the sirens of the New Economy. And it served as midwife to a political upheaval that has captured worldwide attention.

Economic hangover

The Bay Area economy has taken a tremendous beating since 2000. Markets dried up as corporate America (and Asia) cut back on purchases of electronic equipment. Companies have bled red ink until they have shrunk to shadows of their former bloated selves. Hints of recovery in 2002 proved ephemeral, and the downward spiral took off again with a vengeance in early 2003. Massive layoffs came in the wake of the passing financial tidal wave as high-tech corporations sought to stave off the grim reaper. In the Valley (San Jose metropolitan area) 176,000 jobs vaporized from the peak of 1,035,000 at the end of 2000 to the bottom of the slump in fall 2003, or over one-sixth of the total; in San Francisco metropolitan area (San Francisco plus San Mateo and Marin Counties) the loss was 129,000 out of 1,085,000, or 12 percent. The East Bay (Oakland metropolitan area) was less hard-hit because it is the least dependent on electronics. The total job loss amounted to 322,000 around the Bay Area on a base of 3,540,000, or 9.1 percent of all jobs. The jobless rate in Silicon Valley hovered in the 7–8 percent range for three years; in San Francisco it was around 5 percent, despite the departure of tens of thousands of dot-commers (no precise figure exists on the outflow).[19]

In terms of geographic impact, the Bay Area truly reaped the whirlwind. Its job loss represents an astonishingly high proportion of all layoffs in the USA during the 2000–03 recession, the area accounting for 322,000 out of a total of 2.45 million jobs lost nationally (Figure 5.6). That means the Bay Area, with less than 3 percent of the national population, suffered 13 percent, or one-seventh, of the nation's job loss. This ought to go down in the annals of economic geography, along with the shriveling of Detroit in the early 1980s and the burning of recession-torn Los Angeles in 1992, as a recent urban disaster born of a major recession.[20] Figure 5.6 shows that unemployment in Silicon Valley reached a much higher level than in either California or the USA.

The secondary effects of the drying up of electronics have been quite stark. Retailing has been socked, from Stanford Shopping Center to Union Square in San Francisco. The Gap, retailing's second biggest success story in the 1990s after Wal-Mart, took a three-year dive. One of San Francisco's biggest law firms, Brobeck, Phleger and Harrison, with 500 attorneys focused on electronics and high-tech investment, declared bankruptcy. Talk of the New Economy has been stifled as such vocal advocates as *Red Herring* and *The Industry Standard* have disappeared from the internet. On the other hand, homelessness surged, leaving upwards of 20,000 people on the streets in San Francisco, Oakland, Berkeley, and San Jose combined. They are still being swept off the streets, this human rubble

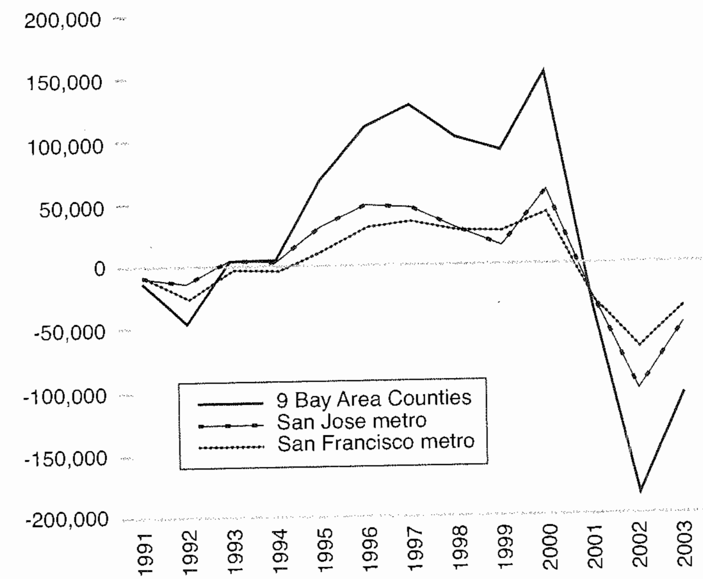

Figure 5.6 Annual employment change in the Bay Area, 1991–2003. Source: State of California Employment Development Department.

Faustian politics

The boom and bust of the turn of the millennium shook Bay Area politics to its roots. The high times gave rein to the lustiest of pro-development politicians and their cronies, while the subsequent economic earthquake left more than a few cracks in the edifice of the state. Through those weakened walls have passed those with the ruthless political ambition to steal in and grab the keys to the vault. Locally, the boom was seized upon by Mayor Willie Brown of San Francisco, and other like-minded politicians, as a means of aggrandizing their careers. There's nothing truer to American local politics than vigorous promotion of business and land development (Logan and Molotch 1986) and so they made lusty concourse with the New Economy and its financiers and real estate schemes. They eagerly greased the wheels of planning boards and other government agencies, allowing a great deal of slippery dealing to enrich business, developers, and their campaign funds, and left a tainted legacy for both.

Willie Brown is the former Speaker of the Assembly, and the most powerful politician in Sacramento during the 1980s. Some say that terms limits were passed expressly to end his tenure (Clucas 1995, Richardson 1996). So, in 1995, Brown ran for Mayor, serving two terms. Brown had a liberal reputation in the state, but by San Francisco standards he is a business Democrat (Walker *et al.* 1990). He cobbled together an alliance of downtown and Pacific Heights capital with African-Americans at the forgotten south edge of the city, plus the ambitious new money of Chinese San Francisco. He kept the labor movement quiet by granting living wages to city employees and wooing the building trades into his pro-development alliance. And he put his muscle behind real estate developers in the beefy alliance with the Residential Builders' Association. Brown installed a pro-development Planning Commission that rubber-stamped all the warehouse conversions and loft projects developers could muster in the boom times. He was able to sell the new baseball park to the voters and to follow that with voter approval of the Mission Bay scheme, after two failed efforts in the 1980s (Blackwell 2000, Beitel 2003, Brahinsky 2004).

The political machinations of the bubble period triggered a popular response of impressive proportions in San Francisco. Many on the left had worried that steadily rising rents had driven all but the leftovers of the counterculture and the political activists out of the city. But the artists, Mission Latinos, and others put up a surprisingly fierce fight against the dot-coms, lofts, and developers. As the warehouse and loft conversions washed up on the shores of the Mission District, it created solid opposition from a still vibrant working-class and immigrant area (Blackwell 2000, Beitel 2003, Carlsson 2004).

Willie Brown's regime took the brunt of the anger. This figures, since Brown showed not the least compassion for displaced tenants in the Mission and nearby neighborhoods where he had twice been outgunned for votes by his mayoral opponent, gay Supervisor Tom Ammiano. In a remarkable election at the end of 2000, neighborhood activists and leftists won seven out of eight Supervisoral seats in San Francisco and dealt Brown a political defeat the likes of which he had never experienced in his brilliant, charmed career. The city lurched dramatically to the left (Beitel 2003, Carlsson 2004). The powers-that-be bounced back, however. They began grooming young, photogenic Supervisor Gavin Newsom as Brown's successor. Newsom is well connected to Pacific Heights wealth and is an up and coming entrepreneur in his own right. Newsom found his headline-grabbing issue with a campaign to eliminate city handouts to the homeless, in a ballot measure deftly entitled "Care Not Cash," because the human rubbish accumulating in the streets was scaring off tourists and shoppers. Newsom was elected in fall 2003, though not without a scare from a polyglot assemblage of the left, headed by equally young, smart, and charismatic Supervisor Matt Gonzales. Not surprisingly, Newsom outspent Gonzales 10 to 1 to earn his narrow victory (Carlsson 2004).

In comes the smiling terminator

The biggest political news from California in recent years was the recall of Governor Gray Davis and election of Arnold Schwarzenegger in October 2003. The presence of Arnold, star of *The Terminator* series and other violent revenge and humiliation flicks, captured the attention of the world. His victory was a *coup d'état* of surpassing brilliance and bloodless efficiency.

The state Republican Party had been in the doldrums since Davis's election in 1998. It had lost a big portion of the immigrant vote because of Governor Pete Wilson's attempt to blame immigrants for California's fiscal crisis of the early 1990s (Walker 1995). The legislature was still firmly in Democratic Party hands.

George Bush lost the state decisively in 2000. But the bursting bubble-by-the-Bay made Davis and the Democrats suddenly vulnerable. The state of California was broke, with a staggering 2003–04 budget deficit of US$25–35 billion (out of US$100 billion). California's deficit was larger than that of all the other states put together. To cover the shortfall, Davis was proposing to cut US$8 billion from expenditures, raise US$5 billion by taxes on car registrations, and borrow US$16 billion short term on the bond markets. In the face of this disaster, the Republicans argued that irresponsible spending was responsible for the deficit and, moreover, Democrats were going to close the gap on the backs of the citizenry by raising taxes.

The real reason for the deficit was not overspending but the precipitous collapse of revenues (Rosen *et al.* 2003). A huge part of the increase in state income in the late 1990s was derived from capital gains taxes, which had ballooned on all the paper stock wealth generated during the bubble. Those taxes had become vital to paying the state's bills for education, health, and infrastructure because Californians have been living in a neoliberal fantasy world for twenty-five years of declining tax effort (California Tax Reform Association 2005). To make matters worse, the legislature – backed solidly by mainstream business opinion – took the view that the New Economy was permanent, and its revenues could be put to use without worry.

The Republicans hit upon the recall to unseat Davis, an obscure law that had been on the books since 1911 but never before employed. California's is an exceedingly facile recall system that allows for no major malfeasance in office and a petition by a small proportion of the voters. The petition drive for the recall was paid for out of the personal fortune of Darryl Issa, a man made rich selling car alarms. Republicans filled up their campaign coffers with millions of dollars and started drawing up lists of candidates. Schwarzenegger was not the obvious choice for governor. But it soon became apparent that his star-power and personal

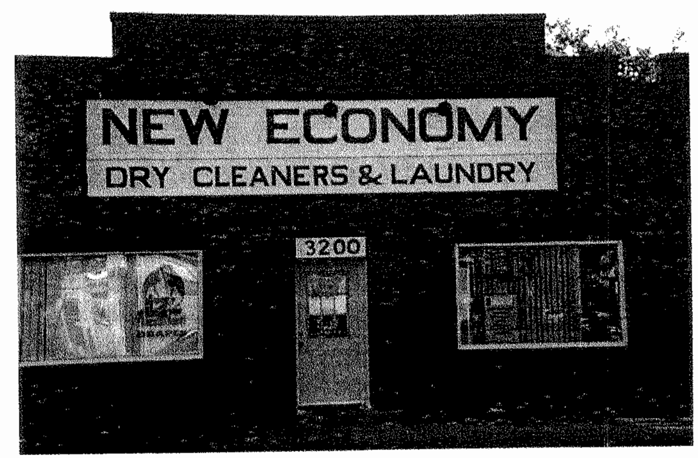

Figure 5.7 The New Economy Cleaners, Berkeley, CA, in 2004.

charm made him an ideal candidate. He had the further asset of being a Hollywood libertine, in a state where reactionary Christian values do not carry much weight. Arnold was helped immeasurably by the dull response of Davis. The governor was a classic New Democratic: a big fund-raiser weighing political payoffs to the fraction. He was utterly mute about issues of importance to an electorate suffering great strain in the face of the state's economic and fiscal meltdown. So in walked the smiling terminator, who swiftly put in place a pro-business agenda – making the budget deficit worse by rescinding the car registration tax. The Bay Area, to its credit, opposed the rest of the state on the recall and voted against Schwarzenegger.

Truly, California has been taken to the cleaners, in this case the New Economy Cleaners – which is just down the road from my home in Berkeley (Figure 5.7). Here is a business that is willing to partake of the ideological fervor without forgetting first principles. It has outlived both the Davis administration and the dot-coms because it has a sound basis in the old economy and provides people with a real service.

Notes

1 Gordon (2000) calculates that virtually all the productivity gains of the late 1990s were concentrated in the computer sector.
2 As Lowenstein (2004: 17) says "Silicon Valley made stock options especially fashionable." When the Securities and Exchange Commission tried to crack down on options in 1993, John Doerr led the Valley's successful lobbying effort to hold them at bay (ibid: 44).
3 Despite the economic crash, the Bay Area had added one billionaire to register forty-four of the Forbes 400 in 2004, putting it ahead of New York and Los Angeles. San Francisco still runs neck and neck with the Valley in the number of super-rich.
4 The percentage had been even higher in the 1980s, nearly 50 percent.
5 At its peak, the NASDAQ's stock traded at an average of ninety times earnings, compared with a peak of eighty times on the Nikkei just before it crashed in 1989 (Ingebretsen 2002: 219). By 2002, the NASDAQ had become biggest US stock exchange in trading volume.
6 Most observers have noted the significance of international capital flows in the great NYSE stock run-up of the 1990s, when around 25 percent of the funds supporting the bubble came from abroad (Brenner 2002, Pollin 2003). Data are readily available at the national level, but not the regional.
7 The catastrophic losses of 2001 are somewhat misleading in that they include some enormous write-offs of bogus gains of the late 1990s, when profits were already falling but the fact was being covered up. In fact, US manufacturing profits had been falling sharply since 1997 (Brenner 2004) and Silicon Valley had been generating more and more profitless start-ups (Sylvester 2002). By the end of 2001, US manufacturing profits were down to one-third from 1997 and computer equipment profits down by 80 percent (Brenner 2004).
8 Based on data from California Association of Realtors.
9 Because housing turnover is relatively low, prices are leveraged higher than they would be in a perfect market, rather like oil in a time of panic buying.
10 Based on data from Colliers International real estate reports.
11 Data from Urban Land Institute and courtesy of Colliers International's San Jose office.

12 This compares with a national average office vacancy rate of 17 percent (Bardhan and Kroll 2003). By no means was the real estate bubble and crash confined to the Bay Area. But it was worse here than anywhere else, as had been the case in Los Angeles in the late 1980s and in Houston before that.
13 Data courtesy of Grubb & Ellis solicitors.
14 Data courtesy of Colliers International's San Jose office.
15 Airport managers also wanted more runways and proposed a doubling of the tarmacs, by filling the bay. This plan has been on hold since the bubble burst, but will be back. It is fiercely opposed by environmentalists.
16 House prices have continued to rise, in large part because of the most drastic reduction in interest rates since the Great Depression. Home buyers can afford much more as their monthly payments fall markedly. This is quite a general phenomenon nationally (Brenner 2004). In the Bay Area, the rise in house values has actually been slower than in many cities since 2000, but still esceeded all other metro areas, surpassing US$600,000 in 2005. But two things have added to the increase in prices. The upper classes were pulling their considerable savings out of stocks and putting them into bigger homes. At the same time, many middle market purchasers panicked as they saw this as their last chance to sneak into a starter home under the half-million mark (soon to be a distant memory).
17 Based on census data for "urbanized areas" (metropolitan areas minus open space). Tables can be found at www.demographia.com.
18 City and county data. In fact, multiples have outrun single-family houses in most years since the late 1960s.
19 Employment figures were repeatedly readjusted downward during the long fall, which was the worst since the Great Depression and proportionately a good deal worse than the horrendous job shrinkage in Los Angeles in the early 1990s.
20 Employment remained stagnant through 2004 (Armstrong 2004) and was worsened by the eagerness of electronic capitalists to offshore work to cut labor costs (Bardhan and Kroll 2003).

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