

NO TIES THAT BIND

Low Skill Workers, Social Networks and Job Search In the Silicon Valley's New Economy

by

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Submitted to the Department of Urban Studies and Planning in Partial Fulfillment of the
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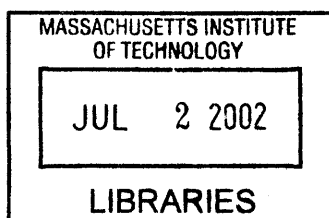
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ABSTRACT

This dissertation is concerned with the relationship between economic growth and social and economic equity. Equity is defined as the economic growth that enables lesser skilled workers to access employment opportunities that provide them some measure of upward mobility. The thesis considers whether personal networks – a key means of searching for work – are likely to provide any upward mobility for low-skill workers.

This thesis examines the role social networks play in providing access to employment opportunities and upward mobility in light of the new economy. In the old economy, lesser skilled workers used friends and family to gain access to entry-level jobs. Because these jobs were largely unskilled, employers looked primarily to these contacts as references for employment. Once hired, the social contract between the worker and the firm meant workers could depend on those jobs for lifelong employment. In the new economy, flexible work systems and new forms of work have created a more fluid labor market with significantly more job changing. As lesser skilled workers negotiate this new terrain, they must determine how to use their networks to identify employment opportunities that offer wage mobility.

This study measures the personal contacts of a small sample of 44 lesser skilled workers against the fastest growing occupations and industries in the regional economy of the Silicon Valley. Methods include survey research, quantitative analysis and in-depth interviews. The data reveal that while the majority of personal contacts were to people in low status jobs, respondents also possessed contacts that were higher status workers with better labor market information about employment opportunities. However, most low-skill workers were hesitant to activate these well-placed networks.

This thesis explores the reticence to activate networks and discusses the public policy implications of network use for upward mobility. It finds that networks are necessary for job search, but not sufficient for upward mobility absent a significant increase in skill. The policy recommendations argue for regional institutions as the point of intervention for policy implementation and labor market reform.

Thesis Supervisor: Frank Levy
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The attempt to see that in my work is not much of a stretch. My original fascination with studying poverty came from my own upbringing as a young girl in a single parent household where money was always stretched. As the oldest of four children, I remember the periods in my childhood when we were on food stamps, when the electricity was cut off because we had no money to pay the bill, when we declared bankruptcy to get out from underneath the financial burden of our bills. Despite seemingly meager circumstances, my siblings and I always attended independent schools, a mandate dictated by my mother.

Why would a woman who couldn't afford to pay a telephone bill require that her four children attend private, elite, educational institutions? Why not just enroll us in the public school down the block for which she had already paid taxes? Because my mother knew, at some fundamental, instinctual and gut level, that the quality of education we would receive, *and* the quality of people with whom we would interact, would make all the difference in our own life chances. She believed that the environment in which we were immersed, and the people whom we met in those places, would help to shape our future.

The idea of examining the role of personal networks for lesser skilled workers did not directly grow out of these experiences, but it is certainly informed by them. The subject of this

dissertation is part of a larger journey to truly understand what makes a difference in helping people to make their lives better. Social networks are but a thread in that very intricate tapestry.

Much of the “data” contained within this dissertation reflect the life stories of countless individuals who willingly shared themselves with me. To the residents of East Palo Alto and East San Jose I owe the utmost thanks for allowing me to ask of you what no researcher should. Your generosity comes with a commitment from me that my life long pursuit will be doing those things that serve your best interests.

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PREFACE

POVERTY AS A FRAME

At its heart, this study is concerned with the issue of poverty and what to do about it. In particular I am concerned about the incidence of poverty as our economy evolves, and the impact of the technological transformation on those with lesser skills. Will those with fewer skills ever be able to participate in the new economy? Can the rising tide lift all boats?

Poverty is often discussed as if it is a monolithic and unidimensional. However students of poverty learn that it is conceptualized in many different ways: as a culture of dependency resulting in reliance upon public welfare systems; as aberrant behavior that creates an “underclass” or results in unconventional family structures; as emanating from issues of identity and discrimination resulting in the desire for greater empowerment; and finally as a lack of income which might result in any of the three prior descriptions. The framework and characterization of poverty directly impacts the range of solutions offered to address it.

It is the last of these poverty “frames,” that of inadequate income, with which this study is most concerned. However, even poverty that is understood as deriving from a lack of income masks several other issues. If one’s earnings are above the official poverty line, does that mean one is no longer poor? Is income-based poverty really about individual or household income, or the distribution of income in society? And as welfare reform has increased the number of individuals in the labor market, is income-based poverty best understood as an issue of the unemployed, or of the working poor?

This study focuses on the structural problems associated with poverty. It examines industrial growth and occupational distribution to determine whether and how lesser skilled workers might participate in the growth industries of regional economies. It focuses on a

particular regional economy – that of the Silicon Valley, and considers what technological shifts mean for lesser skilled workers. And it asks how the existing social networks that people have help to facilitate or prevent access to employment opportunities in the new economy.

SOCIAL CAPITAL VERSUS SOCIAL NETWORKS

Social networks are rarely mentioned in popular literature, and get scant attention in academia as well. But in recent years, social capital is an issue that has gathered significant attention. Robert Putnam's study of the decline in social capital reframes the notion of poverty from a condition that is economically-based to one that is socially-based. He has done so in a way that acknowledges that we live in a culture of poverty, without casting poverty as a form of deviance. His main argument is that we are poor in spirit – in trust, cooperation and involvement in civic life. Putnam and other several researchers at Harvard University have undertaken intensive and extensive research on social capital and its role within American society.

The study of social capital is distinctly different from research on social networks, though the two terms are often conflated and confused. While the social capital literature tends to focus on the interaction between individuals, their civic organizations and the extent to which people feel connected to a larger community, research on social networks largely focuses on individual relationships and instrumental action. My interest is in how people *use* the networks they have, and whether those networks mean anything for improving their economic and social mobility.

PLACE

The networks which people have are very much shaped by place—neighborhood, region, and nation state. The Silicon Valley as a place is also under study here, in large part because of its growing significance in the local, national and global economy. The Silicon Valley is to the United States economy as the U.S. economy is to the world economy: it represents growth,

innovation, wealth, and also has been associated with exploitation, and inequality. As Paul Osterman notes, the Silicon Valley represents our current notions about the “future of work” in the new economy – the trends, paradigms, the expectations and the opportunities – that workers experience, especially those in the high tech cluster industries. Most important for this study though, the presence of the Silicon Valley in many cases influences how people think about and act upon their set of opportunities. And it influences the instrumental role of networks in particular ways.

ECONOMIC SOCIOLOGY AND PLANNING

Some might wonder how a student of urban planning comes to take up study of the field social networks, which falls into the sub-field of economic sociology. The intellectual link between networks and planning has to do with how we think about, use, move about and negotiate space. One question that is raised by social networks is whether or not they are spatially contained. Are networks embedded in neighborhoods and localities, or do they enable one to transcend space in particular ways? We know that for higher skilled workers negotiating space is not much of an issue; in fact, it is taken as a given that their opportunities are not constrained by their neighborhood. But how low-skill workers negotiate space is still an open question. What we do know is that those who reside in low-income communities are confined in particular ways by their neighborhood. They are the victims of dilapidated streets, inadequate and unaffordable housing, and unreliable and inconvenient transportation systems. Yet networks may play an important role in helping people to both imagine their lives outside of their current condition and transcend that condition, and thus they remain important.

So can poverty be addressed by shifts in the regional economy? Can the rising tide lift all boats? It depends. It depends on whether or not that boat has a hole.

CHAPTER 1
UNDERSTANDING THE ISSUES:
REGIONAL ECONOMIC GROWTH AND LOCAL ECONOMIC OPPORTUNITY

In February 2001, the economic boom fueled by high technology industry ground to a screeching halt. After three years of consecutive and unprecedented growth, economic indicators were showing that the stock market was heading into bear territory. The technology heavy NASDAQ index was down 3000 points from its all time high only twelve months before.

In the Bay Area, indicators that there was something troubling in the high tech economy were everywhere. Restaurants were reporting that reservations were available for later that week. Start-ups were going out of business before they ever went public. Established high tech companies, the stalwarts of the information age – Intel, Cisco and Yahoo – were announcing lay offs. Gone were the launch parties that helped to make the region hip and cool to the younger generation. Instead, pink slip parties were all the rage. Twenty- and thirty-somethings were out of work.

Ironically however, while the evening news announced layoffs, headhunters were still busy in their offices. Monster.com was still advertising job openings and some companies were still hiring. While there was no doubt that the economy had slowed, there were still jobs to be had and there was money to be made. The paramount problem was in finding the right person for the right job.

This is a study about the difficulties of matching up jobs and workers, and the problems associated with exchanging information in the labor market. However this study differs from other such studies in two ways. First, it grounds the theoretical writings about labor market information and social networks in the context of a particular regional economy: the “new economy” of the Silicon Valley. While the old economy labor market featured long and stable

relationships between workers and firms, strong internal labor markets and stable wages, the new economy labor market is characterized by brief job tenure, flexible career paths, flexible work systems and wage determination based on productivity (Osterman 1999), placing low-skill workers at a tremendous disadvantage. Second, it examines the experiences of those at the low end of the labor market, often referred to as the “hard-to-employ.” In addressing these issues, this study is concerned with how two variables – skills (as measured by educational attainment) and the strength of the economy – influence the effectiveness of networks in helping people to find work. This study asks how people without college degrees, without engineering backgrounds, and without appropriate “hard skills” find work in and access to employment opportunities in Silicon Valley. At its heart, this study considers the relationship between social equity and economic growth.

Narrative sketch: Lavall

To the outside observer, Lavall does not fit the stereotype of someone who grew up in the low-income community of East Palo Alto. As the adopted daughter of an aging couple who had already raised a family, Lavall grew up in a household where, she concedes, she always believed that money grew on trees. “I just thought that money comes in and there’s just this magical place where there’s money and you go, and it’s a bank, and you go get it when you need some and it’s always there.”

Lavall grew up with all the material comforts her parents could afford, significantly more than most in her neighborhood. With a high value for education, her parents sent her to a nearby private elementary school to give her the best possible education, and never required her to work for spending money. She grew up in a house that her parents owned where she had her own room, her own phone, and a mother who made her bed every day until she graduated from high

school. Her only responsibility was to study. “We had everything. We didn’t struggle,” Lavall says of her childhood and those of many of her peers. “Our parents struggled. But by the time we came along things were kinda easy, kinda nice.”

The comforts of her stable, secure and admittedly “spoiled” life ended when she graduated from high school. That summer her mother became gravely ill and, having already lost her father at age 14, Lavall decided to forgo UC Berkeley and instead stay home to care for her mother. She lived at home for several years during her mother’s illness and readily admits that during this time she had “no ambition. I was just trying to make a paycheck.” Her lack of ambition combined with her mother’s immediate needs made it easy for Lavall to coast through this phase of her life.

When her mother passed away Lavall was left all alone. Although she had siblings that were the natural children of her parents, she had little contact with them because they were so much older than her. “They had families of their own. Some of my sisters had kids. Well my sister had kids that were old enough to be my parents.” And since her sisters moved out of the house before she was ever adopted, Lavall was raised as an only child.

Anchorless, Lavall strove to make her own way in the world but soon found herself pregnant and saddled with responsibility of having to be a mother herself. The birth of her daughter Tasia lent order and structure to Lavall’s life. Lavall got a job as a salesperson at Macy’s, and became more career-oriented. She began to move through the corporate ranks in order to have the resources to provide for her daughter. While her career trajectory in retail – from salesperson to management – did provide her with more resources, the hours compromised her ability to parent Tasia. After eight years, she was forced to leave her job because its demands were making her sick. “When I left Macy’s, it took three people to replace me, all the

different things that I did. ... I had headaches, I was stressed out, I was going to the doctor. The doctor was telling me, 'you got to leave, it's gonna kill you.' They were giving me prescription medicine for my migraines. It wouldn't do a thing to it."

Eventually Lavall went to an employment agency at the recommendation of a friend. Her friend had used Adecco and landed a plum job at Cisco Systems. The Adecco recruiter assessed Lavall's skills, provided her with some training, and placed her in the customer service department of OnSale, a computer software company. When Egghead Software purchased OnSale and the company reorganized, Lavall parlayed her skills into an administrative position within the sales and advertising department. Continually creating opportunities for herself, she currently works for the Vice President for Vendor Marketing earning \$38,700 with a full benefits package, including a few under water stock options.

Lavall claims that her employment successes have been due to her ability to network and to understand the power dynamics within the firm. And, as she looks for a new job now, having grown restless in a position that is largely administrative support, networking is her key job search strategy.

I'm doing a lot of networking, you know, people I used to work with and things like that so, my résumé's out there. I haven't posted it on any boards or anything. But it's out there. I'm just waiting for the right opportunity to come along... (LA: ... You mentioned networking.) Oh yeah. A lot of the people that used to work in my group, I let them know, you know, I might be interested in leaving soon. (LA: Are they still there or?) No, they're gone. They're at different companies. I've got one friend she works at a software company called Broadbase so they're actually, they need a project coordinator. So I'm working with her to see what they have and what they can offer. I've got another friend, actually at work, that knows a lot of people at the last company she left from. And so she's contacted a few people with my resume letting them know, hey well she's here. These are the things she can do. She's just looking for a little bit more challenge. Things like that.

Lavall argued that networking was a clearly superior strategy for finding work compared with other more traditional methods. She reasoned that as a lesser skilled worker, using associates opened up her landscape of opportunities.

LA: So you're doing networking, you're doing the agency, and you're doing a web search. No newspapers or?

Lavall: No. Well, if I really get down and dirty and serious I might go the newspaper route but I really don't see, it's been my experience, I've gotten better jobs from who I know than from what I know. Just, people don't give you a chance. When you come up and you're meeting somebody and they don't know anything about you. They look at you, and they think, ok, you've never been to college, you don't know how to do jack diddly. And they have those assumptions and they, you know, but it just seems that some of the jobs that I've gotten or some of the positions that I've gotten, I've gotten them more because I know someone involved in their organization and they know what I'm capable of. Whereas if I had gone there just off the street they probably would have thought that I couldn't do the job.

Lavall believes that employers are more reticent to hire her and give her a chance because she lacks a college credential, even though she is capable of doing the work. Thus, a reference from a network contact gives her greater opportunity than she otherwise might have on her own.

UNDERSTANDING NETWORK USE

Lavall's case is powerful because it provides an important counter point to the common perception of a typical Silicon Valley worker. She is not an engineer. She is not a college graduate. She has not come to the Silicon Valley with a new product idea or in search of her fortune. Instead she is black, she is a single mother, and she is from a poor neighborhood. Her story illustrates how in an ideal case networks should work for those living in low-income communities.

Lavall demonstrates the importance of early labor market experiences in shaping attitudes about work and behaviors in job search. Even though Lavall only has moderate academic credentials she was able to find work as a young adult that honed her soft skills – being dependable and reliable, working hard, working in the context of a team. Employers identified these soft skills as one of the central characteristics they look for when hiring new workers (Moss and Tilly 1996, Houghton and Proscio 2002). These skills take on particular importance for lesser skilled workers because they have fewer “hard” skills that they bring to their jobs.

Lavall's story also illustrates the role personal networks can play in leading one to vastly different pools of information. In this case Lavall's friend had access to alternate pools of information through the temporary agency, and such intermediary organizations are an important part of the opportunity structure for low-skill workers. This represents a variation on Mark Granovetter's theories about how people get jobs. In the early 1970s he suggested that the most successful job seekers did not get jobs because of who they knew directly, or their strong ties, but instead through the contacts of their strong ties, or their weak ties. The "strength of weak ties" came to represent the extended networks that job seekers have if they received information about employment opportunities through distant rather than close contacts. These weak ties provide access to substantially different pools of information, and thus are particularly important for those looking for new jobs. Thus, for low-skill workers who lack alternate information sources, intermediary organizations with existing relationships to employers can represent that weak tie.

Lavall's story also exposes a natural tension in reliance upon networks for obtaining jobs: while lesser skilled workers need weak ties to get access to better information, they also often need strong ties to maximize their chances of being offered a position. Low-skill workers need people who can "vouch" for them. Lavall showed that she was successful in accessing new pools of information through colleagues; however, she was less successful at forging strong enough relationships within her company in order to get a promotion. To move up within the firm Lavall needed strong ties. Weak ties are insufficient in those circumstances in which workers need someone to vouch for them, as in the case of seeking a promotion or someone with multiple labor market barriers needing a reference to vouch for their credibility as a good worker.

Finally, Lavall's story also illustrates the most advanced form of network use, "high intensity networking." In an ideal world, those with fewer skills should be able to leverage both their work experience and their contacts into new and better employment opportunities. Lavall had learned that it was important to understand who has access to information. She learned that to stay in her field her best sources of information were her colleagues in the field who could "keep an eye out" for her. And she was beginning to understand that it was equally important to have the support of her information source to move from simply getting information about an opening to getting a job offer.

Simply put, Lavall's story illustrates two elements of a broader framework of understanding how information influences job search and career development. The first component focuses on "the strength of weak ties" – where friends and contacts serve as a more refined substitute for newspaper ads and other more traditional and labor-intensive forms of job search. The second component focuses on the importance of strong ties, and how having good personal relationships with colleagues, employers and others rich in job information may provide a reference who can vouch for you when you are trying to secure a specific job. It is when both of these elements work in tandem that low-skill job seekers have the best chance of labor market success.

Given this framework, there are several reasons why job seekers might not be successful at securing gainful employment. First, the problem could be solely an information problem: they simply may not know of any available jobs. This scenario is highly unlikely, because even modest economic activity will create some opportunities for employment. Consequently, the second problem could be an information and wage problem: job seekers may have access to information, but their information may lead them only to opportunities in low-wage employment

with few opportunities for upward mobility. A third problem may be that job seekers know about opportunities with career growth, but may not have the requisite skills or access to people who could vouch for them and provide them with the reference they need to actually get hired. These labor market problems center around access to appropriate networks that can provide job seekers with both critical labor market information and important references.

Given these possible explanations, there are three potential standards of success with regards to the use of social networks. Job seekers for whom information about *any* job is a problem likely have many more labor market barriers that need to be addressed, since most people are able to find a job of some sort, even if it is not consistent with what they would like to do or does not pay what they would like it to pay. If getting information about any job is genuinely a problem, these individuals likely need information about how to seek assistance from any number of social welfare programs. For those job seekers for whom both information and wages are a problem, there is a human capital imbalance. A successful outcome then would mean that new information pools would provide access to education and training opportunities first – and also to supports that enable them to take advantage of those opportunities – and subsequently to information about the right jobs once job seekers have better skills. For job seekers with appropriate skills in positions that can provide for career advancement and upward mobility, success is measured by identifying the right pool of information. If qualified job seekers are applying for jobs and simply are unable to get offers, they need better data about whom among their friends and associates can provide them with both labor market information *and* good references. In all three cases, success means improving access to appropriate and specific pools of information based on one's labor market position.

In this study I sought to understand the role that information and social resources played in the ability of low-skill workers to find employment with upward mobility in occupations and industries central to the growing regional economy of the Silicon Valley. The results of my work suggest that the use of social networks for low-skill workers in the Silicon Valley is not as effective as the job search literature would suggest because they are neither used systematically nor strategically, and thus they do not lead to opportunities with upward mobility in the broader regional economy. I found that unlike the experience of a vast number of highly skilled workers, social networks for low-skill workers are likely best used as a means of connecting workers with intermediary institutions (such as job training organizations, employment agencies, headhunters, etc.) that can then connect job seekers with better information about career pathways and ultimately a broader set of occupational opportunities.

These conclusions are informed by the academic literature on the new regionalism, social networks, labor market matching and poverty studies. The central tenets of these sub-disciplines that shape both the structure of the research and the outcomes of the study are presented in the balance of this chapter.

ANALYTIC FRAMEWORK

My research incorporates two sets of theories to develop a framework that explains the experiences of low-income people searching for employment in the new economy: theories of regional economic development and theories of social networks. This framework integrates our knowledge of labor markets and economic behavior to develop a more comprehensive understanding of the challenges and opportunities faced by lesser skilled workers in a competitive and highly skilled regional labor market. Greater understanding of the interaction between regional development and social ties in the context of job search is especially relevant to

policy makers interested in identifying strategies to assist low-income people in finding employment that leads to greater upward mobility.

My main argument is that regional economies not only influence the labor market opportunities of job seekers, but also the methods for seeking out those opportunities. During the boom years in the Valley, a system of relying on networks created efficiencies in labor market matching for highly skilled workers and the technology firms that had strong demand for these workers. Job search methods were shaped by the imperatives of the new economy in which a constant demand for highly skilled workers, and the large returns to education, created an incentive for workers to constantly be looking for work and changing jobs often. Because firms were always searching for skilled workers, and the information systems to distribute job openings were insufficient to keep pace with the short time cycles in which labor was needed, both highly skilled workers and firms came to rely heavily on personal referrals and networks to disseminate labor market information.

However, different dynamics occur within the low-skill labor market, and thus there are differential effects. Low-skill workers are not only facing an information gap in terms of hearing about jobs, but also a referral gap in terms of needing someone to affirm the employer's impressions about their preparation to be successful within the workplace. Without hard skills, accurate information *and* good references, these workers have very few opportunities for employment opportunities that provide some upward mobility. In this sense, the Silicon Valley reflects a larger story of increasing income inequality and labor market bifurcation, two processes further facilitated by the new economy. The bifurcation in the labor market is not only limited to employment opportunities, but also includes the ways in which labor market information is disseminated.

Debunking the People vs. Place Debate

Policymakers often focus on the role of economic development in increasing employment opportunities for the poor. However, within the field of economic development a tension arises between two seemingly divergent approaches: whether such policies ought to be people-based or place-based. People-based policies focus increasing the skills and resources of individuals and thus tend to employ policy prescriptions that require institutional responses, such as providing education, employment and training, supportive social services, or in some cases employing mobility strategies. In contrast, place-based policies traditionally have advocated improving the physical space of a neighborhood through means such as increasing businesses or improving and developing housing stock. Local place-based policies have resulted in the establishment of community development corporations, while federal responses include the designation of enterprise and empowerment zones.

Inherent in a focus on place-based or people-based strategies is an assumption that the implementation of one strategy will ultimately pave the way for an improvement in the other. For example, it is theorized that increasing the wages of individuals, by improving the education and training opportunities for example, will eventually lead to the economic renewal of previously blighted neighborhoods (Fitzgerald 1993). The logic goes that an infusion of dollars into the hands of residents will result in the spending and circulation of money throughout the community. However, there is little evidence that this symbiotic development ever actualizes. Similarly, place-based policies often attract major corporations to a neighborhood but make no provisions for training or hiring local residents, resulting in the economic leakage of dollars from the neighborhood rather than circulation and reinvestment (Goldsmith and Randolph 1993).¹

¹ In addition to no provisions being made for local residents to have jobs, there are also few places for these dollars to circulate since these communities often have scarce resources (such as supermarkets, etc).

My research argues that policy is most effectively developed if approached from a “continuum” perspective in which both places and people are addressed simultaneously. Most policy makers usually view these strategies as either/or propositions, rarely considering the ways in which an appropriate mix of these policies can support both place-based and people-based goals (Gordo 2000). The continuum perspective maintains that there is a clear and interactive relationship between the broad activities of and trends in the economy, and the everyday, seemingly small decisions of individuals in poor communities that enable them to participate (or not) in that economy. Thus, an ideal economic development policy to support the goal of increasing employment would focus both on policies that address the needs of individuals in finding jobs, as well as those which pay attention to both the creation and the allocation of both jobs and firms within the regional frame.

The relationship between place-based and people-based strategies in the policy realm bears similarities to the interaction between regional economic development theories and social networks theories in the academic realm. Regional economic development is fundamentally a place-based strategy, focusing upon the ways in which attention to place – and particularly to development within the region – affect those who live within it. Attention to social networks (and social status) can be conceived as integral to a people-based strategy focused on how one’s formal and informal social interactions influence job search strategies. I maintain that in the face of a booming economy, attention to both theoretical constructs offers some insight into the labor market matching process.

Regional economic development recognizes that the economic engine of a local economy is not centered in the central city as it once was, but instead encompasses broader “city regions” in which suburban areas figure prominently. Regions are emerging with renewed importance

because, while they have no administrative or political authority, they are bound together by their common economic, environmental and social equity concerns. Despite these commonalities, firms and workers within the region face several challenges, especially these two: the distributional problem of firm location within the region, and the allocational problem of appropriately matching workers with available jobs.

Many researchers have shown that firms in the new economy agglomerate in regions because of the advantages they enjoy from being near like firms with whom they both compete and cooperate (Marshall 1900; Saxenian 1996; Storper 1994; Harrison 1994). Nevertheless, many firms still use traditional “regional advantages” in determining where to locate, including tax breaks, the amount of available land, the cost of that land, and the proximity to the nearest pool of appropriate workers. Among these factors, it is the labor pool considerations that largely inform employer decisions and redefine regional advantages in the context of the new economy. The new economy favors highly skilled workers and pays a significant premium for their higher education level. Thus, despite the extraordinary cost of land, the scarcity of that land and moderate tax breaks, one reason the Silicon Valley remains attractive is because of the presence of a trained and skillful workforce.

Consequently location decisions, while clearly granting certain advantages to the firms, also bear a relationship to who becomes employed at a particular firm. Although transportation concerns appear to be the most obvious physical manifestation of a barrier, a far more challenging barrier is the flow of information to identify the right workers for the right job. Because labor markets (particularly tight labor markets) are increasingly regional, employers in the new economy have thus come to rely on social networks as a means of disseminating information and identifying an appropriate labor pool. For highly skilled workers, the use of

social networks for job search has allowed workers greater choice in the range of employment opportunities available to them by broadening their sources of information about job opportunities (Saxenian 1994).

However, for low-skill workers who ostensibly use the same methods to find jobs, the use of social networks is less rewarding because the makeup of their networks are substantively different (Pastor 1997). These workers often have networks that are based on their neighborhood and community, and consequently know proportionally many more people who have low-skill jobs than higher skilled ones. Thus the majority of the opportunities they learn about are jobs with little upward mobility. Furthermore, knowing little about the job functions or career paths of those in better occupations, and assuming that they lack the requisite knowledge or skills to obtain one of those jobs, better opportunities elude them. The prevalence of social networks for employment in the new economy thus calls for a reexamination of people-based strategies as an essential component of economic development. It calls for a better understanding of how a particular type of place development leads to a particular type of people development.

An effective labor market is not just one where employers are able to efficiently hire appropriate workers. It is also one in which information moves freely enough through the system at all skill levels to help individuals identify jobs both as they enter the labor market and as they pursue a path of career development. The public policy challenge ahead is to determine how to create more linkages for those consigned to secondary labor markets so that as opportunities arise, low-income workers are well positioned to compete for them. This requires greater understanding of the occupational and industrial networks low-skill people have, how those networks get activated, and the conditions under which those networks are most effective.

To fully understand how social networks operate for low-skill workers in a regional economy, it is important to consider first how information exchange and skill preferences have been problematized and discussed within the scholarly literature.

SKILLS, INFORMATION AND UPWARD MOBILITY

The fundamental question posed by many economists and policy analysts regarding the employment of lesser skilled workers in the new economy is this: do inadequate skills explain underemployment and joblessness among the poor?

The skills mismatch hypothesis, developed as an extension of John Kain's spatial mismatch hypothesis, posits that workers do not possess the appropriate skills to meet the demand for labor within the labor market (Holzer and Vroman 1992). The reasons behind this mismatch are at least threefold. First, industrial shifts in the economy have resulted in a decline in manufacturing and the emergence of a loosely defined service sector. This sector is diverse and largely bifurcated, comprising many highly skilled jobs as well as numerous jobs that provide considerably lower wages and less employment security than did many of the traditional manufacturing jobs. While these lesser skilled workers might be able to move laterally into lesser skilled service jobs that garner lower wages, they do not possess the adequate training to move up to the more skilled positions being created by the new economy.

Secondly, the skills mismatch has been attributed to changes in technology. Krugman (1994) has argued that technology adds a wage premium for those who possess the training to use it. As a result, those with more skills are in higher demand and garner higher wages, while those with fewer skills are left worse off. Finally, the skills mismatch is argued to result from the process of globalization whereby labor markets are increasingly integrated. The premise is that globalization creates a world labor market in which workers in different countries compete with

each other for jobs. Thus, the decline in demand for American low-skill labor results from an increase in demand for low-skill labor in other countries where wages are lower (Kuttner 1997).

The empirical literature on the declining earnings for less educated workers also supports the skills mismatch proposition. Levy, Murnane and Chen (1994) show that during the 1980s, those with only a high school degree experienced more than twice the level of unemployment as their counterparts with a college education. Furthermore earnings for men, traditionally the breadwinner for their families, have eroded, especially for those with only a high school education. Whereas a 25-34 year old male in 1986 could earn an average wage of \$26,076, by 1996 he could only earn \$23,873 (Levy 1998).

In the information age, skill requirements for employment have changed dramatically. Murnane and Levy note that the “new basic skills” for today’s high school graduate must include “the three R’s” as well as a full complement of computer training (Murnane and Levy 1996). This differs significantly from the skills required a generation ago, emblematic of the overall shift in the demand away from low-skill labor.

Furthermore, Rebecca Blank notes that the nature of the jobs available to the low-skill labor pool has substantively changed. She writes:

Changes in the U.S. labor market are not leading to the elimination of jobs for less-skilled workers, but to the *reconfiguration* of those jobs into lower-paid positions that provide fewer opportunities for advancement into higher wage positions. The good news is that less skilled persons can still find work. The bad news is that their long term earnings opportunities have eroded. (Blank 1995)

Technology has thus changed the configuration and the organization of work such that jobs have been deskilled.

In addition to the demand for hard skills, there has also been a discussion in the literature about how the lack of soft skills also contributes to the unemployability of many low-skill

residents. Tilly and Moss define soft skills as the skills, abilities and traits that are important in the labor market but are not captured by educational attainment or by test scores. They note that employers are increasingly demanding of such skills, even for low-skill jobs, and that black men (those most likely to lack labor market attachment) were also most likely to lack appropriate soft skills (Moss and Tilly 1996). As a result, the labor market position for low-skill black male workers, and other workers like them, remains tenuous.

While rarely pointed out in the skills literature, and equally absent from the Moss and Tilly discussion, the ability to effectively develop and use social networks qualifies as a soft skill that is required in the workplace. Nardi et al. note that changes in the organizational structure of most firms – facilitated by downsizing, mergers and acquisitions, outsourcing, etc. – has necessitated a change in how work gets done within the firm. Thus, for highly skill workers, effectively using one’s networks leads to enhanced worker productivity and efficiency (Nardi et al. 2000).

Most debates regarding the skills mismatch have much explanatory power at the “macro” level, but only provide limited insight into what occurs at the “micro” level in terms of the process of matching workers with jobs. These theories assume that knowledge about how the labor market operates is a given, and that if the obstacles presented could be overcome – by giving people hard skills or improving their soft skills – then employment would inevitably result. However, a closer examination of the job matching process suggests that low-skill workers may encounter a more fundamental impediment with regards to obtaining employment: the problem of getting good labor market information.

Economic efficiency is premised upon the notion that participants in markets have access to full information and that supply and demand equilibrate in an unfettered market. For example,

when consumers and producers of say, computer goods, meet in the marketplace, it is assumed that buyers will find products readily available and that producers will know exactly where to go and how to sell their goods. Thinking about labor as a sellable good is a useful construct for understanding the role of information in promoting economic efficiency. In the context of labor markets, this means that job seekers will find the jobs they are looking for, and that employers will know what means to use to advertise their job openings and attract the right employees.

However, once employers and job seekers meet in the marketplace, they encounter another challenge. From the demand side of the labor market, employers must obtain access to accurate information about job seekers in order to make judgments about a candidate's suitability for a particular job. The supply side of the labor market is largely concerned with both having access to information about where available jobs are, as well as conveying to employers that applicants have the requisite skills for the position. Thus, within the labor market information is a key commodity for both job seekers and employers.

Human capital theories assume that labor markets work as efficiently as any other market, with employers paying a premium for skills which are harder to acquire, and less for those which are readily available. However, these theories say relatively little about how employers make decisions to hire one job applicant over another (Miller and Rosenbaum 1996). While hiring decisions are based on which employee has better qualifications for a job, even among seemingly similar and qualified candidates there are marginal differences. Determining those differences is a challenge for the employer, demonstrating the imperfection of labor market information. The gap between the information that employers have and the information that potential candidates have is an "information asymmetry" which places job seekers at an advantage in the hiring process (Spence 1974).

Akerloff's (1970) classic lemons problem, which describes the role of information asymmetries within the marketplace, illustrates how information asymmetries operate on the demand side of the labor market. Employer information about the reliability and qualifications of a potential employee is limited for any number of reasons – such as unreliable data or the cost of collecting the information. The solution to a lemons problem, according to Spence, is market signaling. For employers, social networks are one of these signals, communicating a candidate's suitability for a job because of the reputation of the referee. Thus like job seekers, employers benefit from the process of using their networks to find new employees (Miller and Rosenbaum 1996).

Granovetter's (1974) work demonstrated that the study of social networks is fundamentally a study about information flows. Human capital theorists studying the role of information in the labor market give particular attention to how information is used by employers. Assuming that labor markets work as efficiently as any other market, employers pay a premium for skills that are harder to acquire and less for those that are readily available. In order to maximize profits, employers must have reliable information about who has desirable skills and thus deserves such a premium, and who does not. To overcome information asymmetries employers rely on market signals to suggest that an applicant is the appropriate choice for an available job (Spence 1974). For many employers social networks are considered one of these signals.

Networks provide a vital source of labor market information, particularly among the flexible labor markets of the Silicon Valley (Saxenian 1994). Thus, contrary to traditional economic theory which sees labor matching as mediated through a rational process in which the supply and demand of resources are reflected by prices, much of what happens in labor markets

is in fact determined by larger social processes (Granovetter 1974). These processes have specific implications for upward mobility.

One clear concern of this study is the extent to which lesser skill workers can use their networks to experience upward mobility. Several studies of blue collar workers conducted since the 1930s reveal that informal methods of job search, that is job search conducted by primarily relying on friends and families for job leads, was the most common manner of finding jobs, resulting in 60-90 percent of all jobs found (Granovetter 1995). Furthermore, some of these studies suggested that for blue-collar workers, personal contacts were most influential early in their career. Presumably this importance flows from the fact that these workers have few measurable hard skills early in their career, and so employers rely on their own assessment of a candidate's soft skills to determine if that candidate will make a suitable worker. Recommendations from personal contacts about these skills, and thus about a candidate's anticipated job performance, become an important employment factor in job search.

These ties are not only important for those early in their career, but also for those who have questionable job histories. Adult workers who have poor labor market attachment must demonstrate to potential employers that they can be good workers. Similarly, employers need a signal that a worker who has an unstable job history will demonstrate the soft skills of dependability and reliability in the absence of specific hard skills. In both cases, personal contacts and the references they carry serve the purpose of providing access to employment opportunities for lesser skill workers, and of providing an important labor market reference for employers.

As workers move up the career ladder, it would seem these references take on somewhat less meaning as one's work experience and ensuing skill set take on greater importance. Lesser

skilled workers gaining valuable work experience begin to look more like young PTM workers. Granovetter in fact argues that young PTMs, with their greater levels of specialization, rely more on formal means of application in part because the worker – early in his or her career – will have few useful contacts in their area of specialization. In this instance, it might appear that networks take on less significance in terms of providing workers with a reference for a job because skill level is a more reliable signal. However, as these workers gain greater employment experience, contacts become an important means of providing information about job openings and available opportunities. In other words, networks play the critical role of labor market matching between workers and firms. The use of networks in this instance starts to look more like the ways in which Granovetter’s older white collar workers use networks, where use of personal contacts lead to weak tie use and result in better satisfaction with the resultant labor opportunities. However, Granovetter notes that even in his study of skilled workers, more than 80 percent of those who used contacts used them as both an information source *and* a reference (Granovetter 1995). Thus, personal contacts have ongoing importance for all workers, even as skill level increases and other labor market signals take on importance. Networks remain necessary for upward mobility, but not sufficient.

There is still the particular case of whether and how networks can be used to lead to greater upward mobility. In other words, can network use increase access to labor market opportunities that provide better wages and/or more specialized skill sets that would carry with them a wage premium? In order to do so, lesser skill workers would have to stratify their personal contacts’ occupational status, and use higher status contacts as both an information source and job reference. As I will explore further in Chapter 4, there are many complications in using networks in this way, revolving around the assessment of risk for both parties. Job seekers

struggle with their own comfort level in asking for assistance from a personal contact that has a different class status, and references must confront their own comfort level in recommending that individual for a job and risking their credibility at work if their referral does not meet expectations. Both of these factors consequently may help to explain the limited use of networks for the purposes of upward mobility.

Networks also have implications for one's ability to be successful on the job. The evolution in structural changes in the organization of work has also meant changes for the way in which networks operate for workers (Dresser and Rogers 1998). Work is increasingly decentralized, and the decline in internal labor markets places greater emphasis on the importance of social networks. Downsizing, work restructuring and outsourcing have meant that job descriptions have both decreased in sheer number and are increasingly cross-functional. In addition, these jobs have greater specific skill requirements. While promotions in the old economy depended upon experience, seniority, and general management talent, advancement in the new economy calls for more specific "hard" skills. The upshot of these shifts suggest that the old norms for finding work are changing and are placing greater emphasis on social ties in the job search process. They write that these shifts

...result in less clarity in labor market signals, less training for incremental progress through the labor market, and fewer prospects for real careers for many workers. These effects in turn, contribute to increased inequality in the labor market, less regularity in career trajectories, and greater influence of luck and connection in labor market positions. ...The labor market does not provide sufficient information about transitions to work, transitions within work, and requirements for advancement. (Dresser and Rogers 1998)

The type and quality of information that is exchanged will vary according to whether one works in a core job of an industry or firm or whether one is in a secondary labor market. Since

lesser skilled workers are most likely to be employed in peripheral occupations, especially in recent years since they have become largely a contract labor force, they may not get information about employment or career development opportunities. It is in these lapses in labor market information that labor market inequality persists. These gaps are particularly evident when examining the relationship between lesser skilled workers and the regional economy.

REGIONALISM AND THE NEW ECONOMY

The study of regions has roots in multiple academic disciplines: geography, regional science, economics, sociology, political science and urban planning. These areas of study suggest how central the concepts of space and place are to social scientists, but also reveal how the concept of regionalism is broadly construed. While purists study the fundamental tenets of location theory developed by Christaller and Perroux, others have examined the role of industrial districts and its implications for understanding regional development (Storper and Walker 1989; Saxenian 1996). Added to this mix today is the new regionalism, which focuses not only on understanding the emergence of regions and why place continues to matter, but also examines more pointedly the regional lifecycle, how to prevent regional decline, and issues related to equity and regional economic growth. Social networks are one of the processes that help to sustain regional economies and perpetuate economic growth.

Nelson (1993) notes that regional development focuses on the issue of jobs, but that it also refers to changes in a region's demography, manufacturing base, quality of life, income and overall productivity. Nevertheless, in some fundamental ways there is little consensus about what constitutes regionalism and regional development. First, there is no consensus on what constitutes a region in terms of size. Within a domestic policy context, a region is considered smaller than a nation and larger than a city, and has no state imposed jurisdictional boundaries.

However, the definition ends there. In fact, the concept of a region really comes from a geographical area perceiving itself as having shared advantages and disadvantages, and thus a shared identity. Thus, Appalachia, the Rustbelt and the Silicon Valley all constitute a region, despite the wide variation in their geographical boundaries, population and industrial base.

The conceptual definition of regionalism that I employ is one that understands a metropolitan area and its surrounding suburbs as a geographic and economic entity. What is significant about this understanding is that such regions contain multiple political and jurisdictional entities, but operate as a single, interactive unit where housing markets, transportation linkages and labor markets are concerned. The new regionalism is defined by a distinct and highly integrated economy, shared environmental concerns, and acknowledgement that issues of social equity have implications for all of the stakeholders within the region.

Regions have assumed increased importance in the new economy because they represent the structure of economic opportunity in the current age. While this is true for some of the larger regions, such as the European Union, the Third Italy, etc., it also remains true for smaller, metropolitan-based regions such as the Silicon Valley. Within metropolitan-based regions, while neighborhoods and communities may remain distinct, the integration of industries has heightened the importance of space and how economic opportunities are distributed amongst communities – and thus amongst people of various social, racial and ethnic background – within the regional frame.

Saxenian's 1995 book *Regional Advantage* is probably the most well known text on contemporary regionalism as it pertains to the new economy. It is a fluid description of the interactions between high technology firms, the stalwarts of the new economy. *Regional Advantage* focuses how these firms made decisions to locate in the two of the nation's most

developed high tech regions – Route 128 in Boston and the Silicon Valley – and how those decisions affected their competitiveness. Networks, she suggests, are the glue that holds much of the Silicon Valley together, not only facilitating smooth labor market transitions but also serving to propel innovation by diffusing information about changing technology within the region (Saxenian 1995).²

Strikingly absent from Saxenian’s analysis of the burgeoning Silicon Valley is any understanding of the relationship between these industries and the people and communities which surround and make up the Silicon Valley. *Regional Advantage* pays great homage to the entrepreneurial spirit and technological innovation of the Silicon Valley, without considering how it affects those who are not a part of the elite class of engineers or business people who populate these firms. What impact does the high tech Silicon Valley have on the rest of the region?

Most of the academic discussions regarding the Silicon Valley’s role as an emerging region have centered on whether it constitutes an industrial district similar to those of northern Italy. One important characteristic of these districts is that they are rooted in a larger system of firms that make them highly dependent upon their location to be successful (Storper 1994; Harrison 1994; Markusen 1987). However, regardless of how embedded these industrial districts appear to be, they have failed at integrating several communities with the region and thus at assuming a leadership role in shaping local economic development (Harrison 1994). In fact, quite to the contrary, it has been argued instead that the Silicon Valley has produced a bifurcated

² Other scholars support Saxenian’s argument regarding the role of social networks for firms and industries. Walter Powell noted, “In only a minority of instances is it sensible to maintain that the genesis of network forms is driven by a concern for minimizing transaction costs. Strategic considerations – such as efforts to guarantee access to critical resources, to obtain crucial skills that cannot be produced internally, to pacify the concerns of professional communities or national governments, or even, as in the case of global partnerships, to remake the very nature of international competition – certainly seem to outweigh a simple concern with cost minimization.” (1990, 322)

labor market in which the good fortunes of entrepreneurs and engineers come at the expense of a less educated, lesser skilled and less politically influential labor force.

Most of the low-skilled workers of the Silicon Valley were initially in production, causing one scholar to claim that the Valley was “erected in part on a base of low-wage, sometimes dangerous work” (Harrison 1994, p. 107). During the 1970s, the unskilled production workers drawn to the Silicon Valley by the lure of jobs were Mexican and Filipino (both native and foreign born) and to a lesser extent black and Native American. However, during the 1990s explosive growth in the local economy expanded the number and type of employment opportunities for low-skill workers. In addition to being concentrated in production jobs, they are also employed in large numbers in ancillary industries that support the life and lifestyle of the higher skilled elite. Restaurant workers, grocery store clerks and dry cleaning attendants have proliferated during the last decade. This shift in employment to ancillary industries occurred in part because of the globalization of high tech industries and the reallocation of production to facilities in other parts of the United States as well as offshore. Meanwhile, those still locally employed as production workers found that the organization of work itself was changing, with production being outsourced to contracting firms. These jobs offered little employment security in the form of hours, wages and benefits while it grew increasingly costly to live in the region. The continued stratification of workers into a dual labor market was likely facilitated by ethnic networks that concentrate certain ethnic groups into certain types of work (Waldinger 1996).

More recent studies of the Silicon Valley have focused on the many ways in which the development of the Silicon Valley has resulted in a decline in quality of life. While the local economy may be booming, housing prices continue to skyrocket, transportation systems are inadequate, and air quality has worsened with the growth of the region. All of this is

underpinned by near stagnant wages for those at the bottom of the income distribution (JVSV 2000).

Pastor et al. attempt to remedy the oversight by considering issues of equity and economic development as an integral part of regional development in their report called *Growing Together: Linking Regional and Community Development in a Changing Economy* (1997). They argue that in order for the region to thrive, businesses and their regional collaborators must be concerned with the issues of the poor, and the advocates at the local level must be simultaneously concerned with the development of the region. In particular, they found that regions that pay attention to the poor grow faster, and that low-income communities that are connected with the region do better. By suggesting a symbiotic relationship between the interests of those invested in regional growth and those concerned with community and neighborhood development, there is a renewed focus on the strategies that are required to facilitate these connections. They write:

Community development practitioners are often so consumed with immediate matters that they have little time to consider or plan for the broader economic context; meanwhile, regional policy makers and businesses often fail to recognize that paying attention to poverty may, in fact, be good for overall economic growth. To overcome these limitations, a two-part strategy is needed: first, community development efforts should be linked to regional economic strategies and the capacity of community leaders built up so that they can participate effectively in determining and evaluating regional strategies in an ongoing manner. Second, regional economic strategies should be reformulated to include the poor and the range of regional players should be educated to consider the anti-poverty agenda as crucial to the consideration of an overall strategy for economic cooperation. (Pastor et al. 1997, 16)

Pastor's brand of regionalism, described as "equity-oriented regionalism," is offered as an antidote to two other types of regionalism. *Efficiency-oriented regionalism* is motivated by a business agenda that promotes the region as an inexpensive place to do business while

environmentally-oriented regionalism focuses on development strategies which are environmentally and ecologically sound. In contrast, *equity-oriented regionalism* is founded upon addressing issues of poverty and inequality within the region as a central tenet for regional development. Pastor acknowledges that all three types of regionalism can work together to achieve equity. However, equity-oriented regionalism is often discounted in regional development, or forgotten about altogether (PolicyLink 2000).

The main argument here is that prosperity for the region will be limited unless all citizens are included in the prosperity. It is consequently important to make connections between the poor, the underemployed, lagging communities and the growth engines of the regional economy. However, a precursor to making those connections requires understanding what connections currently exist, and how existing ties and the use of those ties shape the employment experience of lesser skilled workers.

ORGANIZATION OF THE DISSERTATION

This study attempts to look at how social networks influence the short and long term employment prospects of low-skill job seekers. I examine fundamentally economic questions through the lens of two interdisciplinary subfields: economic sociology and economic geography. The first is concerned with the influences of social processes and relations on behavior, while the latter focuses on the spatial location of these processes within the regional frame. Economic sociology suggests that networks are a potentially important way of finding jobs, while also underscoring that networks can lead to different labor market outcomes for individuals with different skill levels. Economic geography calls attention to the influence of regional economies and how various levels of economic strength in a regional economy can

influence labor market matching processes. In this way, both micro and macro economic issues are considered within the course of this study.

This dissertation is organized as follows: the current chapter, Chapter One, presents the rationale for undertaking the research. It discusses why networks are important in job search, what other factors bear on job search activity, and how networks may influence the upward mobility of workers. It also presents my framework for thinking about social network use for low-skill workers.

Chapter Two lays out my research methods for this research. Methodologically, I am influenced by the economic anthropology practiced by Katherine Newman who examines economic questions through the lens of those who are most affected by them. In this study these people are alternately called narrators or respondents but are fundamentally story tellers and the voices through whom we understand social influences and economic activity.

Chapter Three provides some background on the Silicon Valley, which admittedly serves as a highly stylized case of a booming region with a strong regional economy. In addition to presenting a historical context for understanding employment trends, this chapter presents empirical data that shows the changes in industrial mix over the past twenty years. In this chapter I discuss the cultural factors that make the Silicon Valley different from other regions and suggest how as a result job search in the Silicon Valley might differ from job search in other regions.

Chapters Four and Five are the heart of the study where the research is presented and analyzed. In Chapter Four I present the results of my questionnaires that describe how connected my sample is to the growth sectors of the regional economy. These results are offered within the context of understanding the broader occupational trends within Valley, and the wages that these

occupations offer. The chapter also focuses on how my narrators used their networks to find employment, and how and why networks were often underutilized. Chapter Five takes closer look at my respondents by focusing on some individual stories of those who demonstrate some promising practices in searching for work. By analyzing the search strategies of all my respondents, I develop a model of what might lead to positive employment outcomes. I then apply this model to “successful” job seekers within the sample, demonstrating the challenges they face as they negotiate job search and employment in the new economy, and illustrating how in many cases their labor market position remains precarious. This chapter goes beyond examining connections to various sectors of the labor market and instead focuses on how those connections were used.

Chapter Six considers what kinds of policy prescriptions might be offered to provide a bridge to the new economy for those who continue to work in low wage jobs without upward mobility. In addition to summarizing the findings of this study, I look more broadly at how labor market policy is developed in the United States and implemented in California, and make specific suggestions about policies to encourage better network use and appropriate network activation for low-skill workers.

CHAPTER 2 IN SUPPORT OF CASE STUDY RESEARCH

In determining how to best conduct this research, I struggled with which methodological approach would best serve the project. Should I analyze an existing data set? Conduct a survey? Engage in in-depth interviews? The selection of a research method would be influenced by the imperatives of my question: what is the role of social networks for low-skill workers searching for employment in the Silicon Valley? To answer this question would require understanding the job search strategies employed by low-skill workers, and asking these workers about their use of social networks. Thus, the methodology I selected to answer this question is based primarily on qualitative methods.

However, I found that the breadth and depth of information I wanted to know, both in terms of background information on the Silicon Valley as well as primary data collection on social networks, would require some combination of approaches.³ My research design would call for a process that allowed for both flexibility and discreet analysis. While my fieldwork would require the flexibility to understand the life experiences of those who I encountered and present their social networks in an appropriate context, secondary data analysis on the Silicon Valley would necessitate analyzing discrete data variables.

The requirements of my primary data collection suggested that a case study was the best research technique for my study because it enabled me to “retain the holistic and meaningful characteristics of real life events” as I sought to “understand complex social phenomena.” (Yin, 1994) A case study would allow me to deal with the theoretical issues regarding job search in a way that evaluated existing and potential theories about job search, based on people’s real life

³ In addition, the decision to blend these research approaches also reflects the methodological strengths of the committee members who have advised this project.

experiences. However, case studies are often maligned among academics as a robust research technique. This is because there is generally no clear sense of what is being observed, what is being tested, and how outcomes are measured. This is especially true for me since I have chosen to focus on a singular case: the Silicon Valley.

Yin (1994) provides a framework for developing a robust research design for case studies that provides for rigorous inquiry and leads to rich data. He maintains that a good case study must contain five components that are clearly spelled out for the researcher and her audiences. These components center on five key questions:

- 1) What is the research question?
- 2) What are the main propositions behind the research question?
- 3) What is the main unit of analysis? What is being studied?
- 4) What is the logic that allows the researcher to know that the data being collected will answer the research question? How will the data be linked to the study's main propositions?
- 5) What criteria will be used to interpret the data once it is collected? How will the researcher know when the pattern has been matched, or when it deviates?

While Yin's framework is comprehensive, it does contain certain flaws. First, the mere development of a framework suggests that there is a singular process for analyzing data. Many qualitative researchers are drawn to case studies because of the flexibility they provide in broadly interpreting data, and in analyzing variables that are unanticipated at the beginning of a study. This methodological approach is particularly useful in cases where the research is helping to develop hypotheses for future testing, which many case studies do. Secondly, Yin's framework is predicated on being able to link the data to the study's propositions by pattern-matching.

However, he acknowledges that the process of pattern-matching is an imprecise process at best, since the researcher must determine what ultimately constitutes a match to the pre-determined pattern.

Despite these limitations, the framework that Yin has developed is a useful exercise for researchers using the case study method, if only because it helps the researcher to clearly articulate several components of the study. The remainder of this chapter addresses each of Yin's criteria as a facet of the overall research design for this project, as well as several other aspects of the research process, such as sampling strategies, the interview process, and the limitations of the data.

THE THEORETICAL DESIGN OF THE STUDY

The Research Question. The initial objective of my fieldwork was to map the access structure of low-skill workers to different industrial sectors and occupations within the Silicon Valley. This objective was guided by my main research question: how do social networks assist low-skill workers in searching for employment in the Silicon Valley?

According to Yin, the form of the research question directs the research method that should be used in answering the question. Using his typology, my research would be classified as an explanatory case study, whereby "how" and "why" questions are answered in the course of my analysis. While the research of Granovetter (1974) established that social networks played a role in the job search process, specific questions of agency were not adequately addressed. How, for whom, and under what conditions do social networks matter? My research builds upon Granovetter's by specifically examining the efficacy of social networks for low-skill residents in a highly skilled region.

Yin offers two other conditions for determining when a case study as a research strategy is appropriate: the focus of the research is on a contemporary issue, and the researcher requires minimal control over “behavioral events.” These two conditions are used to make a sharp distinction between case studies and the two other research strategies which attempt to answer “how and why” questions: experiments and histories.

An experiment, Yin maintains, requires the researcher to maintain much more formal control over events in order to guarantee that the research, if repeated, would yield the same results. However, what is critical about an experiment is the extent to which conclusions are drawn based upon deductive reasoning. Experiments are used to test specific theories, and the outcomes of those tests either affirm or disprove those theories. Thus experiments, by their very definition, involve deductive reasoning. Inductive reasoning, by contrast, uses evidence to refine existing theories (Ragin 1994). As a result, inductive reasoning is substantially more interpretative in nature.

The objectives of this study fit well into the definition of inductive reasoning, since it is not the objective of the project to prove or disprove the theories of Granovetter, Lin and Dumin or Pastor. Instead, my objective here is to extend the theoretical propositions found in their work to make it more specific to and reflective of a particular group of workers – low-skill workers – in a particular regional economy – the high tech industry of the Silicon Valley.

Yin’s second method of examining “how/why” questions is through history. History, he argues, examines events in the past whereas case studies examine contemporary events. However, as Yin himself points out, this distinction is fuzzy, since students of contemporary or modern history might use a case study as a research method. More importantly, a case study is distinguished by a reliance not only on documentation, but on observation and often interaction

with the case. He notes that a “case study’s unique strength is its ability to deal with a full range of evidence – documents, artifacts, interviews and observations – beyond what might be available in the conventional historical study.” (Yin 1994, p.8)

The research question is key because it suggests that what is being studied in this dissertation is the theoretical proposition surrounding how social networks operate for different groups of people based upon their educational background, skill level and ultimately their class status.

Study Propositions. According to Yin, study propositions make explicit what items within the scope of the study should be examined with specificity in order to make claims about the research question. I have identified three questions regarding the character of social networks that point to my study’s central propositions:

- How extensive are the social networks of low-skill job seekers in the Silicon Valley? Are people who share their same class and occupational status primarily included in their networks, or do their networks also include those with both greater and fewer socioeconomic resources?

This question suggests the need to understand both the range and depth of the social networks of low-skill workers. Granovetter’s proposition is that weak ties matter most for job searchers, arguing that these ties tend lead to new and varied employment opportunities. However, for low-skill workers it is not clear how broad their networks are, what proportion of their social ties are weak versus strong, and whether their weak and/or strong ties are individuals who share their same socio-economic background, and thus likely their same occupation opportunity structure. It is also not clear whether their ties are primarily bonding ties, or the bridging ties most useful for acquiring information about opportunities for work within the broader regional economy.

Finally, if they have bridging ties, it is not clear that these ties also provide a recommendation to make the job seeker a successful candidate. This study's proposition is that the networks in skilled occupations provide the best link for finding out about these types of opportunities, even though I suspect that my sample knows very few of these types of workers.

- Do low-skill job seekers activate their networks when searching for work, or do they use other means (such as newspaper want ads) to search for work? Does the "activation" of networks include the entire breadth of their resources, or just those within their socioeconomic status?

Once the breadth and depth of social networks is better understood, it is important to understand whether and how social networks get activated. It is possible that people may have social networks that they may not use, both because they never considered it or they were reluctant to ask contacts for information about jobs. This is a departure from workers with high educational attainment who understand that the "rules of the game" include actively networking to find out about job opportunities and to get jobs. For example Halili, a 30-year old college graduate from East Palo Alto, provides some insight regarding why many of her less educated peers feel reluctant to share employment information.

I think that typically I found that people felt some responsibility, some responsibility like 'well if you come on board now, ya know...' Ya know, so there was this kind of sense that, particularly with black folks, that I have to vouch for you and there's a lot of that in my experience, which is not an unnatural or unfamiliar thing. It allowed me to modify, you know, dealing with that early on, allowed me to modify my approach so I didn't make people feel uncomfortable about what they needed to do or what their ongoing responsibility might be if I were to be employed by a company.

While in the past Halili used her networks to get access to job opportunities, she has subsequently made a conscious choice to use these networks only selectively because of the

burden she felt it placed upon her relationships. Halili's decision highlights an important point: the extent to which networks are important largely depends on the either conscious or subconscious process of activation. Activation then becomes an important mechanism among job searchers. To have untapped networks is something akin to having electricity at home, but never flipping the light switch.

- How do social networks enable low-skill job seekers to obtain information about jobs in high-tech firms? Do low-skill job seekers perceive employment in the high tech industry as a path toward upward mobility? Do they specifically seek jobs in this industry versus other industries?

This final premise unearths whether low-skill job seekers perceive the opportunity structure of the Silicon Valley as applying to them. Do they perceive this industry as a route toward upward mobility? Do they seek opportunities in high tech industries only to find that they are unable to get these jobs? Do they assume that they lack the requisite skills to become employed in the high tech industry, thus discounting the role of the regional economy in providing them with greater opportunity? This final line of questioning will seek to understand how workers perceive their opportunity structure in light of the economic boom.

Unit of Analysis. Yin notes that one of the most confounding issues for researchers employing case studies as a method of intellectual inquiry is determining what the actual case is. Often, because a case study allows for many variables to be examined, the researcher will confuse what specifically is being studied. For example, is a local study of poverty about the neighborhood in which the poverty exists, or the people who live in the neighborhood? This confusion over the case leads to confusion over the main unit of analysis. To explain his position,

Yin writes:

The definition of the unit of analysis (and therefore the case) is related to the way in which the initial research questions have been defined. ...Selection of the appropriate unit of analysis results from your accurately specifying the primary research questions. If your questions do not lead to the favoring of one unit of analysis over another, your questions are probably either too vague or too numerous – and you may have trouble conducting your case study. (Yin 1994, pp. 22-23)

Despite this explanation, determining a unit of analysis for my study has not been easy. Is the unit of analysis the Silicon Valley? The local economy? The neighborhoods I have chosen to study? Low-skill workers as a group?

An examination of my research question did in fact help me to omit one of the possibilities. In studying the role of social networks for low-skill workers in the Silicon Valley, there was little to be conclusively said about the neighborhoods where I chose to focus and collect my data. While some interesting facts about both East Palo Alto and East San Jose did emerge during the course of my fieldwork, my objective was not to address the intrinsic nature of the neighborhoods themselves. However, a return to the research question did little to help me discern whether the appropriate unit of analysis was Silicon Valley, the local economy, or low-skill workers as a group.

Instead, I found that the articulation of the premises offered more direction in determining the unit of analysis. My first premise, concerning the breadth of the social networks, focuses on the low-skill workers themselves and their position within the Silicon Valley. The second premise, which focuses on the activation of networks for the purpose of searching for work, also focused on low-skill job seekers, but had very little to do with the Silicon Valley per se. The final study proposition focuses specifically on how low-skill job seekers use their networks to obtain information about jobs in the high tech economy, and whether this

economy is instrumental as a path toward upward mobility. The unit of analysis here is the networks themselves, and the role they play in moving low-skill workers into better employment opportunities.⁴

Nevertheless, the Silicon Valley remains an important variable in this study because it represents the dynamism of the new economy. The Silicon Valley serves as a proxy for the overall opportunity structure available to low-skill workers within a new economy that favors skilled workers, and how that opportunity structure operates. While some think that focusing on the Silicon Valley as a single “meta-case” may lead to ungeneralizable findings, Burawoy argues “the importance of the single case lies in what it tells us about society as a whole rather than the population of similar cases” (Burawoy, p. 281). The Silicon Valley stands as a proxy for the new economy – the preference of places to privilege high technology industries over lower tech ones, and the consequential requirement by employers for an increasingly skilled workforce over a more diverse one. The outcomes of these trends are increasing income inequality and labor market bifurcation.

Logic. Yin argues that in most case studies, the logic which links data to the study’s main proposition is not sufficiently spelled out. As a result, the process of analyzing data becomes murky, leading to the widespread skepticism about what conclusions can be drawn once the data is presented.

⁴ While either people or place could have been the main unit of analysis (depending on how I chose to conduct the field work), low skill workers and their networks are being analyzed here. The distinction I have made is the following: while I care very much about the regional economy, I care about it only insofar as it related to how low skill workers are affected. Furthermore, a study simply on the role of social networks for employment opportunities in the Silicon Valley would have by definition focused both on low and high-skill workers, perhaps examining differences between the two. Rather, this study takes as *a priori* the fact the well-heeled workers are also well connected, and instead is concerned with the well being of those with fewer skills and fewer resources to negotiate the new economy.

The fundamentals of scientific reasoning suggest that the development of arguments, which make explicit one's reasoning, leads to clear analysis. However, there is a resistance among case studies researchers to explicitly detail these arguments. This is, in large part, because such explicit articulation is perceived as a hemming in, rather than a road map that enables one to figure things out. Indeed, most researchers who use case studies as an analytic tool do so because they appreciate the flexibility in analysis that the method allows them. The goals for most researchers who prefer to analyze a small number of cases in detail over a quantitative approach are to interpret the significance of existing theories, advance new theories and to give voice to a particular group, rather than to make predictions or test an existing theory (Ragin 1994).

Yin recommends the process of pattern-matching as a method for developing a more systematic approach to interpreting data. By pattern-matching, the researcher develops two or more patterns which the data are expected to emulate. If the developed patterns are "rival" propositions – such as a hypothesis and a null hypothesis – then even a single case can be measured against the patterns to determine which is the best fit, and thus will demonstrate the logic of how the data relate to the study's central proposition. I believe that both the development of patterns as well as the original construction of the research design demonstrate how the data links to the study's central propositions. These processes are described below.

Pattern-Matching

The patterns I have developed for this study emanate from the literature that suggests that all workers, regardless of skill level or social status, would benefit from using their weak ties to find employment (Granovetter 1995, Lin and Dumin, 1986). These theories focus upon the

instrumental action of using social networks and led me to the first pattern developed for this study: the lack of use of weak ties explains the difficulties low-skill workers have in job search.

A rival pattern emerges from claims that low-skill workers have qualitatively different networks than other categories of workers (Pastor 1998). This assertion is not about the instrumental use of networks, but rather about the effects of instrumental use for low-skilled workers: lower quality employment opportunities.⁵ This line of reasoning helps to form the second pattern for this study: the social networks of low-skill workers do not lead to occupational opportunities that would provide for upward mobility. Instead, their networks serve to reinforce the existing class status by maintaining them in marginal jobs because the preponderance of these ties are to jobs with little mobility.

The data generated from this study give some indication of the types of ties that low-skill workers have in various sectors of the regional economy, in order to understand whether or not their strong or weak ties connect them to the growth engines of the local economy. The data will also reveal the overall quality of these networks as it pertains to whether or not workers can be connected to “good” jobs in the regional economy. Finally, the data also indicate the extent to which these ties were used in job search, in order to determine if there is pattern-matching in the Granovetter/Lin claim about instrumental action.

Interpretation of Findings. Yin’s final component of a good case study concerns the interpretation of data once it has been collected. Here he asks: how do you determine when the pattern matches the data? How much variation in the pattern can be tolerated before a conclusion can be reached that a pattern has been matched? How rigid is the interpretation of pattern-matching?

⁵ In a later discussion of social networks for job search purposes, Granovetter admits that looking at the overall characteristics of the networks for certain groups may be more important than whether or not social ties are used (Granovetter 1994).

Yin readily acknowledges that the answer to this question is highly subjective and largely dependent upon both the study and the criteria established by the researcher. The structure of this study is elastic enough that the patterns that emerge might match the instrumental use model or the class reproduction model, or perhaps present a third model not previously defined. This after all, is the beauty of the case study method: to discover the unexpected.

Having described the theoretical approach to the research, the following section presents the technical description of the research.

TECHNICAL DESIGN OF THE STUDY

The technical design for the fieldwork was broadly based upon a study conducted by Lin and Dumin (1986) to determine the access of low-skill workers to social resources, and thus to various employment opportunities, based upon social ties. Rather than focusing only upon access to resources, I have adapted this methodology to examine the extent to which those resources are concentrated in the growth sectors of the local economy, and whether those sectors provide low-skill workers with greater or lesser occupational and upward mobility. While many of the fastest growing sectors of the economy are in the high technology field, the economy and local labor market are also bifurcated. As a result, many of the growth sectors also contain employment opportunities that lead to low-wage, low-skill jobs.

My primary data collection queried respondents about three components of their social networks 1) their occupational ties, 2) their industrial ties, and 3) their general social ties. Data about their occupational and industrial ties was collected through a questionnaire. Information about their general social ties, employment history and demographic data was gathered during a subsequent interview.

The Questionnaire: Occupational and Industrial Networks

The first component of the fieldwork determined the extent of a respondent's occupational ties by determining the range of personal contacts they had with individuals in a breadth of job categories. In order to examine the breadth of these ties, and the extent to which these ties were connected to the local economy, I developed a questionnaire for job seekers to complete about their social ties and the connections of these ties to the local labor market. Respondents were asked to examine a pre-selected list of the 20 fastest growing occupations in the Silicon Valley, and to identify if they knew anyone in those occupations, and to identify that person by first name and by tie type.⁶ Contacts were classified as: family, friend, acquaintance or other.⁷ This classification was used to determine whether Granovetter's thesis, that weak ties offer greater occupational opportunities, also holds for low-skill workers. The questionnaire also included a column where respondents could check "don't know" if they were unfamiliar with the occupation. A copy of the questionnaire is contained in Appendix B.

The occupations on the list were subsequently classified according to the occupational prestige and socio-economic scores developed in the General Social Survey (GSS) in order to determine the occupational status of a respondent's network. These status scores will be used to suggest how likely it is that a respondent would have a contact who could provide them with information about an employment opportunity which would lead to a job with greater upward

⁶ The list of occupations is based upon the occupational data for Santa Clara County from the California Employment Development Department's (EDD) Labor Market Information. In this study, Santa Clara County serves as a proxy for Silicon Valley. This list was developed based on the EDD's estimates for the fastest growing occupations in January of 2000. The list is updated annually.

⁷ As Lin and Dumin point out, the term acquaintance is problematic for the purposes of definition. Nevertheless, this classification goes far beyond Granovetter's (1974) more crude initial definitions of personal contacts in which family, friends and acquaintances were all lumped together. At what point is someone a friend versus acquaintance? For the purposes of this study, acquaintance will be defined as those relationships in which the job seeker has less "intensity, intimacy and reciprocity" than others in his or her life (Lin and Dumin, 1986).

mobility. A list of these occupations and their corresponding status scores, and the extent to which respondents are connected to these occupations, is presented in Chapter 5.

Page Two of the questionnaire was designed to discern the concentration or dispersion of a respondent's network by industry. Here a list of the 20 fastest growing industrial sectors in the Silicon Valley was presented in rank order and job seekers were asked to identify if they know anyone working in those industries. The industries were subsequently categorized as either high tech or non-high tech to determine whether their contacts include those in the high tech industry, the region's main economic engine.

As the final part of this exercise, the respondents were asked to identify any individuals who appear on both the occupational list and the industrial list. This information was used to analyze the breadth and the depth of their networks across both occupation and industry.

The questionnaire was designed to act as a barometer of both the breadth and the depth of one's social contacts, both amongst the fastest growing occupations as well as within a ranking of industrial sectors. However, there were aspects of the questionnaire that were problematic. The first problem was translating the names of the occupations and industrial sectors into a layperson's vernacular. For some occupations I did no translation of occupational titles and used the exact titles as used by the Census and the EDD. While most questionnaire respondents did not seem to find this confusing, I did not know with any certainty that job-seekers knew the substantive difference between a computer engineer, an electrical engineer, and a computer programmer.

Second, many respondents often would list only one person in a particular occupation. I was not sure if this meant that they did not know others who worked in this occupation. Rather, I think because this list of 20 occupations appeared long and perhaps a little daunting, once a

respondent could name one person in an occupation they moved on. I had to prompt them for additional names.

In addition, very few respondents took advantage of the columns on the questionnaire that asked them to qualify their answers. This was particularly a concern with the final column that allowed people to indicate whether or not they had ever heard of an occupation before. Some people may have left this column blank because they were embarrassed to admit that they did not know a profession, while others legitimately may have been familiar with all the occupations and industries. Nevertheless, because of the uneven nature of the responses in this area, I have chosen not to analyze this data.

I also noticed that many people did not go back and circle the names of people appearing on both lists, that would enable me to analyze the density of networks by examining occupations within particular industries. However, I addressed this problem during the subsequent interview where I queried informants about their answers on the questionnaire.

Finally, a small handful of participants appeared to give short shrift to completing the questionnaire altogether. The reasons for this were varied – some appeared intimidated by the questionnaire, while others were more anxious to talk than to write. Nevertheless, the instances of reticence to complete the questionnaire were few.

Despite some limitations with the questionnaire, the resulting data gave me a much better sense of the connections that people do have to the labor market. The following section, which focuses upon the interview, gave a sense of the extent to which those contacts were used in the job search process.

The Interview: Background and Demographic Data

Following the completion of the questionnaire, job seekers were interviewed about their responses on the questionnaire as well as their educational, occupational and personal background. Additional information about the individuals listed on the questionnaire was gathered, such as the context in which they knew the person, how long they have known them, how regular their contact with the individual was, where that person lived, and how much knowledge they had of the person's job. They were also asked about the approaches they used to obtain work in the past, particularly their most recent job, and queried about their employment history. Respondents were also asked if anyone identified on their occupational or industrial job lists was contacted in their most recent job search.

The data gathered from this component of the research also included personal background information, particularly work history and educational attainment that was used to determine the respondent's occupational status. By identifying the occupational status of each respondent, I could determine whether the networks extend upwards or downwards or remain constant. Networks that extend upwards would suggest that there may be greater opportunities for upward advancement than respondents take advantage of, while networks which extend downwards, or those networks which are in the respondents same class status, may explain why respondents don't have greater employment opportunities.

Sampling Frame and Recruitment

The population of job seekers interviewed included low-skill male and female workers and non-workers drawn from two low-income communities in the Silicon Valley. A person who was "low-skill" was defined as anyone with less than a two year associate's (AA) degree.⁸ The

⁸ Generally speaking, the Silicon Valley is a highly skilled geographical area, and thus the relative definition of what constitutes low skilled is more rigorous here. While in other areas someone with a high school diploma may be

two low-income communities from which respondents were drawn were East Palo Alto (EPA) and the Mayfair Neighborhood in San Jose. East Palo Alto is a multi-ethnic, multi-racial, separately incorporated city of 28,000 in the northern most part of the Silicon Valley, and Mayfair is a predominantly Latino community with a deep cultural and political history, and the home to late civil rights activist Cesar Chavez. A sample of 45 informants was drawn from these two communities. These communities were selected because of their geographic location within the Silicon Valley (one is in the northern part of the Valley, while the other is in the center), their proximity to high tech firms, and their higher rates of unemployment, poverty and ethnic and racial diversity relative to the Silicon Valley as a whole.

As noted by Singleton and et al., “field research almost always involves nonrandom selection of small numbers of settings and subjects.” (Singleton et al, 1993, p. 328) Such is the case with this dissertation project. While efforts were made to interview informants who represented the broad ethnic and racial diversity of these two communities, my sample is not truly representative of the communities in which they work or reside. Rather than designing a sampling plan appropriate for experimental or survey research, the sampling method I employed was *theoretical sampling*. Thus, the intention of the sample was not to capture the standardization that would result from survey research, nor was it to achieve the replicability of experimental research. Instead, my intent through theoretical sampling was to flesh out the theoretical arguments presented in Chapter One. I used the analytical categories of low-skill, recent job seeker, resident of EPA and Mayfair, etc., as the key theoretical concepts that led to the selection of research subjects.

considered to have skills, I selected a higher definition for determining skills to remain consistent with the higher levels of educational attainment in the Valley. The level of educational attainment among Valley residents is further explored in Chapter 3.

That said, while these communities were both poorer and more ethnically mixed than most in the Silicon Valley, they also contained numerous individuals with advanced degrees and higher than average salaries. The individuals who were recruited to participate in the interviews were selected because they represented the experiences of African Americans, Latinos and Asians in the Silicon Valley with lesser skills. This sample then, while not fully representative, presents a diversity of experiences in order to make some theoretical claims about the challenges low-skill workers and many people of color face in looking for work in a robust and technologically advanced regional economy.

Informants were recruited through several community-based organizations located in the two communities. In both communities, an active neighborhood planning process provided the initial entrée for making contacts with both respondents and community agencies. This planning process, funded by the Hewlett Foundation, provided roughly \$7 million over six years to each neighborhood to conduct targeted community improvements, with the purpose being to determine whether targeted and sustained funds over a long period of time could make a difference in the ability of organization to bring about neighborhood change. The Mayfair Neighborhood Improvement Initiative (MNII) was the first of these initiatives established in San Jose in 1998. Having leveraged additional dollars and assistance from other foundations, city agencies and community organizations, MNII currently has a staff of 15 conducting outreach and community development in a wide range of areas: neighborhood beautification and economic development, arts and culture, housing, education, etc. One project that emerged from MNII was the Cisco Network Training Academy for local residents. The Academy provided the main means of recruiting informants from the Mayfair neighborhood. This was a particularly interesting population because many people in the program were already employed, and were

enrolled in the free training program in order to upgrade their skills and enter the new economy. This population provided me a sense of the challenges among job seekers who were actively looking to become part of the high tech regional economy. In addition to recruiting San Jose residents through this program, I also used a database developed through MNII by Collaborative Economics and the Field Institute from a survey conducted in October 1999. The interviews in Mayfair, and to a certain extent in East Palo Alto as well, were limited by my language skills since I could only interview people in English. The demographic shifts documented in Chapter 3 demonstrate the significant influence of immigration on the region. Being a monolingual English speaker was a disadvantage in developing a fuller understanding of the challenges and opportunities associated with searching for work as a lesser skilled person in this economy.

In East Palo Alto, recruitment was much more dispersed. Job seekers were recruited through a number of mechanisms, including direct referrals, signage posted throughout town, and local community-based organizations. By far the most effective recruitment channel was working with local community-based organization that had an existing relationship with the job seekers.

My second, and more successful, strategy was using key informants who could help me to develop relationships with community-based organizations. At this point, the East Palo Alto neighborhood initiative, called One East Palo Alto (OEPA), was in its infancy and was in the midst of its planning process to become an organization. Without a dedicated staff, OEPA meetings provided a venue for meeting community leaders who could provide me with access to interview informants. Through active participation with OEPA, particularly as a member of the Economics Planning Group, I met residents and community leaders who were able to connect me with community-based organizations. Several of these organizations ultimately provided me

with informants, including the Family Support Center, Start Up, EPA Can Do, and others. (For a complete list of organizations that provided assistance in recruitment, please see Appendix A). In addition, there were organizations, such as the drug treatment organization Free At Last, with whom I had no institutional contact but whose clients, through the grapevine, found out about my small incentive of \$20 and became a part of my survey sample.

All informants who were interviewed, with the exception of those in the pretest of the questionnaire, were paid \$20 for their time. This was a set fee, irrespective of how long the interview lasted. While the role of providing respondents with financial incentives is controversial, I found that it was necessary and served two purposes. First, in a low-income community, \$20 is a respectable amount of money, especially considering that many people work on an hourly basis and judge the value of their time by how much money they make per hour. Secondly, providing cash remuneration for the interview suggested to respondents that both their time and their life experience were valued.

The fieldwork process yielded 40 interviews, with an additional four questionnaires which were completed but for which there is no corresponding interview. While most of the respondents were residents of these two communities, a small handful lived in other places but either worked or spent significant time in the local community for other reasons. Interviews lasted between 35 minutes and two hours in length, with the average interview lasting approximately one hour. Among the respondents interviewed, approximately five do not technically qualify as low-skill, often because they had four-year college degrees earned in other countries.

Among the 44 respondents, three-quarters (32) were women. This was most likely a by-product of my recruitment strategies, since many of the individuals participating in volunteer

activities or seeking assistance from service agencies are women. To the extent possible, I also tried to achieve racial and ethnic balance. Twenty-two job seekers were African American, 16 were Latino, five were Asian/Pacific Island and one was white. These individuals represent the diverse demographics of the communities in which they live and/or work.

Secondary Data and Sources

In addition to administering questionnaires and conducting interviews with low-skill job seekers, several other elements of secondary research were conducted. In particular, I analyzed Census data in order to generate some comparative data on the economic profile of the Silicon Valley. The data sets that were used were from the 1970 and 1990 10% PUMS files. I conducted analysis consisting of cross tabulations for Santa Clara and San Mateo Counties focusing on several variables including race, education, age, gender, occupation, and industry.

I also conducted several interviews with key sources that could speak to the broader economic and social conditions in the Silicon Valley as well as in the communities of East Palo Alto and East San Jose. These interviews began as early as September 1997, when this project was in its conceptual stages. A list of these informants is presented in Appendix A.

THE INTERVIEW EXPERIENCE – TONE AND CONTEXT

The interviews themselves were challenging to conduct for both methodological and ethical reasons. Methodologically, the actual task of obtaining information was complicated because of the three research activities which were undertaken: completing the questionnaire, unpacking the questionnaire in a subsequent discussion, and then engaging the respondent in a taped interview about her or his social ties. The logistics of completing each of these activities, often in a cramped or makeshift environment, often made data collection awkward and challenging.

Ethically speaking, the process of conducting fieldwork was also a challenge in terms of understanding my own place in relation to my informants. I originally believed that I would have an easier time gaining traction in East Palo Alto because the community contained many more African Americans which I suspected would be sympathetic to a young black woman trying to obtain a doctorate. Not so. The overwhelming influence of Stanford University and the ways in which East Palo Alto has become a petri dish for local academics made this task much harder. I was constantly reminded that I was an outsider and an academic, and that my status as such trumped any bonds of race, gender or social class that I tried to capitalize upon. I found that Carol Stack's intonation regarding the challenges of social research still held 30 years after the fieldwork for *All Our Kin* had been conducted. She wrote:

A researcher in the social sciences is practically always defined as an outsider in a study, even if he or she has close attachment and commitment to the community, and shares a similar background. ... Whether studying elites, bureaucracy, or the poor, if one hopes to discover the rules of routine behavior, the observer himself must attempt to learn how to move appropriately inside the private world of those observed. The researcher must take time and patience and practice, attempting to reduce the distance between the model outsiders used to explain the social world and the explanations employed by those studied. (pp. xiv-xv)

Heeding Stack's words to move inside the "private world," I spent a significant amount of time in both East Palo Alto as well as the Mayfair neighborhood getting to know community leaders and residents, and participating in neighborhood efforts for community improvement. The *pro bono* work I did on behalf of these communities both smoothed the way for gaining access to interviewees and gave me a certain amount of credibility with local leaders who were accustomed to researchers coming in, collecting their data and abruptly leaving, without any sustained concern for the community.⁹

⁹ The nature of this pro bono work varied by community and came about as a result of my academic interests in these neighborhoods. In San Jose, I was asked by the staff of the MNII to serve on an economic development task

The challenges of getting access in East Palo Alto and Mayfair were not just limited to actually finding people to talk to, but to getting them to open up once I had them sitting at the table across from me. Unlike Stack, I did not move into the community, nor did I have sufficient funding to pay informants to do multiple interviews. In other words, I had to maximize the sixty to ninety minutes of time I had with each person.

In order to “reduce the distance,” I adopted a stance in my interviews that was decidedly familiar, interactive, and grounded in the art of social relations. As much as anything, I tried to create an environment in my tone of language, choice of words and body language which suggested that we were just friends getting together for a good chat. While the tape rolled I was often free of paper or pen, and though I did keep the interview guide near at hand, the order in which questions were asked varied depending upon the mood of the interview.¹⁰ My own efforts to reduce the distance meant initially engaging my interviewees in topics that they wished to discuss, even if it was not “on point” with what I sought to know. I found that while being an outsider and an academic was a disadvantage in terms of getting people to sit down with me, being a black female researcher often became an advantage in terms of getting people to open up to me. My own position as a woman of color allowed me to develop a rapport and thus “move appropriately inside the private world” of my subjects.

One example of this strategy’s success came with an African-American woman named Leticia, a 29-year-old separated mother of three. I met Leticia for the first time at a community fair where I enticed several informants to complete questionnaires in exchange for entry into a

force to help them think about workforce development for the local community, which comprised a large number of undocumented residents, as well as a significant number of youth. My participation on this task force resulted in helping to design a questionnaire and a focus group script to collect data from residents on their employment experience, employment prospects and their desired kind of work. In East Palo Alto I participated in the first phase of the OEPA neighborhood planning process and have remained involved in the Economics Task Group. This group is interested in promoting workforce development and business development for the city and its residents.

¹⁰ This strategy was especially effective when I could interview people in the own home, where they felt most comfortable, and often served to allow me to get much more information than I otherwise would.

raffle in which she could win a gift certificate for back to school supplies. As one of the winners, Leticia was willing to sit down with me for a follow-up interview on a sunny weekday afternoon. About twenty minutes into our interview, she shared the story of her husband who was seeing another woman whom he had gotten pregnant, a fact that she found out when she was in labor with their third son. A recovering drug addict 19 months sober, Leticia and her children had spent 17 months in a residential drug treatment program. With nowhere to go upon release, at the time of the interview she was homeless, but holding down a part-time job and continuing treatment. My dialogue with Leticia shows how the flexible format of the interview, and my unorthodox response to unsolicited questions, served to change the dynamic of the interview but yield important information.

LA: So where are you living now?

Leticia: Here and there. And it's really, it's frustrating, ya know but I'm still working, ya know I'm still going to my meetings. I'm still, ya know, and it's just really, I get really irritated when I talk about it. I mean, he's an asshole. And now he has, and he has a son from a previous relationship and now this asshole has five kids and he's probably more than likely only taking care of the one that he lives with because that's the type of person he is. Ya know, and I don't know why I expected anything different because all the stories and all the things from what I've heard from him, every time he's lived with someone or didn't live with his mother, it's been with another woman. Why did I expect all of a sudden now he's gonna live on his own and pay his own bills? And so basically I think what happened was he was just gonna live with her until I got out and then just move, but then she ended up getting pregnant. And now, he's all scared. Because he told me out of his own mouth, he's scared to come back to me, because he knows there would be like serious problems.

LA: Well, this is none of my business but you don't want to be with him. I mean, I understand loving him, I do understand that but, that's toxic. That is just not somebody who's good for you. That's not somebody who's trying to make you the best person you can be.

Leticia: Yeah. See, I need to hear that.

LA: Do ya know what I'm saying? I mean, I know this is none of my business.

Leticia: Oh, I know. I'm opening up. I'm talking to you.

LA: That's not somebody who is thinking about you first. It's just not.

Leticia: Yeah, yeah.

LA: That's somebody who's got their own stuff going on trying to figure out, hey what am I gonna do. You need someone who, ya know, wants to build a life with you. You deserve someone who wants to build a life with you and your children and, ya know. You're going up. You're going up. I don't know where he's going but you're going up. I mean, look at the last 19 months. You look at that. That's a huge accomplishment.

The above dialogue demonstrates two important aspects of the interview process: the importance of what Leticia *chose* to talk about and share, and the ways in which I responded to her story. Leticia interpreted my simple question regarding her living situation in two ways. At its most basic level, my question was simply about her current residence. However, due in large part to our conversation before this dialogue about her marriage and her life, my question was interpreted in a much broader sense. It was understood as asking, "How are you doing? How are you coping? How are you getting by?" Engaging Leticia in a conversation about her husband served two purposes. First, it allowed her to participate in setting the terms of the conversation, and speak about those things that were on her mind. Such conversations served as a way for many of my informants to talk about things that might be unspeakable in the context of their daily lives. I often found that my informants had few confidants with whom they could share the challenges of life, and by allowing the interview to become a space for this kind of discussion, informants were also forthcoming about the other aspects of their life in which I was more interested.

Second, while the intricacies of her marriage at first blush appeared to have very little to do with job search strategies and social ties, these "side" stories communicated the social, economic and sexual relationship being brokered between Leticia and her husband, and how negotiating that relationship dictated other imperatives about her personal and professional life. While she was able to cope with homelessness, she was unwilling to sacrifice her hard-fought sobriety for anyone, including a cheating husband she loved. This meant that Leticia had to

marshal the other scant resources she had to create a life for her and her three boys. Working part-time was a part of that strategy.

While perhaps controversial, my responses to Leticia transcended the boundaries of being an objective observer or a collector of information. Instead, I engaged her in a social relationship in which affirmed her efforts to have a better life. Thus, in addition to being a researcher, my role was to be a listener, to engage them in a relationship based on reciprocity, and to share of the circumstances of their daily life.

For many of the informants, the complicated circumstances of their personal lives made it easier to relate to them in such a familiar way, because they often did not have many others to talk to. Consider Elizabeth, a 42-year-old mother of three, whose husband's intense jealousy circumscribed her living. She unsuccessfully fought back tears as she described the struggle with her husband to allow her to participate in an employment training course

It's just like — everything's just like, kind of like falling into place. Except my husband's very jealous and controlling and stuff, too, and he kinda didn't want me to do it, because he's happy with me working those 5 hours, coming home — and I said "Richard, but — I want better! Look it, we're still here, after 27 years, we're still here, with no money saved, living check by check, I want better." And I go, "And I believe it takes two." ... But I know my husband gets very jealous, and that's one thing that bothers him. If I talk to the opposite sex — that's one thing he told me too. He goes, "there's gonna be men there, are you going to be working with men?" I told him, "Richard, there's men everywhere. There's men everywhere, there's nothing to do be afraid of. I want to just better myself, you know. I want to better our family, in a better home, or better — or even just be able to fix our house up, because we don't have any money to fix our house up."

Elizabeth used this encounter to find a confidant in a stranger—discussing both her controlling relationship with her husband and her challenging relationship with a daughter-in-law only 15 years her junior who constantly tells her she has low self-esteem – much in the same way Leticia sought comfort from her sharing her story with me. I found that women were much more likely than men to use the interviews as an opportunity to seek support for the difficulties they endured in their daily lives. In this case, as a researcher, although I learned less about social networks,

these interactions gave me a much better sense of the difficult circumstances with which my respondents coped.

Often being a good listener alone was not an adequate research strategy. It was also necessary to share my own life with the informants to have them understand that our experience was a shared experience. In my conversation with Lavita, a married, non-working mother of three, she explained why she quit her night-shift job at Wal-Mart as stock person after only a few months, a job which met her work style preferences for working alone and autonomy.

LA: You liked it, it was cool. But you decided you didn't want to stay?

Lavita: Oh well, the hours. It was a conflict because to get my daughter ready for school. I would get off at 7 o'clock [in the morning].

LA: My mother worked nights my whole life and I was the oldest, so by the time I was eight I became very skilled at getting up to the alarm, taking a bath, getting my brother up, getting him in the bath, making our breakfast, making our lunch, getting the bus, you know, that whole thing. Because she didn't get home until 8:30 or 9, and I needed to be at school. And that's tough, that can be tough on a family.

Lavita: When I said I was interested in going back into that field my daughter said, 'Mom, are you gonna work from 11 to 7 again?' So that already posed a problem with my daughter. She was having problems with that shift, so.

In this case, as in some of the others presented, my stance as a researcher – an objective collector of information – was blurred in order to reduce the distance and gain a greater understanding of both the experiences and the circumstances of my narrators. My attempts to do so, and my belief that in many cases I succeeded, gives me confidence in the reliability of the data to make new claims about the role of social networks in helping people to look for work.

ANALYSIS AND WRITING

As is typical with many field research projects, much of the analysis (and writing) for this project took place during the course of data collection. Field notes were taken after each day's interviews, and often after each interview, to capture initial impressions about how job seekers experiences influenced their ability to search for work. While I was constantly likening these

experiences back to the theoretical concepts from the literature, I also tried to allow individual experiences to speak for themselves – to develop “grounded theory” based upon the experiences I had in the field.

The analysis of the data took two forms: a data set was developed for the questionnaire responses, and transcriptions were made of the audio taped interviews. The data set enabled me to examine which occupations were most often mentioned, and to analyze these occupations according to key variables such as age, race, gender, marital status, parental status, etc. This portion of the analysis allowed me to “quantify” the connection my respondents had to the local labor market. Most of the results from this analysis are contained in Chapter 4.

Transcriptions were developed of all the interviews.¹¹ These transcriptions were analyzed using two methods. First, as I transcribed the tapes I took notes on themes or concepts that emerged from the text. This type of analysis functioned in much the same way my field notes did, allowing me to reflect on the ideas based on respondent’s text. As a second means of analysis, I searched the text of each transcription using key words or phrases that would relate to some of the pre-established theoretical concepts I wanted to address in the research. These word searches allowed me to summarize the basic experiences of job seekers while also examining the range of experiences among a select group of informants. Word searches also led to passages that were subsequently coded into broad categories or themes that were further explored. In addition to word searches, I also developed a list of questions that I wanted to ask of the data. Thus, in addition to word searches, I also looked specifically for particular trends in the transcriptions that would correspond to pattern-matching.

¹¹ While a handful of transcriptions were full transcriptions, the majority of them were streamlined transcriptions. The reason for this shift was due to the enormous amount of time required to complete full transcriptions. While the full transcriptions contained every utterance on the part of both the interviewer and the narrator, including “ers” “uhs” and “ums,” the streamlined transcriptions contained the verbatim text of the respondents but paraphrased or omitted my questions and responses. (See Appendix C for a discussion of “Moving from Tape to Type.”]

Both methods of analyzing the transcriptions lead to the pattern-matching encouraged by Yin as the most rigorous method of conducting case study analysis. Systematic analysis of my cases allowed me to compare the results of my data to the patterns I developed at the outset of the study based upon the literature review.

CONCLUSION

The intent of this chapter was to clearly present the range of methodological issues I have considered in constructing this research. Because of the widespread skepticism regarding the analytic rigor of the case study method, I have laid out in this chapter the precise analytic variables I have used to understand the role of social networks in the job search process of low-skill workers.

This research is grounded in the case of the Silicon Valley, a highly stylized case with particularities that speak to how low-skill workers fare in a highly skilled, highly competitive high tech industry. The specifics of the Silicon Valley work to our advantage here because they have broad applicability in the methodological approach advocated by Lisa Peattie that focuses on *phronesis* as a type of knowledge in which “knowledge of what to do in particular circumstances” is the desired outcome (Peattie 1994, p.2). This type of research favors concrete cases, practical knowledge, and thick description as a means of informing how we respond to urban problems. The genesis of this description begins in the next chapter where I provide some context of understanding low-skill labor market experiences in the Silicon Valley.

CHAPTER 3

HISTORY OF THE VALLEY: CAN EVERYONE BENEFIT FROM THE MERITOCRACY?

While an unusual and highly stylized case, the Silicon Valley is an important research site because it has been heralded as the hub and prototype of the “new economy.” This economy – widely defined by the revolution in electronics, semiconductor technology and computer chips – has resulted in a huge economic boom for the industries that manufacture products vital to a knowledge-based and information-based economy. The new economy of the Silicon Valley is also defined in large part by its fluid labor markets and flexible production systems. This mobility of labor for highly skilled workers is facilitated by intense personal networks that enable those with greater skills to take advantage of the high demand for their labor (Rogers 1985; Rogers and Larsen 1986; Saxenian 1996). Finally, the Silicon Valley is an important study site because as the new economy continues to take hold, regions around the country are doing their best to replicate what appears to be an idyllic economic region: Colorado has created Silicon Mountain, Texas has the Silicon Prairie, Oregon has the Silicon Forest, and New York City has dubbed an area of Manhattan Silicon Alley.

While much is known about the employment experiences of those with technical skills and business acumen in the Silicon Valley, less is known about the experiences of low-skill workers who seek employment. A recent report on the high tech industry notes every new software engineer position creates 2.5 additional personnel in the industry (Munroe 1997). Undoubtedly, a significant proportion of new jobs are allocated to lesser skilled workers.

Understanding the employment experiences of lesser skilled Silicon Valley workers requires understanding the evolution of the Valley itself, from farmland to technological mecca. The story of the development of the Valley is important because it reveals that the ways in which the Valley evolved created a culture which remains a significant part of how the Valley functions

today. The evolution shows how factors such as entrepreneurialism, venture capital funding, social networks and income inequality were sewn into the fabric of the Silicon Valley in its early stages, and how what we see today is the maturation of these phenomena.

However, before understanding fully the nature of the Silicon Valley today by examining its roots, we must first determine what constitutes the Silicon Valley.

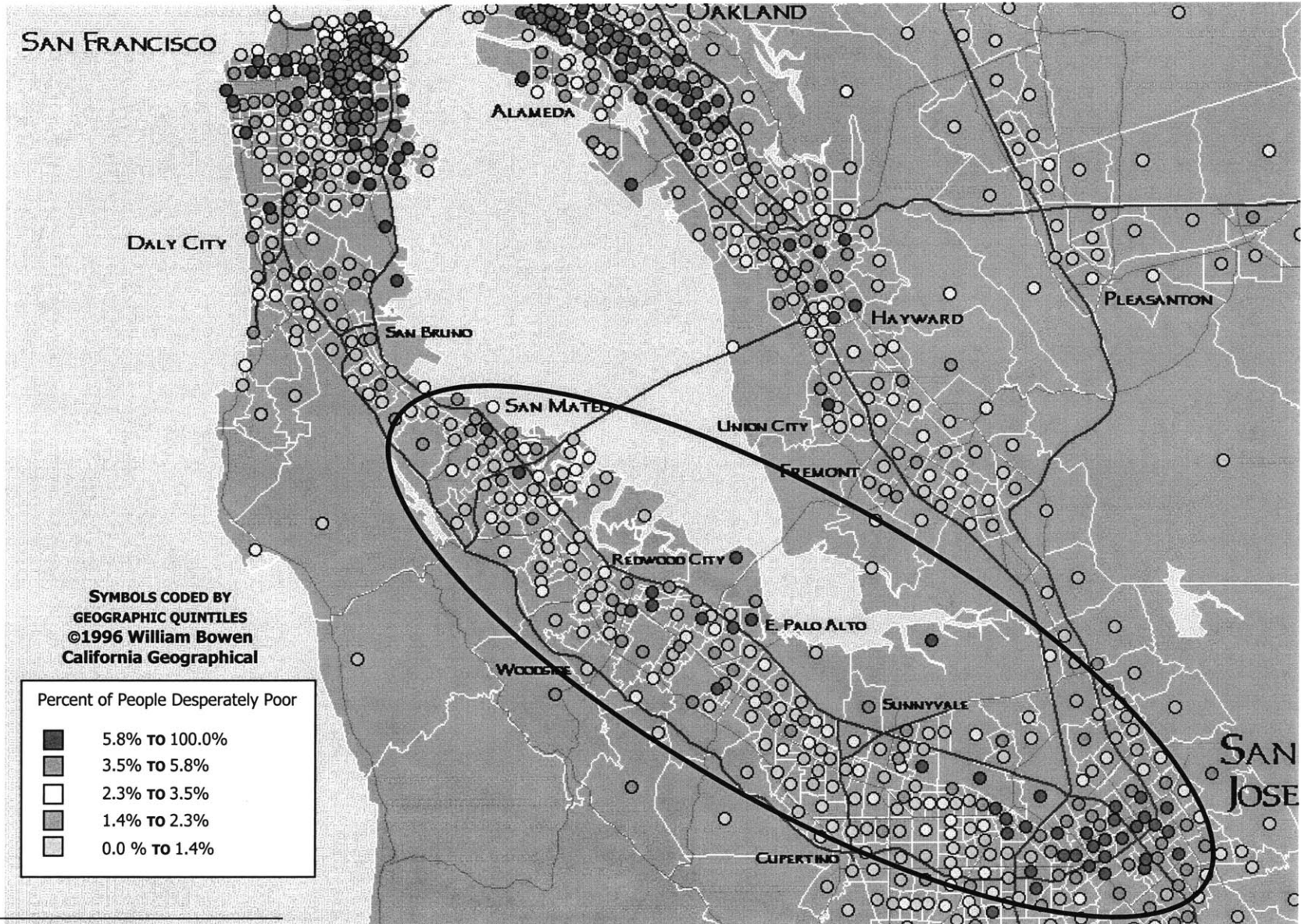
SPACE AND PLACE: CONTESTED CONCEPTIONS OF THE SILICON VALLEY

According to Joint Venture Silicon Valley, the region's leading civic organization, the Silicon Valley is an expanse of terrain extending approximately 1500 square miles (Figure A). However, as Charles Darrah notes, it is often difficult to engage in discussions of the Silicon Valley because there is no real consensus upon its meaning or make-up. Darrah offers three conceptions of the Valley. He views it as a geographical region, an industrial district, and as a state of mind (Darrah 1999). These classifications demonstrate the ways in which the Silicon Valley is "contested" space geographically, theoretically and intellectually. Its physical environs and its interpretations are often both ambiguous and protean.

While few would argue that the Silicon Valley is a distinct geographical area, few would agree upon its boundaries.¹² However, there is general consensus that the Valley is anchored by and encompasses all of Santa Clara County, with the city of San Jose serving as the largest municipal seat of power, and Palo Alto serving as the intellectual and spiritual home of the Valley, since that is where the seeds of the Valley were planted. Many of the cities within Santa

¹² The lack of agreement on the geographical boundaries that constitute the Valley creates obvious challenges for conducting analysis on the region since the results are highly contingent upon which municipal jurisdictions are included. For the purposes of this study, I considered the Valley to begin at Highway 92 in San Mateo County (the northern border) and continue south to the edge of San Jose. Its western-most border is Saratoga, and its eastern most border is Newark. (See Figure 1) However, for the purposes of analyzing data, I have chosen to use Santa Clara County as a proxy for the Silicon Valley.

Figure 1: California's Silicon Valley, by Poverty Status of Residents¹³



¹³ Desperately poor defined as people earning less than half of the official poverty income. Figure used by permission of the author. URL: <http://130.166.124.2>

Clara County – Mountain View, Sunnyvale, Cupertino and Santa Clara – are home to computer industry giants such as Silicon Graphics, Apple, Intel and Cisco.

Beyond this core, the Valley reaches as far north as San Mateo County, as far west as Santa Cruz County, and as far east as Alameda County. However, the geographical center of the Silicon Valley is increasingly expanding to include other aspects of its industrial core. San Mateo County in the north (home of Oracle), southern Alameda County as a manufacturing center, and even the software gulch in San Francisco are considered part of the Silicon Valley industrial complex. These places have an increasing concentration of high tech firms – both start-ups and established companies – that model themselves after the mythical culture of Silicon Valley companies. As land prices in Santa Clara County continue to skyrocket, these alternate locations have become increasingly attractive, if not because they are any less expensive, then because they offer a greater range of housing and commuting choices to those who find affording the southern Peninsula untenable.

Annalee Saxenian has written extensively about how the Silicon Valley fits Darrah's second conception of the Valley as an industrial district. In her work, she describes the Valley as the American version of a classic industrial district, embodied by the sets of relationships within and between local firms that allow the industry as a whole to remain productive and innovative (Saxenian 1990; 1996). While the veracity of this claim has been the subject of intense critiques (see Florida and Kenney, 1990a, 1990b; Harrison 1994) there is no doubt that the Silicon Valley is understood as a distinct regional economy. As such, the mobility of highly skilled labor is crucial: while the knowledge that is produced at any given firm may be proprietary, the skills developed by those who work with its products are mobile. Thus, as workers move from one

firm to another, so go their skills. The interaction and mixing of workers with vastly different skill sets is part of what helps the Valley to remain innovative.

Finally, Darrah notes that others have described the Silicon Valley as a state of mind (Sorkin 1992). Not unlike the industrial district of Hollywood, the Valley has come to embody a particular type of spirit – in this case an entrepreneurialism, a sense of risk taking, a “work hard, get rich” mentality. This mind-set is very much linked to its function as a regional economy, and is used to confer a particular status upon its workforce. Thus, to be part of the Silicon Valley is to have a deep and abiding respect for capitalism, rugged individualism and meritocracy, as well as to possess technical acumen and business savvy. However, this conception is also important because as a state of mind the Silicon Valley is associated with a whole host of issues regarding quality of life. On the positive side this means high wages for some, but on the negative side it means expensive housing for many and traffic congestion for all.

Which definition of the Silicon Valley holds sway? Inevitably, all of them do. The Silicon Valley is both a defined geographical region and an evolving industrial complex, well known for its concentration of high tech firms that have helped to revolutionize the American economy from manufacturing-based to knowledge-based. Technological innovations in high tech computer products improved worker and firm productivity, fueling the momentary NASDAQ run up over 5,000, and for a brief while making millionaires out of a handful of 20 year olds. However, it is also important to remember that the Silicon Valley has important symbolic meaning: as a place that values entrepreneurialism, individualism, and meritocracy (Shih 2001).

It is the culture of meritocracy that prompts serious questions about who bears responsibility for the effects of increasing inequality. A fully meritocratic culture would suggest

that people who are not successful bear responsibility for their status, since a meritocracy fairly rewards those with talent, skills and ability. A meritocratic culture reinforces an ideological argument about poverty that suggests people are poor largely because they lack the drive or initiative to obtain appropriate skills or training and better themselves. The meritocratic argument ignores the structural elements of the economy that prevent people from moving up. As I shall submit later in this chapter, several structural changes in both the economy and the labor market have led to the economic disparity in the Silicon Valley. Fundamentally, the ideals of meritocracy, individualism and entrepreneurialism beg the question of who benefits from the technological progress and wealth creation of the region's economic boom.

How did the Silicon Valley come to represent these ideals? To understand this we must examine its historical development.

HISTORY OF THE SILICON VALLEY – FROM ORCHARDS TO OFFICE PARKS

Bounded by the Santa Cruz mountain range to the west and the San Francisco Bay to the east, it was the climate of the Valley that enabled its first industry of farming. It is estimated that during the 1930s, 120,000 acres of land were dedicated to the counties agro-economy.

Temperate weather and lush soil made the Valley an ideal place for the proliferation of ranches and farms bearing prunes, apricots, apples and cherries. It is no wonder then that Stanford University — located in the heart of this area – is familiarly known as “The Farm.”

Stanford has played significantly into the development of the Silicon Valley and has often been credited for providing a pipeline of intellectual capital to local high tech ventures. Frederick Terman, a professor of electrical engineering at Stanford, is widely considered the founding father of the Silicon Valley, since it was his vision to create a community of “technical scholars” by creating a milieu for research both inside and outside of the university. Terman,

who received his Ph.D. from MIT in 1924, was hired by his undergraduate alma mater to develop a radio-engineering program at Stanford. There he mentored young scholars and upon graduation encouraged them to search for work locally instead of retreating to the east coast, which had a reputation for providing good jobs to scientifically educated graduates. In doing so, Terman helped to create a local critical mass of young scientists. To maintain such a pipeline, one of his enduring legacies was developing Stanford's then mediocre electrical engineering and chemistry departments to world-class status.

However, Terman also had good business sense and, understanding the importance of advances in electronics after the war effort ended, he encouraged the entrepreneurial spirit of his students. He also encouraged Stanford faculty to establish working relationships with corporate scientists to develop more of an institutional connection between local industry and the university. The culmination of his efforts was the establishment of the Stanford Research Park, a high tech industrial park that, in addition to housing Hewlett-Packard in its early days, also housed many other early high tech firms. The establishment of the office park created a means for facilitating the transfer of technology from Stanford's labs to the Valley's leading companies.

The presence of military contracting firms later shaped the expansion of the Silicon Valley. During World War II, the then fledgling Hewlett-Packard provided electronic instruments to the military, and after the war found both civilian and military applications for its technology. However, the onset of the Cold War helped to establish a military industrial complex in the Silicon Valley. The US Department of Defense was the first major purchaser of semiconductor technology, with firms such as Lockheed receiving choice military contracts. Other companies such as Fairchild, General Electric, Westinghouse and Sylvania also became important components of the expanding military industrial complex. It was during these days

that the orchards of Santa Clara County were razed to make room for fabrication plants, housing, and office parks.

EMBLEMATIC OF THE VALLEY: THE RISE OF HEWLETT-PACKARD AND THE DAWN OF APPLE COMPUTING

The importance of Stanford University to the Valley's development demonstrates the historic importance of personal networks as currency for today's new economy. One of the earliest of these stories harkens back to Bill Hewlett and David Packard who met as undergraduates at Stanford. Both majored in electrical engineering and studied under Terman. Terman took a personal interest in them and took it upon himself to encourage their entrepreneurial spirit. Several years after the duo graduated, he invited them back to campus to pursue graduate work in what was a co-curricular interest for Hewlett and Packard while undergraduates. He found them fellowships for their graduate work and other sources of funds for their research project developing an audio-oscillator. When Hewlett and Packard decided to make this a commercial venture, Terman served as an advisor to the fledging company and also served as one of their first venture capitalists, providing them with \$538 in seed funding and making arrangements for them to obtain a \$1000 loan from a local bank.

Rogers and Larsen note that networks were a key component in how the Silicon Valley developed in the early years. Networks, they claim, became the chief way for dealing with the high degree of uncertainty caused by the innovation of new products and new technology. Innovation leads to uncertainty in work, as certain sectors of the economy rise while others fall, causing shifts in the demand for workers with particular skills. In other research Rogers identifies "information exchange networks" as benefiting product development because of the

high degree of employment mobility that allowed employees to take knowledge with them as they moved from one firm to another (Rogers 1985).

Silicon Valley has always had a high degree of job mobility, and this mobility is due in large part to the role of networks. Just as information is passed on about products or venture capital funding, so too is information passed on about employment opportunities. Rogers and Larsen estimated that in the mid 1980s job changing was about 50% per year among lesser skilled workers such as assemblers and “board stuffers” and as much as 30% among engineers and managers. While job-hopping is often used as means of advancing one’s career, it is as often a means for increasing one’s salary. In the 1990s, compensation packages included lucrative stock option packages with low strike prices, enabling highly skilled workers to become millionaires as soon as their company went public. As we shall see in Chapter 4, low-skill workers have realized only marginally better wages.

In addition to the industrial changes in the Valley, it is also important to understand how specific communities have settled in the Valley. San Jose in particular has been noted as important to the Valley’s early development because it housed the manual laborers who worked in production. Mexicans, Filipinos and Vietnamese clustered in “South County” because that was where housing was most affordable. This trend was noted early in the growth of the Silicon Valley. “As one crosses the city limits from Santa Clara, Sunnyvale and Cupertino into San Jose, socioeconomic status drops noticeably. Traffic, smog from auto emissions, and crime are worse. There are social problems, even in paradise.” (Rogers and Larsen 1986, p. 27) An analysis of Santa Clara County’s median family income supports this claim. In North County,

the median income was \$68,790 in 1990, compared with \$50,281 in San Jose and \$44,133 in Gilroy, the southernmost point in the county.¹⁴

The disadvantages for those who are not engineers and managers in the Silicon Valley is nothing new: the disparate income inequality in the Valley was documented by the San Jose Mercury News as early as 1983.¹⁵ The correlation between poverty and issues of race and gender were not lost on the early historians of the Silicon Valley.

To simplify, white males in Silicon Valley hold the engineering and management positions with the highest incomes and greatest power. Non-white men (Hispanics, Vietnamese, Filipinos and blacks) and white women fall lower in the socioeconomic status hierarchy of Silicon Valley. Minority women are at the bottom of the occupational structure. (Rogers and Larsen, 1986, pp. 189-190)

Beyond this many of the conditions which existed in the early 1980s and which perpetuated the income inequality still exist today. The Valley remains largely non-unionized, though there are efforts underway to unionize workers.

Rogers and Larsen reported that low-skill workers also found employment through their networks, just as their highly skilled counterparts did. However, as is characteristic among new immigrants looking for work, the most recent immigrant groups generally hold the least attractive jobs. This creates an occupational niche for those who are recent immigrants, and this niche allows recently arrived folk to find work easily (Waldinger 1996). The concentration of ethnic and racial minority groups in low-skill occupations also reportedly caused difficulties in production because of the multiple languages among competing groups.

¹⁴ The city of Palo Alto serves as a proxy for the northern part of the county. The median family income for the entire county is \$53,670. Data source: 1990 Census STF3.

¹⁵ Ron Howard wrote a working paper called "Second Class in Silicon Valley" as early as 1981. However, its whereabouts are difficult to identify.

For all of Terman's vision to socially engineer a "world-class center of technological innovation," he was flawed in his inability to consider the downsides of having a community composed primarily of highly educated and highly skilled workers. The elite scientists, managers and engineers of the Valley work and live in large part because cadres of lesser skilled, poorly paid workers enable them to do so. However, the ability for low-skill workers to get by in the Silicon Valley is increasingly threatened due to the high cost of living. Nevertheless, for some the Valley remains a place of technical innovation, even if it is somewhat socially stagnant.

The story of Apple Computer exemplifies a Silicon Valley technical innovation success story. Steve Jobs and Steve Wozniak began this venture in 1971, both college dropouts who had returned home where they found work at Atari and Hewlett Packard, respectively. Friends from youth, they decided to try to build a computer circuit board that later became the platform for the Apple Macintosh. By 1982, the company that produced personal "kit" computers in a garage only six years earlier became a Fortune 500 company.

Many of the methods that Apple used in its first few years, and its resultant outcomes, have become standard in the high tech computer industry today, including the tendency towards outsourcing and the bifurcation of the labor market. For example, in 1976 Apple began outsourcing its production of circuit boards to General Technology Corporation, a company whose employees grew from 30 in 1976 to 450 by 1983. The move toward outsourcing was one of the mechanisms that allowed underrepresented minorities access to the jobs in the high tech cluster. Ironically, however, it also concentrated them in low-wage, secondary labor market jobs with few opportunities to upgrade their skills. Known as "board stuffers," Rogers and Larsen note that, "Many [employees] are women who are black, Spanish speaking, or members of other minority groups. They start working at minimum wage and are trained to insert the pronged

ships into circuit boards. The work is boring and the chances of upward mobility are dim for board stuffers.” (Rogers and Larsen 1986, p. 22) Equally significant, workers concentrated in secondary labor market jobs have few information ties to better opportunities with the primary labor market.

The Apple story contains the main elements of Silicon Valley success: entrepreneurial spirit; venture capital; personal networks of information exchange; social inequities represented by third world women board stuffers; and highly competitive workstyles of (often uncredentialed) technologists. (Rogers and Larsen 1986, p. 24)

These stories of inequality and segmented labor markets point to the ways the structure of the economy in the Valley has evolved over time. The industrial and occupational mix of the Silicon Valley suggests the high tech industry has always been a place of tremendous opportunity for some and tremendous dislocation for others.

THE SILICON VALLEY TODAY: WHO LIVES THERE NOW?

The demographics of the Silicon Valley reflect the remarkable growth that industrial and occupational shifts have brought to the region. The overall story of population growth has been one of rapid change, marked by intense international migration and equally intense domestic out-migration.

With a population in 1999 of over 1.6 million, Santa Clara is the largest county in the San Francisco Bay Area and ranks as the 5th most populous county in the state.¹⁶ Table 3.1 reveals that the county’s population grew by 10 percent between the last decennial census and estimates for July 1999. While this is slightly lower than the state’s overall rate of growth, it makes Santa

¹⁶ Throughout this study, Santa Clara County will serve as a proxy of the Silicon Valley where quantitative data is required. Since the Silicon Valley does not reflect a single political jurisdiction, data is not generally available for it. Since the county is only a subsection of the Silicon Valley, it can be assumed that in most instances the estimates are an under-representation of the actual figures. When data specific to the Silicon Valley is available, it will be provided.

Clara County the leader in population growth among those counties in the Bay Area with some geographic proximity to the Silicon Valley.

Table 3.1: County Population Estimates and Population Change, April 1990 – July 1999

County Code	County	Population Estimate July 1, 1999	Population Estimate Base April 1, 1990	Absolute Population Change, 1990-1999	Percent Population Change, 1990-1999
06	California	33,145,121	29,811,427	3,333,694	11.2
06085	Santa Clara	1,647,417	1,497,577	149,842	10.00
06001	Alameda	1,415,582	1,304,347	111,235	8.5
06075	San Francisco	746,777	723,959	22,818	3.2
08081	San Mateo	702,102	649,623	52,479	8.1
06087	Santa Cruz	245,201	229,734	15,467	6.7

Source: Population Estimates Program, Population Division, US Census Bureau

The population increases in Santa Clara County reflect the shift in migration patterns for the state as a whole. While both the state and the county have experienced net domestic out-migration during the 1990s, Table 3.2 shows that international migration has been on the rise. When combined with the natural increase the county population has experienced an overall net gain, increasing by 149,842 since 1990.

Table 3.2: Population Change by Source, 1990-1999

Place	Population Change	Births	Deaths	Net International Migration (Percent Change)	Net Domestic Migration (Percent Change)
California	3,333,649	5,227,258	2,039,044	2,280,354 (8%)	-2,170,790 (-7%)
Santa Clara Co.	149,842	248,056	79,991	159,055 (11%)	-175,929 (-12%)

Source: Population Estimates Program, Population Division, US Census Bureau

Domestic and international migration patterns suggest that the population mix in Santa Clara County also has changed. In 1970, the racial composition of Santa Clara County was 95% white (non-Hispanic), 3% Asian and 2% black (PUMS 1970). Since then, the county has continued to lose white residents but has increased its racial and ethnic diversity. Figures for 1998 show that throughout the 1990s this trend has continued with a 6 percent decline in whites, while Asian Americans and Hispanics have increased by 29% and 26%, respectively.

Table 3.3: Population of Santa Clara County by Race and Hispanic Origin, 1990 and 1998

	1990		1998		1990-1998 Percent Change
	Absolute	(%)	Absolute	(%)	
White	873,984	(58%)	821,156	(49%)	-6%
Black	52,884	(4%)	62,226	(4%)	15%
American Indian	6,948	(0%)	11,302	(1%)	39%
Asian Pacific Islander	254,523	(17%)	359,029	(21%)	29%
Other	2,125	(0%)	-	-	-
Total Hispanic Origin	307,113	(21%)	417,223	(25%)	26%
Total Population	1,497,577	(100%)	1,670,936	(100%)	10%

Source: Population Estimates Program, Population Division, US Census Bureau

Taken together, Tables 3.2 and 3.3 suggest that immigration has played a significant role in altering the racial makeup of the county. These data are supported by the fact that within California, Santa Clara was the 4th most popular destination for immigrants (after Los Angeles, San Diego and Orange Counties). Santa Clara attracted 13,735 immigrants in 1996, accounting for 7% of the state's total immigrant population.¹⁷ However, while the county has become more diverse due to immigration, less is known about the characteristics of the international migrants themselves. This stems from two phenomena. First, data is only collected on legal immigrants to California, even though there is substantial illegal immigration. For Santa Clara County, this suggests that these figures more accurately reflect the immigration of skilled workers, since many of the unskilled workers are undocumented. Second, the data, which is only available through 1996, focuses on legal immigration trends for the entire state and only offers general data at the county level.

Table 3.4 shows the top eight countries of birth for immigrants to Santa Clara County. Except for Mexico, which is ranked third, these data suggest that immigrants from Asian countries are the main groups settling in California. However, as stated before, these data omit the illegal immigration that accounts for many more settlers from Mexico and other Latin American countries, for which there is no data available. Thus, Table 3.4 likely reflects the role

¹⁷ During 1996, approximately 20% of those admitted to the United States declared their intention to reside in California, making the state the number one destination for immigrants.

that Silicon Valley employers have played in obtaining H1B visas for highly skilled workers from other countries.¹⁸

Table 3.4: Country of Birth for Immigrants in Santa Clara County, FY 1996

Country	Immigrants	Percent
Vietnam	2,390	17.4
Philippines	2,047	14.9
Mexico	1,704	12.4
India	1,399	10.2
Taiwan	960	7.0
China	883	6.4
Iran	455	3.3
Korea	267	1.9
Other	3,630	26.5

Source: State of California, Department of Finance.

Educational data for 1990 provides insight into how the Silicon Valley as a region differs from the rest of the nation. As Table 3.5 shows, in 1990 three quarters of working age adults in the United States had a high school degree, while only one fifth possessed a four-year college degree or more. By contrast, in the Silicon Valley, more the four-fifths of residents completed high school, while one third attained a bachelor's degree or higher. These data are consistent with stories about the preference for higher skilled labor in the new economy, and help to explain why median wages are substantially higher in the Silicon Valley.

**Table 3.5:
Distribution of Educational Attainment among Working Age Adults,
United States and Santa Clara County**

EDUCATIONAL ATTAINMENT	United States		Santa Clara County	
	Persons 25 years and over			
	158,868,436	100.0%	974,783	100.0%
Less than 9th grade	16,502,211	10.4%	78,169	8.0%
9th to 12th grade, no diploma	22,841,507	14.4%	96,954	9.9%
High school graduate	47,642,763	30.0%	183,546	18.8%
Some college, no degree	29,779,777	18.7%	215,905	22.1%
Associate degree	9,791,925	6.2%	82,667	8.5%
Bachelor's degree	20,832,567	13.1%	200,081	20.5%
Graduate or professional degree	11,477,686	7.2%	117,461	12.0%
Percent high school graduate or higher		75.2%		82.0%
Percent bachelor's degree or higher		20.3%		32.6%

Source: 1990 Census, Summary Tape File 3

¹⁸ For more on the role of skilled immigrants, particularly those of Chinese and Indian descent, to the Silicon Valley, see AnnaLee Saxenian's *Silicon Valley's New Immigrant Entrepreneurs* (Public Policy Institute of California, 1999)

Taken together, these data reveal a county that is dense, diverse, and increasingly educated. It is this cadre of workers – particularly those with greater educational attainment – that has provided the fuel for the expansion of the new economy in the Silicon Valley. Nevertheless, a core of less educated workers remain, many of who are concentrated in low-income communities and represent members of racial and ethnic minorities.

In the community of East Palo Alto, whose current population is 30,350, 1990 Census data reveal that two-thirds (61%) of the population has a high school diploma or less education, and only 16% has a four-year degree or more. Not coincidentally, East Palo Alto is also one of the more diverse communities in the Silicon Valley, where 54% of the community is of Hispanic origin, 36% are African-American, and 9% are Asian/Pacific Islander. In the Mayfair neighborhood of roughly 8,300 residents, four out of five (80%) of working age adults do not have a high school degree, while only 6% possess a four-year college degree. Mayfair also represents one of the more diverse communities in the Valley. According to 1995 estimates, the population is 80% Hispanic origin (more than 90% of whom are Mexican American), 14% Asian/Pacific Islander, 3% Caucasian and 2% African American.

Both East Palo Alto and East San Jose represent communities with a vastly different demographic profile than the Silicon Valley as a whole. They are both more racially and ethnically mixed, with East Palo Alto representing a low-income community in transition, and Mayfair reflecting a largely immigrant neighborhood. Furthermore, these two communities represent concentrations of workers who have considerably fewer skills and resources than the average resident in the Valley. Focusing on East Palo Alto and East San Jose provide an opportunity to understand the effects of the Silicon Valley boom on the least educated and most vulnerable residents in the Silicon Valley.

Table 3.6: Occupational Distribution, United States and Santa Clara County

OCCUPATION	UNITED STATES			SANTA CLARA COUNTY		
	Employed persons 16 years and over	115,681,202	100%	Rank	806,917	100.0%
Executive, administrative, and managerial occupations	14,227,916	12.3%	3	131,775	16.3%	2
Professional specialty occupations	16,305,666	14.1%	2	150,306	18.6%	1
Technicians and related support occupations	4,257,235	3.7%	10	49,405	6.1%	7
Sales occupations	13,634,686	11.8%	4	86,644	10.7%	4
Administrative support occupations, including clerical	18,826,477	16.3%	1	127,907	15.9%	3
Private household occupations	521,154	0.5%	13	2,454	0.3%	13
Protective service occupations	1,992,852	1.7%	12	10,869	1.3%	12
Service occupations, except protective and household	12,781,911	11.0%	6	66,272	8.2%	6
Farming, forestry, and fishing occupations	2,839,010	2.5%	11	11,131	1.4%	11
Precision production, craft, and repair occupations	13,097,963	11.3%	5	85,578	10.6%	5
Machine operators, assemblers, and inspectors	7,904,197	6.8%	7	43,228	5.4%	8
Transportation and material moving occupations	4,729,001	4.1%	8	18,536	2.3%	10
Handlers, equipment cleaners, helpers, and laborers	4,563,134	3.9%	9	22,812	2.8%	9

Source: 1990 Census, Summary Tape File 3

Standing in stark contrast to the demographic characteristics of Mayfair and East Palo Alto is the occupational distribution of the Silicon Valley. As previously mentioned, the Valley has a labor force that is proportionally more educated than the general populace. The occupational distribution is similarly skewed, and an examination of Table 3.6 bears this out. The table presents the occupational distribution of Santa Clara County compared with the nation as a whole, and while it does not measure the demand for employment, it gives a general idea of job structure. These data show that there are many more high status and presumably higher skill and high wage jobs in the Valley than nationwide. For example, the occupation with the largest occupational share nationwide is administrative support occupations, compared with professional specialty occupations in the Valley. Furthermore, while executive and professional occupations account for roughly one-quarter of all occupations nationally, these categories comprise over one third of all jobs within the Silicon Valley. Similarly at the low end of the occupational distribution, 15% of the country's workers are machine operators, transportation workers or general laborers, compared with only 11% in the Valley.

What are the implications of these data for network use? Certainly the data suggest that – absent increases in skill – using networks to achieve occupational mobility will be limited for low-skill job seekers. And given the increases in the cost of living, the proportion of accessible occupational opportunities poses a challenge for low-skill workers. However, networks could be an effective means of communicating where the occupational opportunities exist, although the structure alone will not get people jobs. To the extent that greater familiarity with the occupational structure informs individual decisions about future training and skills attainment, having networks that transcend the low status occupations remains important. Networks can be an effective means for exposing lesser skilled job seekers to entry-level occupations within the industrial sectors with the greatest growth, such as the technology cluster industries. And as I shall argue in subsequent chapters, this exposure is vital for workers to have an understanding of potential career pathways with opportunities for long-term upward mobility.

INDUSTRIAL MIX: A COMPARATIVE ANALYSIS

To better understand the shifts in the Silicon Valley since 1970, I employed the US Census Bureau’s PUMS data set to conduct analysis on Santa Clara County, comparing 1970 and 1990 occupational and industrial data. Table 3.7 shows the changes in the industrial mix for the 10 largest industries in Santa Clara County between 1970 and 1990.

**Table 3.7: Industrial Mix for Santa Clara County
10 Largest Industries**

1970	1990
1. Electrical Machinery	1. Computers and Related Equipment
2. Elementary and Secondary Schools	2. Electrical Machinery, NEC
3. Ordnance	3. Construction
4. Eating and Drinking establishments	4. Eating and Drinking establishments
5. Hospitals	5. Elementary Schools
6. Canning and Preserving	6. Hospitals
7. Colleges and Universities	7. Not specified Electrical Machinery
8. Department and Mail order (retail)	8. Guided Missiles/Space vehicles
9. Trade Contractors	9. Colleges and Universities
10. Radio, TV and Communications Equipment	10. Real Estate

NB: Computer and related equipment was not a separate industry in 1970. It was included in Electrical Machinery.
Source: 1970 PUMS, 1990 PUMS

At first glance, this table demonstrates that there are actually more similarities than differences between the 1970 and 1990 data. Half of the top 10 industries in 1990 are also on the list in 1970, showing the consistency of the industrial mix over time.¹⁹ However, the nature of local industry in the Valley has evolved. For example, the disappearance of *Canning and Preserving* from the 1990 list reflects the decline of the agro-economy for the county as a whole.

Differences in the lists reflect both the changing classification of the census as well as the evolution of technology and American pastimes. While *Radio, TV and Communications Equipment* is no longer on the list, *Computers and Related Equipment* is the highest-ranking industry, reflecting the tremendous growth in the computing worldwide. However, as the Hewlett-Packard story suggests, radio and communications were the founding technology of the computer industry, and thus what looks like the disappearance of communications may be captured in *Computers and Related Equipment*. Similarly, the trade contractors of the 1970s may be represented by the construction industry in 1990, while *Ordnance* may be replaced by *Guided Missiles/Space Vehicles*.

One industry not present in 1970 but ranking 10th in 1990 is *Real Estate*. The presence of this newcomer to the list, coupled with the high ranking of *Construction*, reflects the tremendous population growth in Santa Clara County in the ensuing twenty years and the importance of land for both domestic and commercial purposes. Similarly, *Trade Contractors* in 1970 has been replaced by *Construction* by the 1990s. The rise of construction in the Silicon Valley demonstrates how much development has occurred in the region, and explains the accordant rise in land values.

¹⁹ It should be noted that changes in the ways in classification of the census categories make a clean comparison difficult. For example, in 1970 Electrical Machinery was the leading industry in Santa Clara County. However, by 1990 we this category broken out into “Electrical machinery not elsewhere classified” and “Not Specified electrical Machinery.”

Table 3.8 represents the ten largest industries in Santa Clara County for those aged 25-64, stratified by educational level. For those with a high school degree or less, the industrial distribution in 1970 is quite similar to that of the general population as a whole (Table 3.6), with eight of the same industrial clusters represented on both lists. *General Building Contractor* and *Grocery Stores* are the only two industries more common with this group. (*Colleges and Universities* and *Radio, TV, and Communications Equipment* are missing from the list.) By 1990, the industrial mix had remained somewhat stable in for lesser skilled workers: 4 of the 10 industries prominent for the least skilled workers in the 1970s were still significant in 1990.

**Table 3.8: Industrial Mix for Santa Clara County
10 Largest Industries, Ages 25-64**

High School Degree or less	
1970	1990
1. Electrical Machinery	1. Eating and Drinking establishments
2. Canning and Preserving	2. Construction
3. Ordnance	3. Services to Dwellings
4. Eating and Drinking establishments	4. Agricultural Production, crops
5. Elementary and Secondary Schools	5. Electrical Machinery, NEC
6. Special Trade Contractor	6. Not specified Electrical Machinery
7. Hospitals	7. Canned/frozen/preserved fruits & vegetables
8. Department and Mail order (retail)	8. Not specified Manufacturing
9. General Building Contractor	9. Computer and Related Equipment
10. Grocery Stores	10. Hotels and Motels

Source: 1970 PUMS, 1990 PUMS

Between 1970 and 1990, *Eating and Drinking Establishments*, *Canning and Preserving*, *Electrical Machinery* and various forms of *Construction* still provided significant employment opportunities for those with the least skills. The disappearance of *Ordnance* from the list likely reflects the overall decline in the military industrial complex in the Valley. Likewise, the appearance of *Computers and Related Equipment* reflects the dominance of this industry in the 1990s. Other shifts in the list may reflect the extent to which particular industries require in increasing skills and credentials, such as the decline in workers in *Elementary and Secondary Schools* and *Hospitals* since 1970. Instead by 1990, non-skilled industries such as

manufacturing, the hotel industry, and home services have risen.²⁰ Finally, it is also worth noting that by 1990, compared with the largest industries overall, only half of the largest occupations (Table 3.7) employed those with a high school degree or less.

Finally, Table 3.9 shows the industrial breakdown for those with some college education. The data indicate that in 1970 those with some college worked in 6 of the 10 top industries for the population as a whole (Table 3.7). They also branched out into other industrial sectors such as public administration, insurance, telephone wire and radio and electrical computing equipment. Only half of these industries are still common among this group by 1990. However, when comparing the industrial breakdown in 1990 for those with some college to the general population, only one industrial sector is represented among those with some college that is not in the general population (retail grocery stores). Thus, those with some college are almost perfectly reflected in the employment distribution of the county as a whole, compared with only half of those with a high school degree or less.

**Table 3.9: Industrial Mix for Santa Clara County
10 Largest Industries, Ages 25-64**

Some College	
1970	1990
1. Electrical Machinery and equipment, NEC	1. Construction
2. Ordnance	2. Electrical Machinery, NEC
3. Hospitals	3. Computer and Related Equipment
4. Local Public Administration	4. Eating and Drinking establishments
5. Elementary and Secondary Schools	5. Not specified Electrical Machinery
6. Department and Mail order (retail)	6. Elementary Schools
7. Radio, TV and Communications Equipment	7. Hospitals
8. Electrical Computing Equipment	8. Real Estate
9. Telephone, wire and radio	9. Grocery Stores (retail)
10. Insurance	10. Guided Missiles/Space vehicles

Source: 1970 PUMS, 1990 PUMS

²⁰ The Californian Statistical Abstract shows that throughout the 1990s this general trend rang true. Unskilled workers were in greater demand in industries such as goods producing industries (2,799,000 to 3,091,000), hotel services (73,000 to 86,000) and other services (448,000 to 582,000). These represent percentage changes of 10%, 18% and 30% respectively, compared with a statewide change in demand for workers between 1991 and 2000 of 200%. (CA Department of Finance, 2001)

Between 1970 and 1990, there is stability in four of the industries most common among those with some college: *Electrical Machinery, Computer Equipment, Schools and Hospitals*. However, most striking about the 1990 data for those with some college is how similar the industrial mix is to the 1970s data for those with a high school degree: six of the ten occupations in 1990 appear on the 1970 list for Table 3.7. This suggests that the opportunity structure for those with greater skills and or credentials is similar to those with only a high school degree in the 1970s.

County Business Pattern data (Table 3.10) provide 1998 estimates displaying where workers are concentrated within Santa Clara County. These data show that the Manufacturing sector accounts for fully one-quarter of all workers, followed by Professional and Technical Services, the Retail Trade and Administrative and Support Services (9%). However, together these three sectors account for one fourth of all workers (27%), suggesting how significant the services sector remains in the Valley. Nevertheless, 40% of the annual payroll for the County is concentrated in manufacturing, while these three sectors make up only 21% of payroll. These data suggest that manufacturing offers better wages per employee than do the other three sectors combined.

Table 3.10: 1998 County Business Patterns for Santa Clara County

2 digit SIC code	Industry	Number of Workers	Percent of Workers	Annual Payroll (\$1000)	Percent of Annual Payroll
	TOTAL	946,363	100.00%	47,589,390	100.00%
11	Forestry, Fishing, Hunting & Agriculture	188	0.02%	4,520	0.01%
21	Mining	95	0.01%	5,534	0.01%
22	Utilities	1,827	0.19%	111,152	0.23%
23	Construction	40,792	4.31%	1,840,153	3.87%
31-33	Manufacturing	240,608	25.42%	18,926,564	39.77%
42	Wholesale Trade	66,206	7.00%	4,306,076	9.05%
44-45	Retail Trade	81,748	8.64%	1,898,122	3.99%
48-49	Transportation and Warehousing	11,232	1.19%	307,060	0.65%
51	Information	48,086	5.08%	4,393,580	9.23%
52	Finance and Insurance	19,746	2.09%	1,043,745	2.19%
53	Real Estate	13,484	1.42%	450,780	0.95%
54	Professional, Scientific and Technical Services	85,359	9.02%	5,732,852	12.05%
55	Management	46,032	4.86%	3,292,155	6.92%
56	Admin, support and other services	81,624	8.63%	2,151,996	4.52%
61	Educational Services	27,724	2.93%	925,832	1.95%
62	Health Care	69,613	7.36%	2,503,260	5.26%
71	Arts, Entertainment & Recreation	11,230	1.19%	223,183	0.47%
72	Accommodation and Food Services	59,730	6.31%	787,343	1.65%
81	Other Services	28,589	3.02%	671,899	1.41%
95	Auxiliaries Unclassified	11,861	1.25%	1,000,132	2.10%
99	Establishments	589	0.06%	13,452	0.03%

Source: County Business Patterns, Bureau Of The Census

Table 3.11 provides a breakdown of the manufacturing sector. These data show how robust the computer industry is in the Silicon Valley. *Computer and Electronic Product Manufacturing* accounts for one-third (36%) of the manufacturing sector, with *Semiconductors, Communications Equipment* and *Computers and Peripheral Equipment* containing the greatest

concentration of workers. Together these three manufacturing units account for three quarters (76%) of all firms in the *Computer and Electronic Product Manufacturing* sub-sector. These data demonstrate the high demand for workers in computer-related industries.

Table 3.11 Manufacturing in the Computer and Electronic Product Manufacturing Sub sector

NAICS Code	Description	Number of Establishments	Value of Shipment (\$1000)	Annual Payroll (\$1000)	Paid Employees
334 (Total)	Computer and Electronic Product Mfg	1068	\$ 55,077,331	\$ 9,490,567	166,578
3341	Computer & Peripheral Equipment mfg	165	\$ 16,421,348	\$ 2,041,315	32,876
3342	Communications Equipment Mfg	137	\$ 14,466,612	\$ 1,971,548	36,058
3343	Audio & Video Equipment Mfg	11	\$ 83,236	\$ 23,747	631
3344	Semiconductor & Other electronic components	510	\$ 17,430,347	\$ 3,626,229	64,795
3345	Navigational, measuring, medical & control instruments	202	\$ 5,998,425	\$ 1,644,857	28,054
3346	Mfg & reproducing magnetic and optical media	43	\$ 677,363	\$ 182,871	4,164

Source: 1997 Economic Census

These data show that despite the reported growth of the services sector, manufacturing still provides a significant share of employment and strong wages. However, 69% of manufacturing is concentrated in the computer and electronics sub sector, and a significant share of these workers are in semiconductors. This suggests that the skill level required for these jobs are higher than the skills needed in the 1970s for manufacturing jobs. The inability of lesser skilled workers to keep pace with skill requirements undoubtedly has contributed to their weaker labor market position today, irrespective of the ideals of meritocracy.

POVERTY AND INCOME IN THE SILICON VALLEY

In 1999 the estimated population of the entire Silicon Valley numbered 2.5 million. As previously mentioned, based on Santa Clara County data we know that half of these denizens are white, one quarter are Hispanic, one-fifth are Asian, and barely 5% are African American.

Roughly one-third (32%) of the population is foreign born, 85% have a high school degree and one-third have a bachelor's degree.

These data, however, do not give us a sense of how the Valley is faring economically, and the story here is one of vast inequality. For example, a recent study by the Joint Venture Silicon Valley (JVSV) estimates that the average wage in 2000 for workers in the Silicon Valley was \$66,400, a 9% increase over the previous year. These wages are even higher in the cluster industries, as Table 3.12 demonstrates.

Table 3.12: Wage Data for the Silicon Valley, 2000

Wage Variable	Actual Wage	Percent Increase ²¹
Mean Silicon Valley Wage	\$66,400	9%
Mean National Wage	\$36,100	2%
Mean Silicon Valley Cluster Wage	–	20%
Software Cluster Wage	\$124,700	25%
Computers/Communications Cluster Wage	\$110,000	32%

Source: Based on analysis for the Joint Venture Silicon Valley Network *Index of the Valley, 2001*

However, Joint Venture's household income data show that there is a significant gap between those at the higher end of the income distribution and those at the lower end. In 1999 the average household income for those in the top 20% of the income distribution was \$149,000, while the average household income for those at the bottom 20% was \$40,000. This gap of \$109,000 is significantly larger than the gap \$64,000 at the national level.²² Furthermore, relative to 1993 –the end of the last California recession – the top and bottom figures represent a 7% decline and a 20% increase, respectively.²³

²¹ Percent increase for average Silicon Valley wage and average national wage represent changes from 1999 to 2000. All cluster wage data represent changes from 1998 to 1999.

²²By comparison, national household income for the top 20% was \$82,041, compared with the bottom 20% earning \$17,774. The national data, provided by the Census Bureau, is measured in 2000 dollars.

<http://www.census.gov/hhes/income/histinc/ie4.html>

²³ Household income is inflation-adjusted for 1999 and represents a family of four.

Census estimates for 2000 show that approximately 6.8% of Santa Clara County residents live in poverty (102,478).²⁴ However among the neighborhoods communities under study, these figures are substantially higher. Census data for 1990 show that 17% of East Palo Altans, and 25% of Mayfair residents lived below the poverty line. Among the African American and Latino communities poverty figures are also substantially higher than the county at 23% and 19% respectively. In East Palo Alto, the median household income in 1990 was \$29,531.²⁵ In Mayfair the large number of undocumented residents make household income difficult to estimate. However, a recent survey found that 79% of children enrolled in local public schools receive free or reduced price meals.²⁶ Furthermore, half of all households in the neighborhood receive some type of public assistance.²⁷

These data tell the story of a Silicon Valley that has enormous wealth and pockets of poverty, demonstrating the region's tremendous inequality. Because of the overall cost of living and the tremendous shortage of affordable housing, poverty is concentrated in a few specific neighborhoods. While on its face the City of East Palo Alto statistically is faring slightly better than Mayfair, these data distort the actual impacts of regional growth. The data do not capture the extraordinary impact of undocumented immigration on these communities, nor do they in East Palo Alto reflect the tremendous out-migration of long-term residents being displaced by new development. Furthermore, the fact that incomes are rising in East Palo Alto is not because wages or skills are improving, but rather because of the gentrification occurring in this centrally located community. East Palo Alto appears to be better off because many of its residents no

²⁴ Estimates suggest that the range is between 5.5% and 8.1%.

²⁵ These data for the city of East Palo Alto are based on analysis by Claritas, using the 1990 US Census 100% Count. Projections for 1999 suggest that EPA has grown wealthier, with the median household income estimated at \$41,241. This income growth is consistent with the gentrification of East Palo Alto as housing pressures in the Valley have brought significant displacement and redevelopment to the city.

²⁶ Mayfair Neighborhood Index of Progress, 2000 Report.

²⁷ Santa Clara County Department of Employment and Benefits, 1999

longer live there. Mayfair, by contrast, remains a port of entry for many immigrants, and Mayfair's transient population helps to maintain its poverty status.

SUMMING UP

The Silicon Valley has emerged as an interesting study site in large part because of the paradoxical nature of the place: It is a region with high tech and service-based industries, with white collar and blue collar jobs, with an American and foreign born workforce, and with a population at both extremes of the income distribution. In short, it represents the complexities of a dynamic economy in an increasingly globalized world. Technology, and the shortage of skills it produces, is in many respects the culprit that has caused many of these trends (Krugman 1994). It has changed the core industry of the Valley itself, demanding new sets of workers who are vastly more skilled to work in high tech firms, and less skilled sets of workers to support this new cadre of skilled workers. This new workforce has been largely dependent on foreign-born labor at both ends of the income distribution.

Viewed in this context, the communities of East Palo Alto and East San Jose are not anomalies with their generally low-wage, lesser skilled populations. Instead, they are structurally induced outcomes of the economic boom entirely consistent with the income inequality of the Valley, providing the only affordable communities in which low-income residents may hope to live. East Palo Alto and Mayfair are low-income, low-skill, working poor communities which, while not "hyper-segregated," are racially isolated with unemployment rates twice that of the region.²⁸ While the economic fortunes of one resident over another are explained by an individual's skills, the broader pool of resources to which a resident has access also may explain economic differences between residents. One critical resource is a resident's

²⁸ This trend is changing in East Palo Alto due to gentrification. However within the city, because of the patterns of redevelopment, there is still racial and economic segregation.

social network. To understand more about the nature of these networks we must turn to the next chapter.

Finally, this chapter has also shown how – despite a culture of meritocracy – structural shifts in the labor market and the premium for highly skilled workers suggest limited advancement opportunities for low-skill workers. In the next two chapters, we will consider how the new economy privileges those who effectively use networks for job search, and the ramifications of this dynamic on lesser skilled workers.

CHAPTER 4
TROUBLE IN PARADISE:
THE CHALLENGES OF NETWORK USE FOR LOW-SKILL WORKERS

This chapter analyzes how networks are used within the job search process and discusses why the use of networks is problematic for low-skill workers. Here I present the results of the questionnaire completed by job seekers identifying the range of their personal ties amongst the fastest growing occupations and industries in the Silicon Valley. This data generally shows that many job seekers have few ties to the high tech industry. When job seekers do have ties to the growth engines of the region, their associates tend to concentrate in low-wage, low-status occupations. I discuss these ties in light of my argument that low-skill workers are less intentional about their use of networks than the literature suggests, activating their strong ties reluctantly and rarely activating the weak ties that could provide broad access to employment in jobs with greater career opportunities. The combination of these activities serves to reinforce their existing class position and marginalize their opportunities for upward mobility.

The theoretical discussion underlying this chapter hinges upon understanding the relationship of networks to two key variables: educational attainment and economic strength. My argument is that the effectiveness of networks differs by both the skill level of the job seeker, and the condition of the economy in which networks operate. Much of the literature, summarized below, discusses the role of networks for those with greater educational attainment. My study deepens this literature in two significant ways: it concentrates on those with less educational attainment, and it considers the strength of the regional economy.

The question of the economy is particularly important not simply because the economy is strong, but primarily because the economy is in transition. This “new economy” which privileges highly skilled workers has also impacted the nature of job searches. From the demand

side of the labor market, short product cycles and the quest for innovative technologies places a premium on improving the quality of labor market information in order to increase the efficiency of hiring workers. The imperative for improved labor market matching has increased reliance on networks to improve the efficiency of hiring not only skilled workers, but also the lesser skilled workers who impact the firm's overall productivity. From the supply side perspective, better information may lead to employment opportunities that enable lesser skilled workers to both gain skills that will contribute to their overall career advancement, as well as to earn better wages that lead to upward mobility.

The chapter is organized as follows: the first section provides a review of how networks for the purpose of job search have been understood in the academic literature. This is followed by a detailed account of the composition of the social networks for the people in my study: how many networks they had, in what industries and occupations, and how this compares with historical data. I then discuss how job seekers use their networks as resources for finding jobs, examining how networks are activated and why they do not get activated. The chapter ends with a discussion of how the social networks of low-skill workers might provide them with opportunities for upward mobility.

THE PRISM OF NETWORKS: A REVIEW OF THE LITERATURE

Widely regarded as the seminal text on social networks is Mark Granovetter's *Getting a Job (GAJ)*, first published in 1974. In its broadest sense, *GAJ* determined that social ties significantly affect one's ability to find employment. Granovetter's study – which focused on male, white-collar, middle class workers or “PTMs” (professional, technical and managerial workers) – specifically argued that “weak ties” offered the best opportunities for success in getting a job. He reasoned that these remote contacts were more effective because a substantially

broader pool of information about jobs would be available to the job seeker than with a close contact. *GAJ* was path breaking because it was among the first literature to empirically illustrate that the labor market is embedded within a system of social relations. If in fact labor market information is conveyed through this system, untapped social ties may result in inefficiencies in the labor market (Granovetter 1974; Granovetter 1985).

While Granovetter's theory of weak ties may provide the right labor market signals for middle class job seekers rich in broad social ties, weak ties may also prove more problematic for lesser skilled or working class job seekers. The problem emerges from the fact that low-skill workers entering the labor market are not just looking for a job, but also for opportunities for career advancement and thus upward mobility. Indeed, *GAJ* says very little about upward mobility. Granovetter intentionally "ruled out social class as a confounding variable" in his study because he was interested in studying "sophisticated attempts at job search." (1995, p. 7) While that strategy made sense for the purpose of focusing his study, the widespread acceptability of his findings today call for a broader application of his theory to other social groups. An important distinction, for example, is that middle class workers generally do not use networks to achieve upward mobility. However, networks do serve to maintain class position. Maintaining class status for lesser skilled workers has the detrimental effect of maintaining them in a cycle of poverty at a time when public policy – particularly the Temporary Assistance for Needy Families legislation – limits the amount of lifetime public assistance one can receive.

Studies of blue-collar workers conducted prior to Granovetter's work showed that these job seekers relied on informal search methods to find jobs. Recent entrants to the labor market were even more likely to rely on these methods. It would seem that employers assume that these workers have the requisite hard skills, and thus they are more concerned about a worker's ability

to demonstrate the soft skills required for work. Networks involving a reference are used as a key mechanism for measuring soft skills. As hard skills that garner a wage premium are gained within the workplace, presumably these networks become less important but still matter. Granovetter's study, for example, showed that 80 percent of his sample used networks not only as an information source but also as a job reference. Thus, the composition of one's networks continues to matter for lesser skill workers, even as they improve their skill level. Clearly these networks are necessary but not sufficient for wage growth and economic mobility.

For people who are poor, much of the recent research argues that there is a social mismatch in the labor market (Falcon 1995; Pastor and Marcelli 1998). Since many unemployed people may know very few working people at all, the number of weak ties these job seekers could call upon to help them with their job search would in effect be limited. Thus, for those who constitute the working poor, it is the quality of their networks that is mismatched to those who could provide information about better labor market opportunities. As I demonstrate later in this chapter, my small sample suggests that the problem is not only the simple case of information mismatch. In some circumstances workers do have access to better information pools but there is a two-fold problem of 1) activating those networks and 2) the disincentive for good ties to share both their labor market information *and* their referral capacity with a worker who faces other labor market barriers. This may explain why even low-skill workers who do not live in the deep social isolation described by Wilson are most likely to rely on networks that extend laterally rather than extending upward, preventing occupational and economic mobility.

Nan Lin extended Granovetter's research on social ties by examining the broader concept of social resources and studying the ways in which ties might be mediated through social structure. Rather than focusing on the breadth and volume of ties, Lin examines the distribution

of ties within an individual's social structure. With the premise that all forms of economic activity – including labor market matching – takes place within the context of a prevailing social structure, social structure is

a network of persons whose positions are rank-ordered according to certain normatively valued resources, such as wealth, status, and power. Thus, social structure can be envisioned as a pyramidal and hierarchical structure in which resources and access to resources are embedded. (Lin and Dumin 1986, p. 366)

Those with lesser skills in the labor market are presumably at the base of that pyramid, with several ties that extend laterally, and many fewer resources that extend up.

Lin and Dumin examine the extent to which workers have access to occupational opportunities through social ties by testing which factors contribute to providing access. They ask: Is access to an occupation contingent upon a person's initial position in the occupational structure, or is access to occupations contingent upon the type of social ties providing such access? The authors conclude that the "strength of position" – that is, the occupational position of the people the job seeker knows – and the "strengths of ties" – that is, how well the job seeker knows them – are the most important characteristics affecting access not only to "high prestige" occupations, but also to a broad range of occupations. The interaction between these dynamics provides for a high degree of occupational opportunity. In further research, Lin concludes that strong ties are most useful for promoting contacts with those who share your class status, but occupational mobility also requires the necessitates weaker ties that help one to access information from those higher up in the class structure (Lin 1990).

However Lin's findings do not account for the fact that the social ties of the poor tend to be more homogenous due to the social isolation they face living in poor neighborhoods (Wilson 1987; Wilson 1996; Tigges et al 1998). By definition, neighborhoods that lack middle class

social institutions as well as a substantial number of jobholders will also lack broad social resources. Thus, the poor may be more bound by their social status and thus unable to access those higher up in the occupational hierarchy. As a result, the weak ties theory may not be applicable to those at the bottom of the labor market, since their social resources are restricted (Granovetter 1995).

Recent studies show that the role of social networks in mediating labor market opportunities may be further influenced by variables such as race, ethnicity, immigrant status and gender. Waldinger's analysis of immigrant groups in New York City shows that ethnic groups dominate particular niches in local labor markets, serving to help newcomers become established in a job or position, and ultimately in an industrial sector (Waldinger 1996). Occupational mobility can thus be found within a particular industrial sector, but it is very difficult for immigrants to become employed in other sectors of the local economy, often because the groups who occupy those niches actively work to keep outsiders from gaining a foothold in their "turf." Furthermore, the biases of employers in maintaining certain groups in particular occupations only serves to reinforce this dynamic (Hanson and Pratt 1995). To the extent that there is occupational and industrial stratification – that is, certain jobs or industrial sectors sit higher up on the hierarchy than others because of the hours, wages or status they garner – certain groups can become trapped within their niche, limiting their economic mobility.

Waldinger's findings are particularly significant because low-income communities are largely composed of immigrants, as they have been historically and as they are in my sample. However, many of today's immigrants hail from third world countries and are perceived in the United States as a racial or ethnic minority. There is little research to date that documents how their new status as a minority in the United States, and their inability in many cases to transcend

the disadvantages of their minority status, influences their ability to achieve greater upward mobility in their new homeland.

Using the Multi-City Study of Urban Inequality (MCSUI), Smith examines how race, ethnicity and gender differences affect the ability to mobilize different types of job contacts, the influence those contacts have in the labor market, and the effect those contacts have on subsequent wages. She concludes that while white men have greater access to social resources than do their counterparts, the mobilization of these networks themselves do not appear to result in a wage differential (Smith 1999), supporting my claim that networks serve to maintain the class position of middle class workers. Smith's work supports Lin and Dumin's theory that the class status of the job seekers themselves matter a great deal, since she found that the benefits realized by one's social resources were contingent upon one's own class status. Smith found that minority blacks and Latinos living in racially segregated neighborhoods had unstable labor market connections. Using these tenuous connections, job seekers could not depend on their networks to diffuse information about "good" jobs because they could not reliably access their contacts. Smith's research also supports the proposition that the weak ties theory may not be applicable to low socioeconomic status (SES) individuals because their weak ties will not be substantially different in class and position than their strong ties (Brass 1985).

The work of Johnson, Bienenstock and Farrell examines how a particular type of social tie – bridging social networks – affect the labor force participation of those who are marginalized in the labor market. In their study, bridging social networks are defined as those ties which connect women, particularly disenfranchised women, to substantively different pools of information, resources and, consequently, opportunities (Johnson, Bienenstock and Farrell 1999). Using the MCSUI data for women in Los Angeles, they find that education-based "bridging

networks” – that is, networks that connect women to contacts who have more than a high school education – enhance overall female labor force participation. However, they also find that the factors that influence labor market experiences vary significantly by race, with bridging social networks being vastly more important for black and Hispanic women than they are for white women. While labor force participation may be positively influenced, these bridging effects say little about the ability of black women and Latinas to activate these social resources, and thus little about their influence on labor market mobility. Consequently, black and Hispanic women may have access to and be employed in positions that give them little opportunities for advancement.

Summing Up

The past three decades of literature about social networks for the purpose of job search has extended our knowledge of the role of networks. The seminal Granovetter work emphasized with importance of the breadth of social ties. However, Granovetter’s study also circumscribed our understanding of how social networks function by focusing on predominantly middle class workers whose employment opportunities, job search behavior and work priorities differ from other classes of workers. His study focused on “professional, technical and managerial” male workers who made “intensive and sophisticated attempts at job search” and who were ultimately successful in their quest for desired employment. This sample does not speak to the challenges encountered by those with lesser skills, those who are unemployed, those who must take jobs to provide for themselves and their families without regard to advancing their career.²⁹

²⁹ Robert Bellah offers the following distinctions between a job and a career. A job provides one to make money and make a living. “It supports a self defined by economic success, security and all that money can buy.” A career suggests achievement and advancement within an occupation. “It yields a self defined by a broader sort of success which takes in social standing an prestige and by a sense of expanding power and competency that renders works itself a source of self-esteem.” (p. 66)

Other researchers interested in how those with lesser skills become employed have redressed the limitations of Granovetter's work. Lin and Dumin focused more on the tie distribution among the working class, while Harrison and Weiss (1998) studied tie quality. However, these studies focus too narrowly on network composition, and undertheorize the process of network activation.

The literature has left some open questions about the patterns of connectivity we expect to see among low-skill workers. How connected are lesser skilled workers to other workers? Are poor job seekers socially isolated, as Wilson suggests, preventing them from both finding work and from having the societal supports required to be successful at work? Or are they part of the occupational niches discussed by Waldinger, only finding out about jobs targeted for their ethnic or racial group? And is it possible for both Waldinger and Wilson to be right: do low-skill job seekers live in socially isolated communities bereft of social institutions but full of laborers who can connect job seekers only to particular occupational niches?

A second set of questions concerns the type of networks people have, and how a booming high tech region shapes those networks. What type of networks do low-skill people have? Are they bonding networks to the local residents and other workers like them, or bridging networks to different pools of information? To what extent are their bridging networks connected to the growths sector of the regional economy?

And finally, if low-skill workers do have bridging networks, to what extent do these networks get activated? Job seekers with extensive but weak ties will not benefit from these ties if social networks are not activated. To the extent that bridging ties exist, there are both disincentives and social pressures, as we shall see, that prevent their use. The remainder of this

chapter closely examines the relationship of social ties to the growth sectors of the economy, and the process of network activation.

THE OCCUPATIONAL AND INDUSTRIAL TIES OF LOW-SKILL WORKERS

This section provides a detailed account of the composition of the networks of the 44 respondents in my study. My intention is to reconsider our current understanding of how networks operate for those residing in low-income communities. As such, the data I have gathered is exploratory, providing a theoretical basis for refining some initial theories about social networks, particularly in light of the flexible and dynamic labor markets of the new economy.

The respondents identified a total of 844 employment ties within their social networks, 51% of which were occupational ties and 49% of which were industrial ties. Occupational ties were defined as the people a job seeker knows –the family, friends, acquaintances or other associates – who are employed in one of the 20 fastest growing occupations in Santa Clara County. Industrial ties were those people a job seekers knows who are employed in a rank order of the fastest growing industries. While the mean number of ties per respondent was 19, the number of total ties ranged from three ties for one respondent to 67 ties for another. Table 4.1 provides an account of these figures.

Table 4.1: Total Number of Ties among Respondents

	Number of ties	Percent	Mean	S.D.	Min	Max	Range
Total	844	100	19.18	15.63	3	67	64
Occupation	434	51	9.86	8.25	0	34	34
Industry	410	49	9.32	8.59	0	33	33

³⁰ It is important to note that this data differs from the data collected by Granovetter in that I am concerned with examining the range of information ties within a respondent’s contact pool, while Granovetter compared a variety of search methods for PTM workers.

Table 4.2 examines the number of ties by several demographic variables: race, gender, city of residence, age, immigrant status, employment status and educational attainment. Overall these data suggest that race/ethnicity, city of residence, age and educational attainment have a smaller effect on the mean number of ties of low-skill workers than do gender and employment status.

Although there were three times as many women in the study than men, the mean number of contacts remained the same: both men and women averaged 19. While women had a greater range of ties than did men, these ties may not be as effective in leading to better employment opportunities. Research suggests that women's ties tend to be concentrated in the domestic sphere where women may not know other working women, while men's ties are concentrated in the work sphere (Moore 1990, Johnson et al. 1999).³¹ Thus, these contacts may not be as effective at leading to greater information about jobs.

³¹ By the domestic sphere, I mean that women's work centers around responsibilities at home while men are engaged in money-making work outside of the home. The literature suggests that since women provide the preponderance of child care and perform the lion's share of household domestic chores, their networks tend to be more focused on kin and family rather than workplace based associates or alternate pools of information (Fischer 1982)

Table 4.2: Total Number of Social Ties by Variable

	Number of respondents	Number of Ties	Percentage of total ties	Mean	S.D.	Min	Max	Confidence level (95%) ³³
Male	12	231	27%	19.25	16.17	4	53	10.27
Female	32	613	73%	18.79	15.68	3	67	5.65
EPA	31	493	58%	15.79	15.29	3	67	5.61
SJ	14	357	42%	25.50	14.60	7	53	8.43
Employed	24	460	55%	19.17	16.15	3	67	6.82
Unemployed	20	384	45%	19.20	15.40	3	53	7.21
Asian	5	121	14%	24.20	18.19	3	45	22.58
Black	22	406	48%	18.45	15.73	4	67	6.97
Latino	16	264	31%	16.50	13.14	3	42	7.00
Immigrants	12	148	17%	12.33	12.32	3	45	7.83
18 – 24	2	72	9%	36.00	1.41	35	37	12.71
25 – 29	6	94	11%	15.67	14.25	5	42	14.95
30 – 39	18	273	32%	15.17	14.76	3	67	7.34
40 – 49	14	278	33%	19.86	15.49	4	53	8.94
50 and over	3	119	14%	39.67	13.05	25	50	32.42
Less than HS	7	67	8%	9.57	3.99	3	14	3.69
HS diploma	10	186	22%	18.6	19.34	5	67	13.84
More than HS	27	591	70%	21.89	15.43	3	53	6.11

The race and ethnicity data show that the small number of Asian respondents had the greatest mean number of ties (24), while African Americans had slightly more ties (18) than Latinos (17).³⁴ The number of immigrants in the study who often had fewer ties but often stronger social ties skews the number of Latino ties.³⁵ Nevertheless, the mean number of Latino ties does not vary substantially from the mean number of ties for the overall sample (19). However, the mean number of immigrant ties (12) is well below the mean for the entire sample.

Age appears to influence the volume of a respondent's ties. Generally speaking, older respondents were more likely to have greater ties. This trend resulted in those over age 50 averaging forty ties, while those in their 40s and 30s had twenty and fifteen ties respectively, and

³³ The confidence levels for these data are quite high but vary substantially, due in large part to the small population of respondents, and the even smaller sub-group populations. Overall, this data is unreliable in terms of making conclusive statements about the population because the sample is so small. Yet and still, these data may suggest interesting trends for the low-skill job-seekers.

³⁴ It should be noted that the small number of Asian Pacific Islanders in this study, 5, makes this finding uncertain.

³⁵ Falcon (1995) and others have documented the important role the networks play in helping immigrants to settle in their new homeland, and reducing their costs of doing so. Networks often provide housing, money and information about employers and jobs.

respondents aged 25-29 had a mean of sixteen ties. Surprisingly, however, the two respondents below the age of 25 had a significant number of ties, averaging 35 ties between them. In their interviews they indicated that many of these ties were school friends, suggesting that schooling provides an environment for low-skill workers to expand their social networks.

When analyzed by educational attainment, the data reveal that the more education respondents had, the greater the numbers of networks they had. Again, while this is an admittedly small sample, the data show that those with less than a high school education had a mean of 10 ties, while those with only a high school degree had almost twice as many ties at 19. Those with some postsecondary training or education had even slightly more ties than this, at 22. Because 92% of the sample had a HS degree or more, there are too few people in the sample to make any gross characterizations about how those who did not complete high school behave relative to others in the sample. However, it is worth noting that among the six individuals reporting how they found out about their most recent job, four indicated it was through a personal tie, while two used some type of intermediary organization.³⁶ And all of these respondents mentioned talking to their networks as one of their strategies whenever they searched for work. For workers with more than a high school degree, of which there were 27 (or 70% of the sample), networks remained important, but these job seekers were more likely to use a range of strategies. One third of this group (9), heard about their most recent jobs through personal contacts, while 7 used an intermediary agency. Another seven found out about their most recent job through another means.³⁷ In terms of their overall job search behavior, two

³⁶ A total of seven individuals had less than a high school diploma. One person did not report how she found out about her most recent job.

³⁷ Three found out through posted signage, while two use job fairs and two used the newspaper. Four individuals did not report this data.

thirds (18) of this group used networks as a strategy to search for work, while 12 mentioned that they had prior experience search for work through an employment agency.

Finally, the demographic data show surprising differences in the data when looking at city of residence. Residents of East Palo Alto had an average of 16 contacts per person whereas San Jose residents who averaged 26 contacts per person. These figures might be correlated with employment status, since 71% of San Jose residents were employed, compared with 53% of East Palo Alto residents. However, the mean number of contacts was 19 for both employed residents and unemployed residents, suggesting that employment status has little influence on the number of contacts one has.

Overall, the demographic data suggest that the people in my sample are much more connected to the labor market via their social ties than we might expect to see given the literature. In terms of gender, women have many more contacts than expected, given that within the broader social structure women are often concentrated in the domestic sphere rather than in the work place. This data may reflect that the high cost of living in the Bay Area requires multiple workers in a household. The age data, while based on very few respondents, reveal that older residents also have many more networks than the literature suggests. In general older respondents were less socially active and had smaller networks than younger people, consistent with studies showing that people later in the life cycle had fewer social contacts but greater network density, while the young have greater network range (Fischer 1979, Marsden 1987). When the data is reviewed by employment status, unemployed job seekers are not bereft of networks, suggesting that these residents may not be as socially isolated as William Julius Wilson's research claims since the volume of the networks are almost identical with those who are employed. Taken together, these data suggest that the residents of East Palo Alto and East

San Jose possess employment ties. The networks of those in my sample present a face of poverty different than the one offered by Wilson, which highlights social isolation and abandonment.

The data collected on the occupational networks of low-skill job seekers reveal that despite the range and volume of their ties, most of their connections to the labor force are to individuals in low-status occupations. In Table 4.3 I have divided occupations by quartiles to show the most common occupational ties among the sample. The five most common occupations among job seekers' social ties were retail salespeople (39), janitors (35), cashiers (34) secretaries (33) and receptionists (32). With the exception of secretaries, these occupations are amongst the lowest paying jobs in the region. Consistent with the Johnson/Bienenstock study, these data suggest that low-skill job seekers will not benefit from using their social ties to find work because while friends and associates may increase their labor force participation, these jobs are not likely to lead to greater opportunity or upward mobility for job seekers. Instead these positions serve to reinforce their existing class status, just as professional high tech workers in the Silicon Valley use their networks to maintain their own class position during job search.

**Table 4.3:
Occupational Distribution of Social Ties by Quartile and by Contact Type**

	Occupation	FAM	FRD	ACQ	Total
1st Quartile	Salesperson	9	25	5	39
	Janitors/Cleaners	12	17	6	35
	Cashier	13	20	1	34
	Secretary	7	17	9	33
	Receptionist	9	12	11	32
2nd Quartile	Registered Nurses	19	8	4	31
	Computer Engineer	4	16	10	30
	General Manager/Top Executive	6	16	6	28
	Computer Programmer	7	8	7	22
	Electronic Assembler	3	14	5	22
3rd Quartile	Waiters/Waitresses	10	8	1	19
	Sales Reps	2	11	4	17
	General Office Clerk	7	8	1	16
	Hand Packers/Packagers	7	9	0	16
	Guards/Watch Guards	8	5	2	15
4th Quartile	Electrical Engineer	3	6	5	14
	Marketing, Advertising, PR Manager	0	8	3	11
	Systems Analyst	2	6	2	10
	Electronic Technician	1	6	1	8
	Engineer, Math/Science	1	3	4	8
	Total	130	223	87	440

Those employed as secretaries and receptionists might be better resources for job seekers since these white-collar positions are often in large corporate settings that provide greater opportunity for career mobility within the firm as well as better wages and benefits. However, few Silicon Valley firms hire secretaries and receptionists as direct employees. Instead, most secretaries and receptionists become employed through temporary or employment agencies first, and only then are hired on as permanent staff. Thus, job seekers might hope to get information about the internal demand for temporary help within the firms, and perhaps a contact to a temporary agency that has a relationship with the firm. However, the work-based networks of the employees themselves may not benefit those looking for work.

The second quartile of occupational ties contains nurses (31), computer engineers (29), general managers/top executives (28), computer programmers (22) and electronic assemblers (22). Most notable about this quartile are the three occupations connected to the high tech industry, clearly demonstrating the influence of the region's "new economy." While the position of electronic assembler is a low paying job, computer programmers and computer engineers are high status, high wage positions that might afford greater access to information about a range of employment opportunities within a firm or within the industry. Once inside a high tech firm, employees have access to job boards, online information boards, and other information sources providing information about a range of permanent, internal positions. Furthermore, they could also actively use their networks to find out about positions in other companies within the high tech industry.

However, when respondents were asked about the kind of work their friends do as programmers or engineers, many could not describe any specific job functions. This suggests that these data are a better reflection of job seekers who know *someone* in a high status position who is connected to the high tech industry, if not engineers or programmers specifically. Similarly, in the category of general manager/top executive, many respondents knew people who managed others or who were in a decision making position within their organizations rather than CEOs. In both these cases, even though the job seekers may not know people with the specific occupation, their connections to these higher status occupations is important in terms of accessing different pools of information than those provided by cashiers, salespeople and janitors.

The third quartile of occupational ties included waiters and waitresses (19), sales representatives (17), hand packers and packagers (16), general office clerks (16) and guards and

watchguards (15). Significantly, this quartile is dominated by low status occupations. This suggests that there may be some bifurcation among the low status occupations since these jobs are not grouped with the cashiers and janitors. Part of this clustering of occupations is due to the sheer number of jobs generated, that is, many more first quartile jobs are created in the economy and thus show up in people's networks more frequently. However, at least two occupations – general office clerks and waiters and waitresses – are high growth occupations for low-skill workers. Their location in the third quartile may reflect the ways in which particular low-skill occupations are rank ordered among low-skill workers.

In the final quartile of occupations are electrical engineers (14), marketing, advertising and public relations managers (11), systems analysts (10), math and science engineers (8) and electrical engineering technicians (8). While these were the least common occupations among the social ties of job seekers, it is significant that three are within the field of engineering, and four are related to the high tech industry. Only one occupation that might be a good job for low-skill workers – electronics engineering technicians – was found among these occupations. This occupation might be a good prospect for low-skill workers because it has a clear, well-articulated career pathway that could provide a decent salary, benefits, and job security for low-skill workers, but does not require the same kind of educational background and training as an engineer. This occupation might provide a good career opportunity for low-skill workers, even though it is largely out of the scope of their immediate social contacts.

Occupational Wage Data

The Occupational Wage Data presented in Table 4.4 provides the entry-level, mean and median wages of the twenty fastest growing occupations, ranked by the frequency of respondent tie. This table tells us two things: it suggests the socio-economic status of the respondent's

contacts, and it tells us the levels of wages job seekers could expect to earn if a reference from their contact led to a job in that field.³⁸

**Table 4.4:
1998 Wage Data by Occupation According to Respondent Rank**

Respondent Rank	OES Code	Occupational Title	Employment Estimates	Entry-Level Hourly Wage	Mean Hourly Wage	Median Hourly Wage
1	49011	Salespersons, Retail Janitors and Cleaners, Except Maids and	24,260	\$6.51	\$10.24	\$8.12
2	67005	Housekeeping Cleaners	15,310	\$6.63	\$8.34	\$7.62
3	49023	Cashiers	16,110	\$6.18	\$9.03	\$7.52
4	55108	Secretaries, Except Legal and Medical	16,210	\$11.44	\$16.22	\$15.91
5	55305	Receptionists and Information Clerks	10,740	\$7.75	\$11.35	\$11.18
6	32502	Registered Nurses	10,220	\$20.36	\$27.24	\$29.27
7	22127	Computer Engineers	17,720	\$24.62	\$32.30	\$33.78
8	19005	General Managers and Top Executives	26,090	\$20.12	*	\$44.65
9	25105	Computer Programmers	13,440	\$23.14	\$33.69	\$35.25
10	93905	Electrical and Electronic Assemblers	6,060	\$6.65	\$9.44	\$8.46
11	65008	Waiters and Waitresses	11,660	\$5.93	\$6.90	\$6.08
12	49008	Sales Representatives, Except Retail and Scientific and Related Products and Services	8,910	\$12.86	\$23.74	\$20.94
13	55347	General Office Clerks	20,800	\$8.13	\$12.64	\$11.83
14	98902	Hand Packers and Packagers	4,980	\$6.46	\$7.96	\$7.25
15	63047	Guards and Watch Guards	6,370	\$7.37	\$9.54	\$9.09
16	22126	Electrical and Electronic Engineers Marketing, Advertising, and Public	19,060	\$27.04	\$35.04	\$37.22
17	13011	Relations Managers	7,820	\$23.34	\$38.02	\$41.19
18	25102	Systems Analysts, Electronic Data Processing	8,730	\$18.85	\$26.51	\$25.48
19	22505	Electrical and Electronic Engineering Technicians and Technologists	10,470	\$12.94	\$20.63	\$18.66
20	13017	Engineering, Mathematical, and Natural Sciences Managers	10,420	\$30.70	\$44.69	\$50.05

Source: 1998 Occupational Employment and Wage Data, Employment Development Department, 2000

*Denotes data can not be reliably calculated by OES because a substantial number of workers in this category earn more than \$60.01.

³⁸ This data is drawn from the Occupational Employment Statistics survey for 1998 conducted by the California Employment Development Department.

An examination of these data illustrate how using their most common contacts would decrease low-skill job seekers opportunities for finding long-term, stable work with opportunities for advancement. The median hourly wages for occupations in the first and third quartile are \$10.07 and \$11.04 respectively, compared with a median wages of \$30.38 and \$34.52 for occupations in the second and fourth quartile. Thus, the most common contacts of low-skill workers are likely to lead them to similarly low paying jobs, compared with their least common ties who garner wages three times greater.

However, if we were to plot the distribution of wages by quartile, we would notice a bimodal pattern. I believe this is explained by the fact that the frequency of contacts in quartile two is likely an aberration in the data, as suggested above. Many respondents equated knowing people who were managers or supervisors with “general managers/top executives.” In addition there may be an over-reporting in the computer occupations because people identified anyone they knew who worked with computers as an engineer or programmer. However, these data provide some indication of the extent to which respondents have contacts in the computer industry.

The table also shows the demand for labor in each occupation. The first two quartiles contain 59% of all new jobs being created, with 31% in the first quartile and 28% in the second quartile. These data suggest that while job seekers have contacts in the jobs with the highest demand, most of these contacts are in occupations that pay low wages, offer little employment opportunity and have slim chances for upward mobility. Finally, the table shows how the demand for labor reflects the income inequality in the Valley. General Managers/Top Executives and Salespeople are the two highest demand occupations and the median wages they garner, \$44.65 and \$8.12 per hour respectively, are at opposite ends of the income distribution.

The California Employment Development Department's list of Quality Occupations in Santa Clara County provides a barometer for examining job quality in the region.³⁹ The list consists of 61 occupations in which "at least 50 percent of surveyed employers provide at least three of four benefits (vacation, sick leave, retirement, or medical)." Among these 61 occupations, only 8 are also among the top 20 occupations with fastest growth. They are:

- Registered Nurses
- Electrical and Electronic Engineers
- Computer Programmers (including aides)
- Computer Engineers
- Secretaries
- Electrical and Electronic Technicians
- Electrical and Electronic Assemblers
- Janitors and Cleaners

Two of these eight occupations – janitors and secretaries – are found in the top quartile of contacts among job seekers. However, the entry-level wages for these occupations are \$6.50 and \$10.00 per hour respectively, while the median salary is \$10.76, and range of salaries for quality occupations range from \$6.50 to \$20.71.

Table 4.5 reveals the composition of industrial ties among survey respondents. The five most common industries among the ties of jobs seekers are social services/day care (39), retail (36), health (34), business services (31) and transportation (30). In social services/day care, one third of the contacts mentioned here are described as acquaintances or other. Interviews revealed that these are often people known in an institutional setting, such as through a job seeker's caseworker or employment counselor. These contacts can often provide information about job opportunities, but are not necessarily individuals with whom the respondents have a trusting relationship. The presence of retail in this quartile is consistent with the high representation of

³⁹ The data for this survey was collected between 1995 and 1997.

cashiers and salespeople within the respondents networks, and the presence of business services accounts for the people respondents know within the computer industry. Three of these industries – social services, health and business services – fall within the service sector and together account for 25% of all the industrial ties of respondents.

The second quartile contains the special trades (29), police, fire and the courts (27), finance (22), insurance and real estate (21), and engineering and management (20). The construction and financial sectors are well represented in the quartile. Eight of the ten industrial ties in the top two quartiles are also found among the ten fastest growing industrial sub-sectors for the region as a whole.

**Table 4.5:
Industrial Distribution of Social Ties by Quartile and Contact Type**

	Industry	FAM	FRD	ACQ	Total
1st Quartile	Social Services/Day Care	6	20	13	39
	Retail	11	17	8	36
	Health	17	12	5	34
	Business Services	7	12	12	31
	Transportation	15	10	5	30
2nd Quartile	Special Trades	10	14	5	29
	Police, Fire, Courts	7	9	11	27
	Finance	6	10	6	22
	Insurance/Real Estate	3	10	8	21
	Engineering & Management	4	11	5	20
3rd Quartile	General Building Contractors	6	10	4	20
	Amusement	5	11	2	18
	Hotels	6	9	0	15
	Heavy Construction	4	10	0	14
	Manufacturing	4	6	3	13
4th Quartile	Communications	2	5	5	12
	Private Education	0	4	7	11
	Federal Government	5	4	1	10
	Wholesale Trade	0	2	4	6
	Non-Durable Goods	0	3	0	3
	Totals	118	189	104	411

The third quartile is comprised of blue collar and low service sector jobs including general building contractors (20), amusement (18), hotels (15), heavy construction (14), and durable good manufacturing (13), while the final quartile contains communications (12), private education (11) federal government (10), wholesale trade (6) and non-durable goods manufacturing (3).

A more revealing analysis of this data, presented in Table 4.6, shows the relationship between respondents' contacts and particular sectors of the economy. Two items are particularly striking. First, proportionally speaking, the contacts of respondents in my sample were not equally represented in each of the industrial sectors: they were either over-represented or under-represented. The services sector that came closest to proportional representation. We shall return to that point in a moment.

**Table 4.6
Respondent Contacts within Sectors of the Local Economy**

Sector	Sub-sector	No. of contacts	Respondent Rank	Projected Employment Growth	County Rank⁴⁰
SERVICES	Social Services/Day Care	39	1	9,800	3
	Health	34	3	12,400	5
	Business Services	31	4	60,300	1
	Engineering & Management	20	10	9,600	7
	Amusement	18	11	1,700	14
	Hotels	15	12	1,300	16
	Private Education	11	16	2,400	11
	Subtotal	168		97,500	
CONSTRUCTION	Special Trades	29	6	7,800	8
	General Building Contractors	20	10	500	18
	Heavy Construction	14	13	400	19
	Subtotal	63		8,700	
FINANCE, INSURANCE AND REAL ESTATE	Finance	22	8	1,400	15
	Insurance and Real Estate	21	9	2,100	12
	Subtotal	43		3,500	
TRANSPORTATION AND PUBLIC UTILITIES	Transportation	30	5	2,900	10
	Communications	12	15	2,000	13
	Subtotal	42		4,900	
TRADE	Retail	36	2	20,300	3
	Wholesale	6	18	15,600	4
	Subtotal	42		35,900	
GOVERNMENT	State and Local	27	7	6,000	9
	Federal Government	10	17	700	20
	Subtotal	37		6,700	
MANUFACTURING	Durable Goods	13	14	36,400	2
	Non durable Goods	3	19	1,000	17
	Subtotal	16		37,400	
TOTAL		411		194,700	

Source: State of California Employment Development Department and my data set.

Secondly, Table 4.6 reveals that contacts were significantly underrepresented in both the trade and manufacturing sectors. For example, while 40% of anticipated growth in trade is in wholesale trade, only 15% of respondent contacts were in this area. And in manufacturing, historically a strong employment sector for lesser skilled workers, only 4% of total contacts worked in this sector, while it represented 19% of projected employment growth.

**Table 4.7:
Distribution Of Contacts And Projected Employment Growth Within The Services Industry**

Sub-sector	Number of Respondent Contacts	Percent of Services Contacts	Projected Employment Growth	Percent of Projected Growth
Social Services/Day Care	39	23	9,800	10
Health	34	20	12,400	13
Business Services	31	19	60,300	62
Engineering & Management	20	12	9,600	10
Amusement	18	11	1,700	2
Hotels	15	9	1,300	1
Private Education	11	7	2,400	2
TOTAL	168	101⁴¹	97,500	100

Finally, Table 4.7 shows the relationship of my sample's contacts to the areas of growth within the service sector that accounts for 50% of total projected job growth. These data show that while nearly two-thirds of employment growth is expected to be in businesses services, only 19% of respondents had contacts in this sector. Accordingly, the contacts of job seekers are over-represented in areas of the service sector that appear to be growing more slowly. For example, employment growth in social services/day care is projected at 10%, and 23% of contacts were in this sub-sector. Similarly, hotels and amusement account for only 3 percent of employment growth, but job seekers find 20% of their contacts in these sub-sectors.

Overall, the occupational network data suggest that most common strong ties among low-skill workers are in jobs with limited employment opportunities, and more importantly, in jobs with no strong attachment to the high tech economy. Furthermore, the industrial data show that there is mismatch in the industrial ties of job seekers relative to the areas of the economy that are growing most rapidly. Taken together, these data suggest that while job seekers in my sample are not socially isolated in the way Wilson describes, the preponderance of the social ties do not penetrate deeply into the high tech cluster. Job seekers are missing the bridging occupational ties that would connect them into the growth sectors of the local labor market.

⁴⁰ Rank of Fastest Growing Occupations in Santa Clara County from 1995-2002. Source: State of California Employment Development Department and my data set.

⁴¹ Rounding Error.

By way of comparison, it is interesting to assess changes in the opportunity structure of low-skill workers by examining how the occupational mix has changed over time. Table 4.8 reveals the occupational trends for all workers in 1970 and 1990. Between these

**Table 4.8: Occupational Mix for Santa Clara County
10 Largest Occupations for all workers**

1970	1990
1. Secretary, nec	1. Managers and administrators
2. Managers and administrators	2. Secretaries
3. Sales Clerks	3. Supervisors and Proprietors, sales
4. Assemblers	4. Electrical and electronic engineers
5. Bookkeepers	5. Cashiers
6. Elementary Schools teachers	6. Janitors
7. Typists	7. Salesworkers, other commodities
8. Janitors	8. Computer Systems Analysts
9. Foremen, nec	9. Accountants and auditors
10. Electrical and electronic engineers	10. Teachers, elementary school

Source: 1970 PUMS, 1990 PUMS

years, there was a decline in the number of assemblers, bookkeepers, typists and foremen, and a rise in occupations such as accountant, systems analyst and cashier. The main finding here is that the occupational mix in the Silicon Valley has been fairly stable: six out of the top ten occupations on the list in 1970 remain on the list in 1990. The changes in the mix reflect the overall upskilling of employment in the region.

However, these trends mask the ways in which some of these occupations have endured for those with lesser skill. For example, an examination of Table 4.9, which shows the occupational data for those between the ages of 25-64 with a high school degree or less, reveals that assembly has been an enduring part of the occupational landscape. In 1970, it was the fourth largest occupation for this cohort, and by 1990 it was both the third and fourth largest occupation, with electrical assembly becoming its own occupation.

Table 4.9 also shows a significant change in the status of occupations for those with less education. In the 1970s, less educated workers were still able to hold positions in white-collar jobs as secretaries, managers, bookkeepers and typists. By 1990, these opportunities had eroded, and the positions available to them are largely blue-collar jobs in assembly, and as

**Table 4.9: Occupational Mix for Santa Clara County
10 Largest Occupations, Ages 25-64**

High School Degree or less	
1970	1990
1. Secretary, nec	1. Janitors
2. Managers and administrators	2. Cooks
3. Sales Clerks	3. Assemblers
4. Assemblers	4. Electrical Assembler
5. Bookkeepers	5. Farmworkers
6. Foremen	6. Gardeners and Groundskeepers
7. Janitors	7. Construction Laborers
8. Typists	8. Laborers
9. Truck Drivers	9. Graders and Sorters
10. Waiters	10. Maids

Source: 1970 PUMS, 1990 PUMS

farm workers, groundskeepers, laborers and maids. In fact, 7 of the 10 occupations held by high school graduates in the 1970s were occupations reserved for those with some college by 1990 (Table 4.10). Overall, these data show that there is a narrower range of “white collar” labor market opportunities for those with no college than there was in 1970.

Table 4.10 also shows a similar trend for those with some college. While the occupational status of this group in 1970 was largely white collar, by 1990 this cohort was more likely to be employed in a blue-collar job as a janitor, electrical assembler or truck driver. In sum, these data are consistent with our understanding of the restructuring of the occupational opportunities for those at the lowest levels of the educational distribution. The shift toward credentialism (Newman 1995) results in increasing levels of education required today to hold jobs held by those with less education in 1970.

**Table 4.10: Occupational Mix for Santa Clara County
10 Largest Occupations, Ages 25-64**

1970	Some College	1990
1. Secretary, nec		1. Managers and administrators
2. Managers and administrators		2. Secretary
3. Sales Clerks		3. Electrical Assembler
4. Registered Nurses		4. Janitors
5. Bookkeepers		5. Supervisors, sales
6. Electrical Technicians		6. Truck Drivers
7. Typists		7. Assemblers
8. Foremen		8. Bookkeepers
9. Electrical Engineers		9. Supervisors, precision production
10. Draftsmen		10. Sales workers, other commodities

Source: 1970 PUMS, 1990 PUMS

Summing Up

Johnson et al.'s classification of bridging networks by bridge type – AFDC, education, neighborhood, etc – provides an indicator as to quality of the social network. Using the LASUI, they found that education, neighborhood, gender and job bridges enhanced the employment of women.⁴² Similarly, I am suggesting that particular occupational bridges – to engineers, computer programmers and technicians – as well as ties to particular industrial sectors can provide low-skill job seekers with bridges into the regional economy, enhance their labor market status and influence the structure of their labor market opportunities.

If job seekers readily use their first quartile networks, it is likely they will not find jobs in those areas of the regional economy that would not provide them with the best long-term prospects for employment and upward mobility. However, job seekers actively seeking information from their second and fourth quartile occupational ties would have a greater likelihood of finding employment within a high tech cluster industry. Unfortunately, having the ties among one's social networks is only part of the challenge in finding employment. No matter how rich in occupational bridge ties, these connections will prove fruitless unless they are activated for the purposes of acquiring information about labor market opportunities. However,

low-skill job seekers do not activate their social ties to acquire information about jobs like those in Granovetter's study. The next section, based upon my interviews with job seekers, explores how information networks get activated, for whom, and why.

NETWORKING STRATEGIES

Granovetter and others have discussed the relationship between job search activities and how they are embedded in a larger system of social relations. My study confirmed that one's friends and family influence the content and nature of their job search. However, my study also examined the mechanism by which social networks were activated. I found that job seekers did not actively ask family or friends for information about jobs and employment, though they were more willing to accept such help from family and friends if offered. The reason for the lack of activation has to do with the ways in which networking occurs and our conceptions of what constitutes networking.

The process of networking itself has two dimensions, encompassing both active networking and passive networking. In active networking, people network as a means to meet people in a particular industry, to obtain information about occupations and available jobs, and to understand trends within a particular industrial sector. These individuals are very purposeful about asking friends and family about job opportunities, conducting informational interviews, and for the most career-oriented, understanding the trends within an industry or sector. However, this definition of networking does not apply uniformly to those in the lowest skilled jobs – informational interviews are rarely conducted for those who seek to become employed as dishwashers, secretaries, gas station attendants or janitors.

⁴² An education-bridge was defined as knowing someone with more than a high school degree, a neighborhood-bridge was defined as knowing someone outside of your neighborhood, a gender-bridge was someone in their network who was male, and a job-bridge was a tie to someone who was employed.

Instead, low-skill workers frequently engage in passive networking. In passive networking job seekers find out about job opportunities from friends and associates by chance, rather than as a result of their intentional job search activities. Friends and associates may tell job seekers about employment opportunities because they know someone is searching for work, but job seekers are not actively asking their friends for assistance in conducting their job search. The reasons that job seekers do not ask for assistance are detailed in the following section, but it should be noted here that network activation and use appears to have some relationship to class-based understandings of the meaning of work. Because many low-skill workers do not strongly identify with middle class notions of career attainment and “professionalism,” their means of activating and using their networks differ. Instead of reaching out to associates to understand the demands of a particular occupation or the contours of a specific industry, low-skill job seekers are often just looking for work of any sort, irrespective of what they want to do or have been trained to do. Their material need for money to support themselves and their family overshadows their desire to do a certain type of work.

There were two notable exceptions to the trend of passive networking that occurred among low-skill job seekers: craft-based networks and immigrant networks. Walter Powell (1990) describes networking among construction worker as craft-based networking. Occupational networks are found in particular industries that have incorporated networking as a means to find out about job opportunities. Some industries are structured to have tighter social networks than others, such as construction. Construction workers often use networks to find employment, even though they have access to more formalized sources of job referral, such as unions. Their networks may include other construction workers with whom they have worked in the past, but often include supervisors or foremen for whom they have worked. Murphy, a 42-

year-old construction worker from East Palo Alto, says of his experiences looking for work in the construction trades, “We network with each other...I, people who know me they know I do construction. I go out and look for work. I would talk to people I know in construction and see if any of they companies are hiring.”

In construction, networking is as fundamental a skill as one’s trade because the cyclical nature of the work means constantly finding opportunities for new projects. This in turn requires workers to possess a certain amount of self-awareness regarding their skills. Construction workers must be able to articulate their skill level as they constantly explain their qualifications to new employers. They must also be skilled in the art of self-promotion to convince foremen unknown to them that they ought to be hired for a job. Thus, the construction trade demonstrates how occupationally driven networks can enable workers to develop a set of “soft-skills” which are transferable outside of their chosen profession.

Craft-based networking is important because it speaks more broadly to the reason why networking has been successful in the new economy of the Silicon Valley. Noting a 1967 article on organizational frameworks by Charles Perrow, Powell notes that craft-based work is project-based where “each product is relatively unique, search procedures are non-routine and the work process depends to a considerable degree on intuition and experimentation (Powell 1990, p. 306).” It has been argued that workers in the new economy are very much like those craft workers because of the specificity of their skill set and the fact that their work is often project oriented, requiring no allegiance to a particular employer. These parallels have led some to argue for greater employment protections for craft-based workers, such as providing them with portable benefits, to enable them to be mobile and adapt to the demands of a flexible economy. The policy implication of craft- based work will be addressed in Chapter 6.

The second specialized case of active networking that takes place among the lesser skilled is immigrant networking. As mentioned earlier, Waldinger (1995) argues that ethnic groups dominate particular niches in local labor markets, serving to help newcomers become established in a job or position, and ultimately in an industrial sector. My study found this to be true, with new immigrants using their close friends or family as the first point of contact for obtaining work.

Immigrants new to the United States are highly dependent upon those around them to help them negotiate the terrain of their new homeland (Newman 1999). One of the key activities is finding a source of income, and new immigrants quite actively ask their friends, relatives or sponsors for information about where they might work or who is hiring. For example Rafael, 33, immigrated from Mexico to Southern California, and then relocated to East Palo Alto to find better work. His choice to settle in the Bay Area and leave his family behind in San Ysidro, California was based upon having contact who could help him get set up. Since arriving he has been living with his friend Gustavo and several other men in similar circumstances. For Rafael his networks have provided him with multiple resources.

LA: So how did you find your job as a janitor. Your friends or?

Rafael: Yeah my friends. Yeah my friends. You know I look around...

LA: Is that Gustavo?

Rafael: Yes. You know I have a lot applied [sic]. But for, you know, it's too low, it's too far

LA: Too far away?

Rafael: Too far away. Yeah. I have a lot.

LA: Applications?

Rafael: Applications but that was, company, I got a car the company, for my company, janitor, because I need car.

LA: Oh, I see. So the company actually gave you a car

Rafael: Yeah, sometime, not for me but for my friend.

LA: Oh, I see. So then you can get a ride with him.

Rafael: Yeah. I got it. Yes, yes.

LA: I see. Well that makes it better.

In addition to shelter and employment, Rafael's networks have also provided him with transportation. However, the long-term usefulness of his networks, while providing him with immediate resources, is not clear. On the one hand, because Rafael works at night, he has been able to use the car during the day to conduct other job search activities. On the other hand, because he lives and works with Gustavo and others in a similar situation, he speaks Spanish almost exclusively, preventing him from improving what he describes as his biggest barrier to better employment.

Rafael: I can got it a better job. But English is, you know.

LA: So English is a barrier to finding better work. Are there other things that are barriers for you?

Rafael: Yes. You know, it's hard for me because a lot of people, janitors, is Spanish, only speaking Spanish. You know what it's

LA: It's no opportunity to practice.

Rafael: Yeah, practice. I need practice, practice, practice. Eh, I know more people in the same place for ten, twelve years be janitor. Because they don't want to, you know, ten years, they don't want to go to school for practicing English.

Finally, there were also instances in my study of both immigrant networking and craft-based networking converging in the concentration of certain ethnic groups in particular industrial sectors. To some extent I expect that this trend was reinforced by the geography of race. In East Palo Alto, for example, there was intense animosity between African Americans and Latinos, and it is highly unlikely that labor market information was shared between the two groups. Both language barriers and racial and ethnic strife reinforced the tendency towards niche occupations

by containing the flow of information. In San Jose, by contrast, where there was both greater homogeneity and greater social cohesion, niche occupations still existed but information flowed more freely, enabling access to more bridging networks. Furthermore, occupational niches were not only dependent on geography, but also on the occupations themselves. Some occupations are highly correlated with immigrant niche jobs – such as gardening and housekeeping – while others, like the construction trades, use broader networks. Michelle, a young Filipina from San Jose, talks about the concentration of Filipinos in the airline transportation industry.

A lot of like my family members live, they work in the San Francisco Airport....They would, they're the people who stand in line and make sure your baggage gets checked or they're at the front desk, or you would turn your ticket in before you go into the gate, you do that stuff. Or you change the oil for the fuel tank.

Michelle's story shows not only how occupational and immigrant networks overlap, but also how families in occupational niches can provide entrée to a particular job.

NETWORK USE

While Granovetter's finds that job seekers often obtain their best job leads from their social ties, my study suggested that in many cases social ties were not used. The reasons for this were two-fold: many respondents did not activate their networks, while others saw drawbacks to using networks and consequently were reluctant to utilize these resources, or only did so very selectively.

The primary reason social ties were not used in searching for work was lack of activation. By this I mean that while job seekers were actively searching for work, they did not perceive their friends and family among the sets of resources that might help them find a job.

There were generally two reasons for lack of activation. First many job seekers assumed that their contacts could not be helpful, pointing out that they were looking for jobs in different lines of work than those of their associates. The assumption that the only useful contacts will be

in one's line of work may suggest a disconnect about how Granovetter's theories about job search actually work. If job seekers find employment primarily through weak ties, but do not ask for information from their strong ties that could be passed on to weak ties, then the range of information available to them about job openings is severely restricted compared with those who cast their net more broadly. In effect, job seekers prescreen their strong ties and ultimately the weak information ties that would provide useful in their search for work.

A second reason for lack of activation was that many respondents were actually embarrassed or reluctant to ask their social ties if they knew of jobs. Respondents related stories that suggested they felt it was inappropriate for them to go to friends for assistance with a job search – that there was some shame in doing so. Hilda, a married 40-year-old mother of one who was eager to put accounting skills to use, offers this example:

LA: Right. So most of your attempts have been through the agencies. But you know a couple for people who work in the Silicon Valley? Russell...

Hilda: And Carlos. I'm so shy to ask them for... I just to go directly to agency. I don't want to ask them a favor.

LA: And why is that?

Hilda: Because maybe I'm afraid I can't do very well in those jobs, but I know them.

LA: You think you wouldn't do well in those jobs?

Hilda: I think so. I'm very good at accounting jobs, but I'm afraid.

Even more educated and skilled workers who tended to think more proactively about their use of networks expressed reservations. Take Halili, a 30-year-old woman born and bred in East Palo Alto. The youngest generation of a well-known EPA family, Halili graduated from one of the local high schools and attended Howard University in Washington DC.⁴³ Thoughtful,

⁴³ Quite by accident, three people were included in the sample who had attended college. Their responses to the questionnaire detailing their social ties were not included in the previous section's tabulations, but I am including

reflective and funny, Halili was quite articulate about the role of social ties in her process for finding work. Her experience shows that while social ties have served her well in the past, she currently utilizes them strategically, talking only to those whose positions give them some decision making authority. She does this because she senses that some of her peers worry that Halili's jobs performance could reflect negatively on them, or feel threatened by the jobs she indicated an interest in, and thus they were much more guarded about suggesting that she apply for specific jobs or positions.

LA: You talked about two experiences at least where you used social networks to find jobs but then you also gave this very compelling story about just using resources on the web. I'm wondering what your thoughts are in terms of which in general is more effective for you? How the process differs? What some of the opportunities and challenges are of using either?

Halili: ...I think that typically I found that people felt some responsibility, like 'well if you come on board now, ya know...' So there was this kind of sense that, ya know, particularly with black folks, that ya know [hesitation]...

LA: I have to vouch for you.

Halili: I have to vouch for you and there's a lot of that in my experience, which is not an unnatural or unfamiliar thing.

LA: Because its a lot of expectations around...

Halili: Dealing with that early on allowed me to modify my approach so I didn't make people feel uncomfortable about what they needed to do or what their ongoing responsibility might be if I were to be employed by a company.

LA: So they felt like they would have to care for you, or what you would do would then reflect on them, or?

Halili: I think it was like what I would do would be a reflection, ya know, which is true whenever you refer anyone, anywhere. And I don't know whether there was a concern that is might be negative but there was a concern that I don't experience when you're dealing with positions that are at a higher level and people who are accustomed to working at a higher level.

The reticence about using networks appears to transcend educational background.

However, Halili's comments suggest that this may be due to job seekers using strong ties instead

their transcriptions when they can provide additional context and/or explanation for why and how people use their social networks.

of weak ties in their job search. The fact that nearly all low-skill job seekers in my sample perceived their employment resources as being only their immediate social ties suggests that there is a lack of understanding about the role which weak ties can play in the job search process. Job seekers are usually better off casting their nets of information widely, and then seeing what contacts that generates. By restricting their job seeking activity to those individuals they believe can be directly helpful, they are restricting the possibility of many more employment opportunities.

Job seekers expressed reluctance about approaching friends because they were nervous about how their performance would reflect on their friends. Asking friends about jobs was perceived as perhaps negatively affecting the friendship, and generally job seekers were unwilling to compromise their relationship. When asked about using friends to help her get a job, Lavita, a married 31-year old mother, expressed her reluctance to use friends this way.

But me, just the person I am, really, I wouldn't like to through my friends. (LA: Why is that?) Probably just to say, well, I'm going to look for work this is what I'm gonna do. If they know something or mention it, then that's fine. But as far as "Well you know, I'm really looking for a job. Can you give me information from your company or something like that," I usually tend not to do that. And I just think that's my own personality that I'm going to them asking, hey I really need a job, just get me in there – and that's not how I want to perceive it to be. Or you know you have friends that feel, "ok, if I turn this in then you have to perform" then it becomes an issue where they're concerned that if I put their name, my name on there, and what of you don't turn out well, is that going to be a reflection on me. I don't want to put them in that position. I'd rather just do it on my own. ... I probably fear that the reflection upon them, whatever the outcome maybe, and me personally, I wouldn't want to put them in the situation. For them to speak for me, on my behalf, although most employers tend – well, what is said and done is between us. But if they were to ask what was wrong with your friend or what happened, well, they don't know what happened. They're not me they don't know the situation. I feel they shouldn't be put in that situation.

This is sometimes linked to the fact that friends know each other in a social capacity, but not necessarily in a professional capacity and thus feel they can't really vouch for their associates.⁴⁴

⁴⁴ Granovetter found that two thirds of contacts were "work" contacts, while only a third were "family social" contacts. Furthermore, he found a positive correlation between those with access to better jobs and their likelihood

Awareness of how network use could be unsuccessful and consequently strain the relationship between the job seekers and their contacts served as a deterrent to activation. Relationship strain often places limits on the use of personal contacts. Granovetter also noted that those in his sample were quite conscious of the frequency with which they used any single contact for similar reasons: his job seekers did not want to use these contacts too often for fear of “using up their ‘credit’ with them, straining the relationship.” (Granovetter p. 29, 1995)

Some job seekers also expressed their reluctance to help others find jobs, noting that they have been “burned” by helping someone get a job in the past. They too worry and have anxiety about how their own credibility and reputation might be affected by associates employed at their work. For low-skill folks this is a palpable issue, because the life circumstances confronted by low-income and low-skill workers are significant. These “circumstances” manifest themselves as barriers to employment for low-skill workers, barriers that middle- and high-income workers do not face or barriers that they are able to solve with their material wealth. Among my small sample the barriers to employment that people described included homelessness, drug addiction or drug recovery, felony record, unreliable childcare, unreliable transportation, ailing parents, etc. The precarious life circumstances of people who are poor interfere with their ability to do work.

These labor market barriers have a very real impact on the likelihood of higher status personal contacts to vouch for their friends and associates of lesser means. Higher status workers must assess the risk they are willing to bear in making a reference of this type. To personally vouch for an “at-risk” low-skill worker means to potentially compromise one’s own

to use work contacts. Finally, he also noted that 80% of the PTMs in his sample used their contacts for both information and a referral.

reputation at work if the contact does not work out. If such an assessment proves too risky from the perspective of a contact, a job seeker's labor market mobility could be adversely affected.

Job seekers were more likely to seek assistance from family members, ostensibly because there was less fear that they would compromise their relationship. LaRaye for example, a single mother of three living in East San Jose, was employed at Raytheon assembling wafers in her first job after in high school. Her mother, a 28-year employee of Raytheon, helped her to get the job. While she liked the job in assembly, she eventually left because of the strain it put on her relationship with her mother, made worse by the fact that LaRaye was still living at home.

I did the aligning, not the aligning, the spinning on the machine. And I had just started aligning through the microscope, then I quit. (LA: Did you like it?) Yeah, I liked it, but I didn't like working with my mom. She wasn't in my building — she wasn't in the room I was in, but she was two doors down, and she would always come down there and check on me, or if I'm out, or in the bathroom, or if she'd see me in the hallway, she'd tell me what to do "get back to work" or do this and do that. I couldn't do that. I was like, "okay, I live with you, you tell me what to do at home" where I work was supposed to be different. But she just — she didn't know how to separate the two. So I couldn't work with her.

LaRaye did not express any concern about the impact that leaving her job would have on her mother, ostensibly because their kinship ties were stronger than any allegiance that her mother could have to the firm, even though her mother had worked there for 28 years.⁴⁵ LaRaye's mother's monitoring of her daughter at work indicates that she was considerably more concerned with how her daughter's job performance would reflect on her, even with such a long tenure at the firm.

LaRaye's comments above reflect both the advantages and the disadvantages of using one's strong ties to get jobs, and illustrates why a job seeker might be reluctant to use networks. While LaRaye was able to find out about the opportunity to work at Raytheon and to become employed in a stable job with, perhaps, some opportunity for upward mobility, the stress on her personal relationship eventually caused her to leave. If LaRaye had found out about this

opportunity from a friend instead of her mother, it might have negatively affected her friendship. This is a risk many low-skill people are unwilling to take because of the importance of friends and associates for other aspects of their everyday sustenance (Stack 1972). Nevertheless, becoming employed at the company of a friend or associate carries with it the fear that working in a professional setting may disrupt the existing power relationships.

Educational Attainment and Networks

The occupational status of workers was somewhat correlated with educational attainment. Three people interviewed in my study had college degrees – two from state schools and one from private college.⁴⁶ The networks for these three individuals looked vastly different from those of the workers defined here as “low-skill.” Proportionally speaking, they knew many more people in high status occupations and in growth industries. Each respondent knew someone who was a electrical engineer, general manager or top executive or a marketing/public relations manager. In addition, they all knew people in business services, the health care industry, the construction trades, finance, and general building contracting. Furthermore, each was employed full-time in an occupation of their choice, earning a comfortable income.

What was most different was the way in which the three college graduates understood their networks. Their reference group was much broader. The frequency of their contact with people who had higher status jobs was greater, and this clearly had an affect on how they viewed what was possible in their lives, what they thought and dreamt about, etc.

Pamela, an African American woman in her mid-forties, grew up in Menlo Park but on the east side where there “really wasn’t that much of a difference” from East Palo Alto. Despite the humble beginnings suggested by her neighborhood, Pamela was raised in a family with a

⁴⁵ Eventually the company was purchased and her mother’s division of Raytheon was closed.

high ethic for attending college. As we talked about her responses to her questionnaire, she described her family in the following terms:

LA: Ok. So you have a lot of family members, let me just run through them really quickly. Larry is...

Pamela: Nephew.

LA: Your nephew. He's a computer engineer. Henry?

Pamela: Brother-in-law.

LA: That's your brother-in-law. And how many siblings did you say you have?

Pamela: There are five of us kids. I'm the baby of five.

LA: Wow. Lots of bothers and sisters-in-law and nieces and nephews and

Pamela: Yeah. They're all college educated. Did you know that's weird because my sister and I were [sic] sat down yesterday and were talking about my mom and dad. My mom is college-educated, my dad third grade education.

LA: Is that right?

Pamela: Mmm hmm. And he is the pillar of the family. This is a man that has a lap top and stays up with everything. Whatever. He knows how to do it. He called and asked me for some new software. I'd never heard of it. Like, "Dad, how do you do this?"

Pamela credits her parents with instilling in her siblings an intellectual curiosity that has enabled them to succeed. Among her siblings she also counts a brother who is an entrepreneur and business executive and a sister who manages a department in an accounting firm.

Halili, the 30-year-old woman from East Palo Alto, also demonstrated the importance of network use, particularly in facilitating access to early labor market experiences.

LA: So let me ask about your whole job trajectory. This first opportunity when you went and worked for the UN in Switzerland or Europe, how did you happen upon that?

Halili: Now that, interestingly, was a friend of our family who was the director of a small organization called Access Secretariat, who was looking for interns and I think she may have been in touch with my mom who said do you know of any bright, college grads and she said "yeah, my baby!" It was really through her, through my mom and through the woman who I

⁴⁶ It bears noting again that these results are not a part of my tally of networks, but that I have included their narratives to provide insight into how networks function.

didn't really know directly, but it was that way that I got that position. And then, while I was there I worked for UNICEF, like after I left Access I did some work with UNICEF, and did that work because I networked with some of the people who were there.

While Halili's experience shows how using one's social resources expands employment opportunities, it also demonstrates the role of intergenerational contacts. Her mother's friend who perceived Halili as no threat to her own job, was more willing to help her find a job without worrying so much about how Halili's employment would reflect back on her. It also may suggest that older people are better positioned to be of assistance to young job seekers.

Wayne, the final "educated" resident I interviewed, also had stories of his family being helpful to him, not only securing employment, but also in developing his professional interests. While his mother did not directly get him his job as a teacher, she introduced him to the world of teaching through a series of summer jobs with the school district that eventually became a career.

Wayne: My mother was the food service director for the school district. And she got me in as a food service worker, and I was still going to school. So, during the summer I was working for her, food service. Then when I got out of school I went there and they hired me.

LA: How many summers did you do that for?

Wayne: A lot. I don't quite remember how many but I imagine about six or seven years. I come here and as you know, students don't have a lot of money so had to do something.

LA: So you did that for six or seven years. Were you in school that whole time?

Wayne: Yeah.

LA: And you finished and went back look for a more permanent...

Wayne: Well I talked with the superintendent. She said when you graduate we'll hire you.

LA: And were you still working food service when you were hired?

Wayne: No. I worked as an instructional aide.

LA: And is that what you're still doing?

Wayne: No. I'm teaching.

LA: How long did you work as an aide before you started teaching?

Wayne: About a year and a half. Because I was working under emergency credential until I finished. I still needed six months to get my teaching credential. They'll let you work up to 24 months without, just on emergency over there. Yeah, about that.

Wayne was “in the profession that I pursued” working as a teacher. His experiences first as a food service worker and later as an instructional aide gave him exposure to elementary school teaching as a profession and helped him to make an appropriate career choice. However, like Halili and Pamela, his familial and social circle was extremely broad. While Wayne knew his share of temp workers, food service workers and secretaries – some of whom were in his family – among his contacts was also an uncle who designed and patented technology for Ames Research Center, a division of NASA.

All of the educated respondents I interviewed spoke of having a career – for Wayne it was teaching, for Halili it was technology training, and for Pamela it was a new career, having left law enforcement behind to join the ranks of the high tech industry. These were careers in which they expected to remain and excel, in which they hoped both to gain greater tenure or levels of responsibility and “move up the ladder.” Their conceptions of work differed markedly from the descriptions of other workers who were clearly looking for a job, but not necessarily a career. Most residents could not conceive of what they might be doing in five years. While some mentioned pie in the sky dreams of wanting to become a fashion designer, others wanted to legitimately join the cadre of high tech workers. Most wanted a job that would give them personal satisfaction, comfort and would be compatible with their lifestyle, as Lavall describes.

I need to just find that perfect job. I've never found anything that makes me completely happy. Project management sounds really interesting because it's not the same thing day in, day out. ... And project management ...– I mean it works from anywhere from retail to software to no matter what. I see myself contracting actually in five years. I don't see myself permanently at one job I see myself contracting. I actually see myself working for myself. Contracting myself out to a different company – oh I'll work on this project for three months I'll work on this project for four months. And I pick what I want to work and I work when I want to work. I work on projects that I want to work on. You pay me a whole lot of money so I could afford to pay for this house and

still be able to go to my daughter's PTA meetings. That's my five-year plan. Somehow, somewhere in there I'm gonna keep taking classes so maybe when I'm about 45, 50 I'll have a enough credits so I can graduate! [erupts into laughter]

Lavall's long-term plan to attain enough credits is a strategy that bears closer examination and development. I shall return to this idea in Chapter 6.

BARRIERS TO WORK

A job seeker's ability to secure better employment is influenced by several factors in addition to having the appropriate information sources to find work and the right skill set for an available position. In my interviews with job seekers, I found that there were several barriers that prevented them from sustaining gainful employment. In this section, I detail the nature of those barriers to show how they further complicate job seekers' efforts to become employed. I mention these barriers in part because they speak to the social world of the job seekers themselves, and how, in some cases, their social world contributes to the quality of their networks. It is worth noting that many of these barriers, which help to sustain a job seeker's detachment from the labor market, are characteristic of the nature of poverty itself. As such, these barriers explain some of the social class differences between these job seekers and the highly skilled workers in the Silicon Valley. I also highlight these barriers because they point to the complications faced by low skill workers who need someone to vouch for them in the employment process. Lesser skilled workers often need a personal reference who can attest that these workers are able to overcome these barriers and be productive and contributing members of the workforce. On the other hand, to the extent that the information tie has doubts about the job seeker's ability to overcome these barriers, there is a disincentive for the information tie to communicate employment opportunities or to serve as a reference for the job seeker.

During my interviews I asked respondents the following questions: "Some people have a hard time looking for jobs because they get discouraged. Have you ever had trouble searching

for work? In the past, what have been the biggest barriers to finding work?” Table 4.11 details their responses to this question and is followed by a brief discussion.

**Table 4.11:
Barriers To Employment As Reported By
Questionnaire Respondents**

Barrier Type	Number
Basic Needs	10
Childcare	3
Transportation	6
Housing/Homelessness	1
Skills and Experience	12
Basic Skills	3
Credential	3
Work Experience	4
Job Search Skills	2
Structure of Labor Market	8
Need Flex Time	5
Not enough jobs	3
Discrimination	4
Racism	3
Felony Conviction	1
Other	8
Disability	2
Discouraged by Job Search Process	1
Have Family Commitment	2
Substance Abuse/Recovery	1
Welfare Status	1
Undocumented Immigrant	1
No Barriers	13

Basic Needs

The poverty literature outlines in great detail the various basic needs of those looking work. The job seekers in my sample were no exception. They found access to childcare, housing and transportation vexing problems in maintaining a regular work life. Dawn, for example, discusses how transportation is barrier.

Yeah, ... I don't have transportation. That's real hard. It's like the temporary agency telling me about this job in Milpitas. I mean I know Milpitas, the general area it's in, which way to go. But I don't have the transportation so if the busses, I gotta find out today where is the job at and if the busses can get me close there because it starts seven o'clock in the morning. And that means I'll

be on the bus at five [a.m.]. Cause it take a while to get down there. And, and, transportation. It's a BIG barrier.

Dawn's experiences of the challenges of transportation are confirmed by a study on job accessibility in the Bay Area that developed an accessibility index by job class. The study found that there have been significant gains in accessibility for executive, professional and managerial workers and marginal gains for technical and service workers. However, sales, administrative, clerical and "other" blue-collar workers have experienced a sharp decline in accessibility. Furthermore, the study's authors found that employment growth patterns have failed to improve job accessibility for those living in the region's poorest neighborhoods (Cervero, Rood and Appleyard 1997).

Some of these basic barriers to employment can be either overcome or exacerbated by social networks. For example, in an analysis of the Urban Poverty Family Life Study (UPFLS), Martha Van Haitsma found that "network differences can translate into childcare differences. Mexican women with young children are significantly more likely than their black counterparts to have regular childcare provided by a friend or relative (Wilson 1997, p. 93)." The significance of these network differences turn on the immigrant status of the Mexican women and the well documented density of their networks (Portes 1995, Sassen 1995, Fernandez-Kelly 1995). Thus, while immigrant networks may lead to less well-paid jobs in occupational niches as Waldinger suggests, their networks may also provide greater supports for the world of work.

An important distinction must be drawn here about the use of social networks to overcome basic needs barriers. The networks that are most effective for job seekers are made up of their bonding ties rather the bridging ties. Simply put, bonding ties are the ties that people use to get by. They include the "essential kin" described by Carol Stack thirty years ago, the people with whom the lesser skilled "share reciprocal obligations," "individuals mobilized for a specific

end and they can be mobilized for extended periods of time” (Stack, 1974, p 44). The basic needs of low-skill workers reinforce the use of these bonding ties. Because networks for job search are not actively invoked, job seekers obtain much of their information about labor market opportunities from their bonding ties rather than their bridging ties that would lead to substantially different pools of information.

Skills and Experience

Several low-skill job seekers recognized the ways in which their skills and experience impeded their success in the labor market. The range of these barriers includes illiteracy, poor English-speaking skills, the lack of a vocational credential, a degree to show that one has mastered basic education requirements, and a lack of employment-related experience.

James, age 43, only completed the 8th grade. He grew up in Louisiana where, at a young age, he would pick cotton with his mother, and haul hay and logs with his father who owned a truck. Most of his work history centered around manual labor and James discussed how his inability to read and write has impeded employment opportunities in the workplace:

LA: Have you had opportunities when you’ve worked at different places to get training on the job?

James: I have. But to be honest with you at the time I really didn’t take advantage of it. I didn’t take it that seriously. I didn’t figure that it was that interesting at the time but I wish now I did. A lot of jobs ... they start out with training. But a lot of them they wanted you to know the basics, you know, reading and writing and math. And some of that, a lot of that I definitely didn’t know so I didn’t really have much of the qualification going in. So that was part of it.

James was not the only respondent with so little education. Several immigrant job seekers indicated that they had not completed elementary school. But the most common skill deficiency noted by immigrants was their lack of English-speaking skills, as poignantly described by Rafael

(p. 28).⁴⁸ Rafael's close social ties, which provided him with both shelter and employment, afforded him no opportunities to practice his English language skills, which are largely self-taught. In this case, his social ties also have negative effects.

Other respondents reported feeling the sting of credentialism. Credentialism describes the tendency of some employers to require a degree or certificate as an indication of an employee's suitability for a job, even though the degree may not be necessary to perform the specified job functions (Newman 1995). Lavita, for example, felt she has been passed up for promotion opportunities in her places of work, even though she may have had more on-the-job experience than a newly minted college graduate.

... I was out of high school, I think I was like 18 or something, and I worked at the food service company, inside of Hewlett-Packard, Marriott, the lead cashier along with the food preparation was what my title was. Well, the supervisor that we had, she had been there for several years. That was understandable, I mean she trained us and everything. But an opening came up for her to move on. Well her replacement was a graduate, fresh out of school, meaning all she really had was just the book knowledge. Hands-on training she really doesn't have that. It didn't bother me at first, I was like well, ok, that's fine. But in the long run. And I just think it probably could have just been a personal issue between the both of us, is that she came in with the sense that, she's out of school, she just got a degree in the this certain field and that makes her better to make the choices or do whatever. And just, to say, I wasn't there very long after that. It was just like a conflict. That she chose to throw her weight around and she just got out of school and this is what she studied for versus, ok, that's fine. But you can also learn from someone who has been here for quite a while that's had hands-on training, experience to deal with the people.

Immigrants with significant job experience, and often even a foreign credential, also found the credentialism of the Valley particularly challenging. Gerardo has employment experience working in the field of industrial engineering, both in Mexico as well as in the United States. Until recently, he had been gainfully employed in a division of Hewlett-Packard that the company moved to Delaware. Eager to provide stability for his wife and children, Gerardo

⁴⁸ My lack of Spanish language skills prevented me from conducting more interviews with immigrants who had limited English. However, anecdotally it should be noted that about six respondents completed the questionnaires in the Spanish language version.

passed up the opportunity to move with his company and instead chose to stay in the Bay Area and look for work. He had been out of work for several months.

Gerardo: Most of the time in Mexico, I was working in the environment. But here I was trying and I went to San Mateo, Santa Clara. Eh, I mean, San Mateo, excuse me. In San Mateo I sent away, I sent my resume because it says so there's positions in environment, technical. But they told me "you know, your degree from Mexico, for us, is not good enough."

LA: Did they say why?

Gerardo G: They, the degree...

LA: Why is the degree not good, though?

Gerardo G: Oh, because they need to make..., they need to make the translation to ...in American ... "we need people with skills, with experience in United States". Not all of them.

LA: But they prefer, like, uh, you know, a US degree essentially.

Gerardo G: They... they are right. ... I would like to go to the school, to get the information from the school so then I could support my family.

How respondent's assessed their skill set was also informed by their impressions of the Silicon Valley overall. For example, Laura, a community health outreach worker, has made plans to go back to school because she feels her current skill set will not help her secure employment in the region.

LA: Are there things that are barriers for you in terms of looking for work?

Laura: Yes. Absolutely. Because my area is not computer so if you wanna make some change and you don't know something about computers you don't know nothing! [Laughs]

LA: Right. But you have a lap top?

Laura: Right. I know just Microsoft Office. That's enough. Because the computer they know of here is so high. I don't know exactly what some secretary do, go to someplace and say I'm secretary, and I don't know exactly what the secretary do in the computer

LA: Plus it's not your interest right.

Laura: Mmm Hmm. So my area is different. My area is work with the community. That's the reason because maybe in sales I can look work but not in the computer area. Unfortunately.

Structure of the Labor Market

Several structural labor market issues also precluded a number of my respondents from working. They mentioned two in particular, the need for flexibility to enable them to care for their family, and a dearth of employment opportunities within a reasonable geographic proximity of home.

Several women indicated that they required jobs that would allow them a flexible enough schedule to meet the demands of caring for their young (and sometimes older) children. Jeri, 52, is the mother of three children, ages 21, 19 and a 14-year-old son who has special needs. She is searching for work that will support her and her kids, but she needs flexibility in her schedule:

I'm looking for work in general. I'm not looking for – I'm looking for something that pays well. I still have this one kid to take care of – well, I still help out all three. I have, finishing school in my priority, so making money paying the bills is basically the priority three. And again I have to look for work with flexibility in order to be able to get my son the services that he needs, so I have about, I have to get this cleaned up, and I have to get him where I need to get him, and I'm getting there.

Laura, an employed mother of three children, works part-time (33 hours a week) as a county health outreach worker. While her “part-time” job does allow her some flexibility, the nature of her work requires her to travel, eating up her extra hours and what little flexibility she does have. Furthermore, she would like to go back to school to sharpen her computer skills but can not do so given her current schedule.

Laura: I'm looking for a job but here in East Palo Alto. That's the reason because I come here [sic]. Because I know that will be open a clinic over here. I wanna work like community worker in this area because I know very well this area. So when I read the paper that you're looking for some jobs or something like that I say yes I looking for some job. More formal because right now I'm working here in East Palo Alto but I need made a lot travel, trips

LA: to Burlingame?

Laura: Right, or Fair Oaks Community Center. So if I wanna, for example I wanna bunch the flyer bunch, I need go over there. [sic]

LA: So you're trying to find something more local?

Laura: Right. And more formal. Because now I can speak English much better than two years ago. I have more skills, so for me I wanna some more, *estabacere*, how you say it?

LA: Established?

Laura: Established. Right.

Not surprisingly, all of the respondents who mentioned the structural limitations of the labor market were both women and mothers. The need to align the demands of the domestic sphere with the responsibilities of paid employment is an issue women are still trying to come to terms with. Arlie Hochschild (1989) notes that reducing one's hours at work is only one of the strategies women use to cope with "the second shift."

Discrimination

A few respondents reported that they felt that they were being discriminated against in the job search process. While only one person reported race as a barrier to employment, a few indicated that their felony record had an impact on how employers perceived them, and that they were discriminated against before being able to demonstrate to the employer that they could perform the required job task. Dawn offers this example of looking for an entry-level position at Costco.

Dawn: Oh well everybody knows, Costco's hiring, you know. So I just went in there, did the interview and everything. Never got called. Probably because I have a felony. You know it's hard for me to get a job. They'll brush it off you know "we found someone" and they try and make it nice but I know it's because I have a felony. Conviction xxx from prison. So it's hard. Sometimes I might get a break. If I put in 120 applications somewhere I might get two interviews and I'll be lucky to get one of them jobs. Probably see that have you ever been convicted and I don't lie. I put yeah. Then they write "Explain." Possession. That's all I put.

While this represents a general statistical discrimination that some employers use to reduce their recruitment costs, it nonetheless presents a challenge for those with a criminal record.

Race and ethnicity also continue to play a role in the ability of job seekers to get hired.

Hilda reported her impression of why she has been unable to get a job.

Hilda: [laughing] Could be, my origin. I'm Hispanic.

LA: You think that makes it harder.

Hilda: I think so.

LA: How come, what is it that makes it harder?

Hilda: Not only me, many people.

LA: Why do you think it makes it more difficult?

Hilda: I don't know – They have the xxx Hispanic people. Most Hispanic people only work in market. They don't aspire to go up, up from there. They only have minor jobs. And when you have education, you have preparation, sometimes they think, "Oh no, Hispanic people can go there, that way."

The role that race and ethnicity play in actually getting a job is significant not only from the perspective of those on the supply side – that is, job seekers – but also from the demand side. Several scholars have documented the ways in which employers discriminate against workers based on race and ethnicity. (Kirschenmann and Neckerman 1991; Holzer 1996; Moss and Tilly 2001) Holzer's work on black youth showed that using "informal means" such as social networks to recruit employees may allow race to play a more significant role in the hiring process. He suggested that blacks are more likely to be hired if they are evaluated by formal means where explicit criteria are used to evaluate candidates. In this case the use of social networks could be a detriment to employment.

Other Barriers

There were several other barriers to employment mentioned by job seekers that deserve mention. Two respondents had disabilities that limited their labor market opportunities because they had very specific job requirements. Despite the fact that they received public assistance they were interested in working if they could find jobs that accommodated their disabilities.

LA: Do you um... you mentioned you were disabled. Have you looked for a job recently?

Roze: Yeah. There are jobs about there, assemblers jobs, where you can actually sit and do your work. If I can find a sitting job I'll take it. I'm on SSI right now. It's not making ends meet. I could always use extra income. I forget the name of the place but there's a place in Mountain View that assembles medical kits, medical equipment. And it pays, I think the guy said \$18-20/hour just to sit down and put these kits together. So that's the first place I went. I went down there. I haven't gotten an interview yet. But he said that something should happen cause he said normally everybody that goes in puts in an application gets an interview. I'm still waiting. It's the only job I've looked for in a little while.

LA: When did you look for that job?

Roze: About a week ago.

One of the most striking finding regarding the barriers to employment that Table 4.11 does not suggest is that most low-skill job-seekers had not just one barrier to work, but several (Newman 1999). Often it was the interaction effects of these barriers that provided the greatest challenge to becoming employed, rather than any individual barrier. Equally striking is that when asked, academic most job seekers did not acknowledge that they lived with several barriers that prevented the sustained employment. For example, Roze only reported his physical disability as a barrier. However, he is also a recovering alcoholic. Although only one respondent pointed to her substance abuse as a barrier to employment, I noted that eight respondents mentioned that they were in recovery during the interview, and three respondents had been using prior to the interview.

The effects of these barriers are persistent unemployment, or at the very least, a constant cycling through the labor market. William Julius Wilson suggests that work is important not only in providing for one's material well being, but also because it "constitutes a framework for daily behavior and patterns of interaction because it imposes disciplines and regularities." (1996, p. 73) This absence of discipline and regularity amplifies the effects of the various barriers described above. Further, it prevents workers from being able to participate fully in contemporary life.

Regular employment provides the anchor for the spatial and temporal aspects of daily life. It determines where you are going to be and when you are going to be there. In the absence of regular employment, life, including family life, becomes less coherent. Persistent unemployment and irregular employment hinder rational planning in daily life, the necessary condition of adaptation to an industrial economy. (1996, p. 73)

The challenges posed by the multiple barriers encountered by low-skill job seekers are enormous, and call for social welfare interventions to prepare them for a life of sustained employment. The broad strokes of such a program are beyond the scope of this study, but should complement many of the proposals detailed in Chapter 6.

CONCLUSION

Much of the social networks literature provides an undifferentiated view on how networks operate for low-skill job seekers. In particular, most studies have not investigated how place and space influence the type of contacts one has, particularly insofar as these contacts are attached to the regional economy. My research suggests that social networks may differ significantly according to residential neighborhood, challenging claims that residents of low-income neighborhoods experience a degree of social isolation that prevents them from working, knowing people who work, or having access to institutions that support the world of work. As Stack, Lin and Dumin, and Harrison and Weiss all argue, low-income and low-skill folks do have social resources. However, the large concentration of their social resources is not in segments of the economy that would provide them with upward mobility. My research suggests that low-skill workers are disproportionately connected to low-wage occupations as well as industrial sectors that are not a part of the high tech economy. The preponderance of people in their networks do not provide occupational bridging networks with useful pools of information for connecting them to the growth sectors of the high tech economy.

In addition to poor quality networks, job seekers expressed concerns about approaching their associates to find out about jobs. Many felt that getting information from friends was

unethical or showed a lack of initiative, while some expressed reluctance to use their networks because they were concerned about the impact it would have on their relationships with the friends or family member referring them. For information seekers, this reticence stems from a social stigma that some associated with nepotism: there is a belief using one's friends to get information about employment opportunities represents unethical behavior. Many respondents stressed that they felt that they did not want a "hand out." There was a certain amount of shame associated with asking about jobs, because asking for information and asking for assistance were conflated.

Low-skill job seekers use their networks differently from Granovetter's middle class job seekers who are more comfortable putting the word out that they are looking for a job or asking a friend or associate to put in a good word for them. Middle class workers are more confident in their ability to fulfill the requirements of their job, and generally not as concerned that the daily realities of their life will impinge upon their ability to fulfill their job responsibilities. Conversely, low-skill workers tend to cycle in and out of the labor market precisely because they have many more personal life circumstances they are trying to balance than middle class workers. They cannot make the same guarantees that they can be dependable and reliable, that their child care and transportation plans will be sustained, that they will be able to meet their employer's expectations of what it means to be a good worker. Fundamentally this evolves from the fact that their occupational identity is not their primary identity. They described themselves first as mothers and fathers, sons and daughters, recovering drug addicts and convicted felons, but not in terms of their work status. Self-identification as a worker or professional is a marker of middle class status that my sample has yet to achieve.

Network use for upward mobility is also circumscribed by the importance of skills as one expects to earn significantly better wages. Employers rely heavily on networks as a barometer of one's soft skills when hiring entry-level workers because it is presumed that they have the necessary skills for an "unskilled" position. However, as the jobs themselves require higher levels of hard skills, assessing these skill sets take on increasing importance. Networks remain necessary, though not sufficient.

The reticence expressed by low-skill workers to use their social networks to find employment is not meant to suggest that some lesser skilled workers are not employed in various sectors of the Silicon Valley. In fact, more than half of the people in my sample were currently employed on either a full-time or a part-time basis and a few were employed in high tech industries. In the following chapter, we will examine the success stories of employment in the Silicon Valley, including those working in the technology cluster. In particular we will look at the nature of their employment experiences in the Silicon Valley, both in high tech industry clusters as well as in other positions, and discuss how these experiences influence their desire to utilize their networks and seek out work in the regional economy.

CHAPTER 5
PATHS TO MOBILITY:
JOB SEARCH SUCCESS AND WORK EXPERIENCES

While low-skill job seekers in the Silicon Valley encounter a range of barriers in obtaining work, especially in high tech cluster industries, not all of them are limited by their educational background, English speaking skills or family circumstances. A few are able to navigate the complexities of their family life and the labor market to obtain work – even well paid work – in the Silicon Valley. While these individuals are the exception and not the rule, the objective of this chapter is to focus on some of the success stories of those in my sample, people who despite difficult circumstances were able to obtain good jobs. This chapter is concerned with how the imperatives of the new economy shape the ability of lesser skilled workers to be successful in those jobs.

While there are no systematic explanations which explain their employment success—that is no typology of success – there are several elements which have contributed to success: family values around education, an entrepreneurial spirit, and vocational training among them. This chapter will examine some of these elements primarily by focusing on the life and employment experiences of three participants in my sample. Like Lavall in Chapter 1, their experiences are success stories because they were able to obtain work in high tech cluster industries despite their background, and because they demonstrated the importance of networks in helping them to get to where they are. They are success stories because they were able to negotiate some of the challenges posed by the new economy.

In addition to focusing on the successful job search strategies of low-skill workers, I will also use this chapter to explore some of the trade-offs low-skill workers make to work in the high

tech industry, and how those trade-offs pose particular challenges because of the life circumstances discussed in the last chapter.

The theoretical argument that underpins this chapter is that within the Silicon Valley, successful job seekers are those that appreciate the value of high intensity networking. While my research shows that many job seekers rely on personal contacts for employment information, the ways in which those contacts get used vary dramatically. Those who understand which contacts can provide them with the best labor market data – often work associates, and not family members or a casual friend – fare better than their counterparts. Furthermore, the effectiveness of networking as a job search strategy has repercussions far beyond the immediate job being sought and the wages that job provides. It has repercussions in terms of the future contacts job seekers might make, the future jobs they might have, and the wages they might gain. In other words, there is both a path dependence that develops from good work experiences and the networks that result, and an opportunity cost to not having these experiences. In the absence of these networks, labor market intermediary institutions can play a vital role in trying to provide people with the training, skills, jobs and ultimately contacts that will promote their career advancement.

This chapter is organized as follows: I begin with a brief discussion of the job search strategies invoked by my sample, highlighting the variation in search strategies and the absence of a single reliable method leading to position search outcomes. I then develop a model for what might lead to positive outcomes. With this model in mind, I explore the job search and employment experiences of three low-skill workers in the Valley, weaving together their stories with elements of the job search process and their experiences of working in the Valley. I end the

chapter with a fuller discussion of how labor market intermediaries might substitute for the bridging social ties in low-income communities.

JOB SEARCH STRATEGIES

My interviews with low-skill workers in the Valley suggested that job seekers had no standardized process for how to perform a job search. Instead, the job search processes of my narrators were characterized by their variability, specifically the multiple approaches they used and the combination of strategies they employed. Overall, these strategies support my claim that the social resources of low-skill workers influence their employment opportunities by reinforcing the effect of their bonding ties and de-emphasizing the role of their bridging ties. This section describes the methods that people generally use when looking for work including relying on printed materials and door-to-door strategies.

Many job seekers have no strategic or systematic approach for looking for a job, while a few are highly structured in their approach. Larry, who recently returned to East Palo Alto after living in Michigan for several years, told me that he was reluctant to ask his friends or family for help in finding a job because he didn't want to burden them. As a result he relied on his own strategies for finding work.

I have resumes, I'm a very good job searcher myself because I know how to present myself. I know what to wear. Since I have been a job coach I do have strategies, you know. And the best places really to look is through the phone book or the paper. I'm in the process. If I just ride down the street – like the guy across the street from us he own his own business and I walked up to him the other day and ask him if he doing any hiring, looking for good people. He told me not at this time. I rode down the street today and went to a car rental, National Car Rental. And I walked in with this young lady and I seen a sign saying like uh, they're looking for some help so I put in an application there as a sales representative or whatever. So I just do my own thing. If I see something that I think may happen, I'm on...

Larry demonstrates how an unstructured approach toward job search results in the use of multiple strategies. While Larry discusses various printed materials as being his best resources for finding employment, his behavior suggests that most of his job search occurred using door-

to-door strategies. These labor-intensive approaches, while they may turn up leads, are not the most efficient way to look for a job and, given the structure of his own networks and contacts, likely will not lead him to gainful employment within the high tech sector. Furthermore, to the extent that Larry needs a reference to secure a position, these strategies may not bear fruit.

Despite the reluctance expressed in Chapter 4 about asking friends and associates for assistance in the their job search, low-skill workers still reported using the friends, family and other associates to look for work. When asked the question, “How did you find out about your most recent job?” nearly half of respondents reported they learned about a position through a contact. Table 5.1 shows the distribution of responses.

**Table 5.1:
How Respondents Heard About Their Most Recent Job⁴⁹**

Source	#
Personal Contact	20
Employment Agency	7
Sign	4
Newspaper	2
Job Fair	2
Training Agency	2
Union	1
Other	1

Most job seekers indicated that they had heard about a job from a friend or associate by happenstance. The transfer of this information occurred in multiple contexts. Dawn provides a typical example, a 34-year-old ex-convict whose felony convictions stem from her drug addiction. When I interviewed Dawn she had just been released from prison again, and was looking for work. In the course of asking about her job history, she shared the way in which she found out about her last job in a medical lab.

LA: The lab in San Jose – do you remember what it was like when you were actually looking for that job?

⁴⁹ This question was asked of all respondents regardless of their employment status. Some unemployed respondents did not answer this question.

Dawn: Yeah. I really didn't apply to too many [places]. That job kinda like fell in my lap because the manager of this place is in recovery, and she [went] to the same NA [Narcotics Anonymous] meeting that I went to. And the girl that worked there at the time as a secretary said you know my job is hiring somebody to work in pouring in the lab. And that's how I got the job. It just fell... and I really wasn't looking. I know I needed a job but I wasn't applying everywhere. You know so. I think I put in an application at Home Depot. Did an interview at Home Depot. No that wasn't Home Depot that was Costco. That's probably the only place I went.

In addition to demonstrating the randomness of how she obtained job search information, Dawn's experiences are emblematic of the passive networking that often occurs among lesser skilled job seekers. In passive networking, job seekers may casually mention that they are affecting a job search, but are not actively or strategically asking friends or associates for information about job opportunities. While such methods do result in hearing about position openings, the random nature of their information gathering increases the likelihood of job seekers hearing about positions from people in their most common contacts: in Dawn's case job information came through a drug rehabilitation meeting. In this way, using passive networking can reinforce the influence of the social structure on one's employment opportunities.

Use of personal contacts can be an effective job search strategy for low-skill workers, particularly in instances where having a reference is important. James, a 42-year-old East Palo Alto resident, provides an example of how passive use of personal networks can provide them with job opportunities. Another ex-convict and recovering drug addict, James also was looking for work after a recent release from jail. He found out about a custodial position in the local school district through a friend.

LA: How did you find out about that job?

James: Through a friend that works there. He told me about it. I went and applied and I told them I had a record which he [supervisor] said he was gonna give me a chance. Cause the record, years ago a used be on drugs, but I got off them, to give me a chance and I worked and I haven't had a complaint, or write up or nothing the whole time...

LA: Is he still working there, the person who told you about the job?

James: Yeah, he's working there.

LA: Is he on this sheet?

James: No, he works in a different department though. His name's Mike Smith.

LA: Is he doing custodial work also?

James: No, he's a supervisor.

LA: He does administrative stuff?

James: Exactly. He works in the main office.

Even though James has a felony record, his contact was able to introduce him to a hiring manager who was willing to “give him a chance.” James' experience points up the multi-dimensional ways in which networks are used. At its most basic level, networks provide an “information-tie” about labor market opportunities. However, James uses his networks in another way: to provide him with a “reference-tie” that would help him to actually secure a job. Obtaining a recommendation from a social tie reduces the level of risk employers encounter as a result of imperfect labor market information.

Irene, a young San Jose woman, reported how using an information tie contributed to her job search. However Irene also demonstrates a variation on passive networking. Even though she initially heard of the possibility of working at Macy's from a weak tie, her weak tie did not provide her with entree. Rather than using this tie as a credible reference, she only used the information she had heard about to include Macy's in the group of retail establishments at the mall where she applied for work.

Irene: I was out of work, and I just went to Valley Fair one day, and I applied at every — most stores that looked nice. And I went to Macy's, why did I go to Macy's? Oh, okay. Because my friend's cousin's girlfriend was working at Macys in Oakridge, Blossom Hill area, and she could have gotten me in there, but then she told me that the Valley Fair Macy's was on commission. I think the only two that are on commission are Valley Fair, probably Stanford, and then San Francisco. The Union Square. So I thought, “okay, well, if I'm gonna do that, then I should go for the commission.”

Here Irene shows how contacts can be used for informational purposes only, compared with James who uses his networks for both information and as a recommendation.

The job search experience of James, Dawn and Irene illustrate how both networking approach and tie types influence job search. The combination of networking approaches – that is active or passive – and network functions – informational versus reference-based, constitute different intensities of networking. A matrix that defines networking intensities is represented in Table 5.2.

**Table 5.2:
Networking typology**

	Passive	Active
Information	Low Intensity Networking	Moderate Intensity Networking
Reference	Moderate Intensity Networking	High Intensity Networking

Each intensity can result in slightly different labor market outcomes for job seekers. In passive information networking, a job seeker may or may not find out about employment opportunities because they are not actively seeking information. In active information networking, job seekers are more likely to find out about job information, but this will not necessarily influence the probability of them actually becoming employed. In passive reference networking, the respondent may not find out about employment opportunities, but if or when s/he does, then there will be a greater probability of becoming employed. Finally, in active reference networking, a job seeker will not only be seeking out labor market information, but also will be seeking to use the information provider as an employment reference. The various intensities represented by each of these types of networking generally suggest how aggressive a job seeker is in their quest for employment. Julie is an example of a networking intensive respondent.

Narrative Sketch: Julie

Julie, a 48-year-old Latina, joined Cisco Systems after a 30-year career with the Marriott Corporation in the food and agricultural industry. Her desire to leave Marriott was part of a desire to “downshift” her life and work in a less stressful environment. Trying to find the right opportunity was a challenge for Julie, because while she wanted to leave behind her job as the chief buyer of worldwide produce for the entire corporation, she also sought an opportunity that enabled her to work independently on the job, be self directed at work and maintain her status of living. She was looking to relieve herself of the significant responsibilities she held at Marriott, yet also earn a comparable salary. While Julie obtained initial information about her job at Cisco by means of passive networking, as the following passage describes, she was able to escalate the scale of her job search intensity by using her friend as a reference.

So one time I was having a conversation with a girlfriend, I said “You know what? I’ve had it. I need to find-” and I was kind of just talking, I said, “I would just love to have a job where you just lay shrimp all day long. Just a job that you don’t have to think about, you do it, and you leave.” She said, “Really, what would you do?” I said, “You know, I’d really like a job that I could just do my job, and I’m responsible. It starts and, and then I’m out of there.” Then she says, she calls me up, she says “you are just the person for a Cisco project manager, I think you’d be great.” I said, “I’m not a secretary.” She said, “No, it’s not a secretary.” She told me more or less what it was. She knows me. I worked with her for 10 years, and she was my controller. So I said, “You know, that sounds interesting, I may go in there.”

Julie used moderate intensity networking to find her job and was eventually hired as a contractor to do project management. However, once her affiliation with Cisco began she used high intensity networking to conduct an internal job search and change her status from a contractor to that of a permanent employee.

... I went with them as a contractor, knowing that eventually, I’d get in there. Once I got in, I was there 30 days, I knew. I’m not leaving this place. I will find me a regular job. When I decided what I wanted, what I wanted to go, I just started networking. I started going and doing volunteer work. I started going and meeting different organizations within Cisco. I started going out and asking people about their jobs, and managers, because I was curious. I wanted to know what this was. I didn’t know this world. And that’s when I started meeting a lot of new people. But being a sales person, and you know how to network, you know where to go. I started going

to outside functions. What xxx for women? Where is this? Then I started, and I'm not intimidated. "You need your degree, you need this" and I thought "These people are looking for people. I know they're willing to train you if you have the right attitude. So I have no 4-year degree. And I didn't have any technical background. I didn't have anything. But I had the desire and the attitude. When I went out to tell them I wanted a regular job. I had them calling me in Cisco, "Well, come and talk to me." I was like, "This is amazing to me."

The overall effect of Julie's networking was vastly different from that of Dawn, Irene, or James for several reasons. When Julie conducted her external job search, her success at "stumbling" across a new opportunity occurred in large part because Julie's social resources were different. Unlike James and Dawn, whose lives included spells of incarceration and attempts to secure high paying hourly jobs, and unlike Irene, whose understanding of work was influenced by her friends who were also recent entrants to the labor market, Julie's social world was influenced by the people with whom she worked at Marriott, a corporate setting. Her information source at Cisco was the past controller at Marriott, illustrating the influence that occupational status can have on one's social resources. Julie's friend and colleague went on to become a contractor for Cisco, and by maintaining her contact among her circle of social resources, Julie had access to a new pool of labor market information.

During her interview Julie advocated networking as a job search strategy, claiming that it was the only way in which she had ever become employed. However, her employment history shows that much of Julie's networking during the early part of her career was the result of passive networking.

I think I've always networked, and didn't know that's what it was called. Yeah. Because when I worked at the cannery in the summer, I worked every summer there, then I graduated high school, I got married at 18. And I knew I was going to get married, but I was going to go to college. But I had been talking to this manager, and he said "we have jobs in the warehouse all year round." So I said okay, and I went to work for them, the same company, California Cannery and Growers, which is now Tri-Valley, to go work for them in the office as a file clerk. (LA: And where was that?) Here in San Jose, right down town. It was one of the largest packers there. I worked in the office as a file clerk — very, very minimal, I was only 18. Then after that, they put me in charge of inventory, and then they put me, I was office manager, then I was the director, I started growing and growing, went to costing. Then I decided I was going to quit and just go to school

and get my degree. Well then my husband divorced me. So then I told my friend that I needed to find a job and make more money. Well, someone told someone else, and then I'm in this other place with Sysco Food Service. Not Cisco Systems. So I stayed with them, and then was going through a divorce and needed more money. Then a friend of mine who worked for the Marriott program said, "You know, we're looking for somebody." So I talked to them. So every job I've had has been word of mouth of a friend. But for me to go on the floor knocking from door to door, I've never done that. Never done that. I've never gone door to door looking for work.

Julie's employment history as well as her recent job search demonstrates how high intensity networking – as characterized by both active networking and referential ties – can optimize a job seeker's employment outcome. Julie's job history also reinforces how social context provides access to particular types of job opportunities and in Julie's case helped her to forge a career and eventually make a career change. Julie's contacts provided her with bridging ties, while her job history experiences set up a certain "path dependence" in which she had access to high status individuals with decision-making authority, either directly or through her social ties.

Many of the low-skill job seekers who are less successful in forging a career than Julie also experience a degree of path dependency in their career trajectories. Their initial labor market experiences expose them to a set of individuals and opportunities that do not provide for greater upward mobility. In this sense their networks have a negative effect on the employment trajectory. In order to improve their work opportunities they may leave their job in search of a better position; however, having acquired no greater skills they are unable to secure better opportunities. As a result they end up cycling through the labor market, in search of marginally better wages and opportunities with few prospects for true mobility.

The strategies described in this section show how a haphazard approach to job search reinforces reliance on bonding ties for labor market information, rather than the bridging ties that lead to new pools of information. Coupled with job seekers reluctance to activate their networks at all, low-skill workers engage mostly in low or moderate intensity networking rather than the

high intensity networking which would likely lead to greater job search success. Moreover, the employment history of most low-skill workers leads to a path dependence in terms of their future work opportunities, preventing them from breaking the cycle of poor quality employment. In the following section, I will discuss what opportunities there are for increasing the skill set of low-skill workers, how these resources are used, and what barriers exist preventing their greater use.

THE INTERVIEW PROCESS

Within the job search process, interviews are often billed by employers as an opportunity for a firm to get to know a candidate, and a candidate to learn more about a firm and the open position. However, interviews are rarely perceived in this benign way by job seekers. Instead, interviews are perceived by job seekers as a barrier to entry, preventing them from being able to have the job of their choice. Nevertheless, interviews take on increasing importance in the job search process with low-skill workers, precisely because in many cases hard skills are usually not required for their jobs. Instead, employers use the interview to assess a candidate's soft skills – their ability to comport themselves, communicate effectively, and get along in a professional environment. Employers believe that interviews provide a good setting for evaluating these traits.

Every candidate in my sample who was searching for work had to engage in an interview at some point in the job search process, and more often than not they engaged in more than one. For many, employment agencies were their first encounter with an interview in any job search process. These interviews effectively functioned as an initial screening. If job seekers were not successful at “passing” the employment agency interview, they would not be called back for temporary jobs or referrals to other opportunities.

For some workers, the interview process is perceived not only as a barrier to getting a particular job, but also as a discouragement for engaging in job search activity. The interview can also become a barrier to people seeking greater upward mobility and employment opportunities. Marci, for example, is a married 45-year-old Filipino woman who has been living in the United States for 17 years. Though she has been working as a Material Handler of electrical components at Solectron, a Silicon Valley company known for having a progressive policy of hiring and training low-skill workers, Marci is interested in improving her skills and increasing her income so she can send her teenage son and daughter to college. In the Fall of 2000 she enrolled in the Cisco Networking Academy to become a Network Administrator, a job with a starting average income of \$50,000 a year, a significant increase over her \$13 an hour job. However, when asked about moving on from her current position, she expresses some reticence to do so because she finds the application and interview process daunting.

Marci: I'm not interested anymore in applying. Like I get tired of applying. I just want to wait for another position in the company where I work right now. Because it's — I'm tired of like being interview, filling out applications.

LA: So have you done a lot of that in the past?

Marci: Yeah.

LA: But not at Selectron?

Marci: Not at Selectron. Before I go into Selectron I do. Like for 12 years, I told you, when the first I got laid off, I applied to many companies, several companies, too many interviews. And also the frustrating thing that happened to me is when I went to Sawyer College, I started computers, I learned the basics, and they also, they told me that they gonna help me look for a job. They send me to — I think about 10 companies. I told they is gonna help me. No. And I get to a lot of interviews, nobody hired me.

Employers put a great deal of stock into interviews as mechanisms for weeding people out of the applicant pool. This has lead to extensive interview processes. Consider the experiences of Michael, a 34-year-old African American male from San Jose. When his employment agency lost a big contract with Cisco, Michael found himself back on the

employment line. This time he went to the Apple One employment agency, which sent him to interview with a small Silicon Valley firm, Future Electronics. Michael endured five interviews in his quest for a position in the customer service department before being hired into a lesser position in the mailroom. When asked about how he ended up in the mailroom he responded:

Because she, the person that interviewed me, they felt that I didn't have the skills yet for that, so she was like, 'the best thing is to get the foot in the door and stuff, because they do move up and stuff' and I was like "I don't know about that." You know, it was kind of frustrating, because I went on like — I had to go in there for like 5 interviews. And I had never done that before, you know. My thing is I heard of one, two or three, you know. So I was like kind of frustrated. I was like, "What's going on? Why all these interviews?" You know. So I was like — when it came to the 5th one, it was like the president of the company, I kinda had an attitude, I was like, "whatever" you know, because I was so frustrated. So when he asked me, "Anything you want to ask?" My attitude was, 'well, I already asked you guys about everything I can ask now, since this is the 5th interview.' My attitude — I'm like, okay, you need the job, you don't need to be talking like that.

Often job seekers are not sure what to make of such a lengthy process, since they are rarely told why they have to come back for so many interviews. The attitude that they might develop in the process could serve to prevent them from getting the job in the long run.

Extensive interview processes were encountered regardless of whether the job was a full time or part time position. Consider the experiences of Julie, the 48-year-old Latina who joined Cisco Systems after a 30-year career in the food and agricultural industry.

So, at the time of the end of the 9th interview, they hired me, they asked me if I wanted a job. But it wasn't a regular position. That means regular with stocks and insurance. I was going to be a contractor. Which means they can let me go within 12 months. Well, I checked around, and I found out that 40% of Cisco's employees are hired as contractors, and within 1 year, they either let you go or they hire you. But I knew, I had done some homework, and I knew that Cisco was starting ___ and I knew that they were looking for qualified people, and I knew I was good. And I knew with their training — I'm a quick learner, and I like to learn. So I knew, there's no way. They're going to keep me. So I quit my job.

Because of her background in sales and her many years of experience in the corporate sector, Julie had a different skill set than most low-skill workers in my sample. However, to the extent that firms use contract workers as a pipeline for permanent positions, an extensive and intensive interview process may be a permanent part of the employment landscape. In the new economy,

lesser skilled workers, temp workers and part time workers are held to the same standard as full time, permanent employees. This represents a shift in how we think about the nature of work.

In the quest to move low-skill workers into the core industries of the Silicon Valley, completing the interview process and getting hired is only one half of the employment equation in the Valley. Once working in Silicon Valley firms, many workers express dissatisfaction with their employment experiences. The balance of this chapter describes the nature of employment in the Valley, the barriers faced by workers and the trade-offs they must make to stay employed. Claudia's story provides some insight into the nature of these stresses and compromises.

Narrative Sketch: Claudia

Claudia would be the first to tell you that she is fed up with her job. Her bosses are inattentive, her colleagues incompetent, and given her work hours, her commute too far. For Claudia to be fed up at work is saying a lot. Her personal life demonstrates that she can handle a lot of pressure.

Claudia has been the primary breadwinner in her family since 1998 when her husband fell victim to a family illness that left him disabled, highly medicated and only able to work a few hours a week. His illness is so debilitating that he can't carry their children or throw out the trash, which means Claudia also shoulders the majority of the household responsibilities. In addition to caring for her husband and children, Claudia also has responsibilities to her first family. In the past few years, everyone in her family has been in poor health, her mom and dad with serious illnesses, and her only brother with cancer. However, it was not until her husband got sick that Claudia realized that she would have to alter her work life to accommodate her home life.

Claudia had been happily employed at RayChem where she worked in the accounting department. When her husband fell ill she reluctantly was ready to quit her job when RayChem announced that they were having layoffs. Claudia's boss added her to the lay off pool to give her some security and enable her to claim unemployment for eight months while she cared for her husband.

When Claudia re-entered the workforce a year later she cycled through a few jobs before ending up at ISP. She began in the Ernst & Young accounting department filing extensions for tax returns for W2s. But her time at E&Y was short lived because she didn't like it. "Everything was totally weird ... I think they were snobs," she recalls of her time there. Using the newspaper, Claudia found a job in the purchasing coordinating department at a Palo Alto company that produces electronics devices for satellite dishes and other end uses. However, when a corporate merger revealed that her position was duplicated she was let go. Finally she landed at ISP in the purchasing department.

Claudia found out about her job through a friend of hers who worked for a temporary agency. The agency's initial placement at ISP hadn't worked out and they needed to find a replacement fast. Claudia was soon hired as a permanent employee and eventually transferred to the billing department.

Despite a permanent position, a healthy salary (Claudia makes \$18.50 an hour), and a five mile commute, Claudia is not happy with her job in the Silicon Valley: it does not give her enough of a work family balance, and more importantly, she does not like the way she is treated by her colleagues. She routinely works overtime, often clocking fifty to sixty hours each week and impinging on her ability to care for her husband and son. And when she is at work, she feels poorly treated by her peers and micromanaged by her supervisors.

Claudia's story may not be typical of the employment experiences of most low-skill job seekers in the Silicon Valley, but it does point up the compromises that must be made in order to hold a job in this competitive environment.

WORKING IN THE SILICON VALLEY: A LIFE OF COMPROMISES

For low-skill workers fortunate enough to become employed in the Silicon Valley, work exacts a toll on their personal lives. The centrality of work in the lives of Silicon Valley workers is in part bound up with the identity of the place itself: the multiple conceptions of the Silicon Valley are bound together by its identity as a regional industrial complex, and as a result the Silicon Valley promotes a culture that values work above all else (Darrah 1999, Shih 2001). This work culture is characteristic of the new flexible economy as a whole. Kanter notes that while the ideology that work is one's central life interest has been persistent since industrialization, the advent of more flexible work systems now requires more of those near the bottom of the corporate ladder (1989). The pervasiveness of this culture of work is demonstrated in the types of trade offs that workers make in order to become and remain employed in high tech industry.

For low-skill workers the dedication required to work in the Valley creates a special dilemma. Because low-skill workers often have a host of life circumstances which they are trying to balance (recovery from drug and alcohol addiction, residency status, unaffordable rent, and family members with special problems, etc.) and/or fewer resources (sole breadwinner in family, less disposable income), working in the Valley exacts a toll on them which is much more difficult than that experienced by higher skill workers with greater means. Low-skill workers are often forced to confront the trade off between making a higher salary by being in the high tech industry and the need to devote time to family life.

Claudia, our 28-year-old billing analyst in the accounting department of an internet company, complained of the extra time she is required to work and how that time impedes her from being able to have a fuller family life. It was particularly upsetting to her, for example, when she was required to work holidays.

They make me ... we're always here like idiots working holidays. ... our boss says that he expected somebody to be there no matter what ... the work needs ... to be done, and nobody's volunteered. And they're like, "Well, why can't Claudia just do it or why can't May just do it?" Well Claudia's been here – we had a meeting – Claudia's been here for the past eight holidays. All this year. ... Last year, I was here Thanksgiving Day, I was here the day after Thanksgiving, I was here Christmas Eve, I was here day after Christmas, I was here New Year's Eve, I was here the day after New Years. Every damn holiday.

Claudia's complaints center not only on the expectation of her boss, that someone needs to be at work over the holidays, but also on the expectations by her colleagues that she is the default person who should be at work, in large part because of her home's proximity to the office relative to her colleagues. She feels that she is expected to give an inordinate amount of her time to her job, leaving her less time for family. She continues:

But it's your boss who should be able [to say] – ok you be here this time. Like Saturday. I volunteered to be there Saturday but then they want me to be there Monday. Hello, it's a three-day weekend. I don't have holidays or Saturdays. I don't understand this. We're basically swinging everybody around. Somebody has to be there Monday, and it aint gonna be Claudia. I already told them, "It aint gonna..." "Well why not?" "Because you're taking three days off this week and you need to be here Monday." They're like, "Why, because I have, you have plans?" I'm sorry if you have plans but the funny thing [is] every month, every time we have a holiday you have plans, that don't make sense. Especially if you don't have any kids. You need to get your butt all over here. You need to come to work.

Claudia's conflict demonstrates how working in a flexible economy interferes with family life. Kanter noted that the responsibilities of family combined with the demands of work have the "danger of excluding half the workforce – women – from better jobs." (1989 p. 293)⁵⁰

⁵⁰ Certainly for workers who have made lifestyle choices to remain single, the conflict was not as apparent. Julie for example, left her 30-year career with the Marriott Corporation to join the high tech industry as an effort to "downshift" her work life and work more regular hours.

These pressures, which are specific to women because of the domestic division of labor, are also particular to low-skill workers because of their overall socio-economic status and the attendant life circumstances in which they live.

Other workers have found ways to integrate their work and family lives. Lavall, for example, a devoted single mother living in East Palo Alto, would take tedious work requiring long hours – even if it meant bringing work home – if it meant that she was able to take time out during the work day to go to parent teacher conferences or do other similar activities to care for her only daughter. She made this sacrifice even though she did not particularly like her job.

My position was supposed to be more operations, more support, more project coordination. And then as my boss realized that I had clerical skills and the type of clerical skills I had are admin skills, I became more her personal assistant. I mean I got a daughter, so if I made her happy, you know, “Debbie I gotta go, I gotta go pick my daughter up from school today.” So she didn’t really trip. So then I didn’t trip.

Workers not employed in cluster industries also seek flexibility. Irma is a housekeeper for several members of an extended family in Palo Alto. The relationship she has with this family is both employer-based as well as friendship-based. Having this kind of relationship has allowed Irma to change the basis of her interaction with this family. Instead of a formal employer/employee relationship, Irma is both able to set parameters around her work life, and also reap special benefits which serve not only her but her entire family.

And this job, well they, they pay me good because they say I’m a part of the family. ... The first day when I go in these houses, I go and clean the houses and they ask me, “Irma how much you going to charge us?” and my first answer is, “I don’t know. Give me whatever you want.” Because I’m not the people who say, “Ok, give me \$80 or \$100 for this job.” No I say like this because I know these people for long time, and I don’t want to, yeah like, now, I don’t know. Like, they are not my friends. And I feel like they are part of my family because they do so much thing for us. (LA: What do they do?) Oh, they bring my children a lot of place. They take to the movies, to Great America. To libraries, to the take out dinners, breakfast. Yeah. We feel all these people like family. Not like I’m going clean the house and that’s all. ... And for me that’s good because they don’t force me, like do this, do that. They say doing whatever you can doing and go where you need to leave.

Irma has used this relationship to state the terms of her employment – she only works three days a week and she must be off each day by 3:00pm to pick up her children from school. Thus, the benefits of this close relationship come in the form of a flexible work schedule and special advantages for her children.

Where is the Silicon Valley?

The conceptions of work in the Silicon Valley described above and in Chapter 3 are even more dramatic from the perspective of local residents not employed in the industry. I asked my respondents about their knowledge and understanding of the Silicon Valley. While there were variations in the responses there were two distinct, geographically-shaped impressions. While residents of east San Jose generally acknowledged themselves to be a community that had been excluded from the Valley and its wealth, many residents of East Palo Alto did not see themselves as a part of the Valley at all, often describing it as “down there” or “over there.”

These different perspectives may be caused by historical factors. Prior to its incorporation in 1983, East Palo Alto received its municipal services from San Mateo County. According to one community activist, this caused residents to “look north” and understand themselves in relation to San Mateo County. However, recent changes in East Palo Alto suggest that they are not as separate from the Valley as many residents believe. While the Silicon Valley used to simply “meander around” East Palo Alto, today the redevelopment of large land parcels for market rate housing is bringing gentrification to East Palo Alto. With housing prices in the new Signature Properties development starting at \$540,000, this far outstrips the affordability of most residents in a town whose per capita income is \$13,400.⁵¹

An unclear perception of where the Valley is located is only one of the barriers to looking to this regional economy as a source of employment. Many East Palo Alto residents perceived

⁵¹ Based on the OEPA Report. Housing prices were reported in 2000.

the Silicon Valley as a regional economy that only values highly skilled workers, and as a result never considered looking to the Valley for work.

LA: There's a lot of talk about working in the Silicon Valley. Have you thought about looking there. What does that mean to you?

Dawn: First thing that come to my mind is that I don't have the experience for that. Cause you know you think of suits, business suits and heels and ya know typing and all that and sitting at the computer and all that and I don't have experience for that so I really don't –I don't see it happening for me. Not my impression of the Silicon Valley. You're a professional. I think I probably would have to get some schooling before I get one of them type of jobs. That's my impression. I really don't know.

LA: What about this job at Bay Technology, the assembly job. Does that seem like a Silicon Valley job to you or no?

Dawn: Yeah, probably. But it's assembly. You know what I mean. You don't have to... It's assembly and anybody can do that. Putting stuff together and xxxx. Perhaps that would be considered a Silicon Valley job because this is the Silicon Valley. And that's a technology company. So, yeah. And the people that are walking through the, off the area, had on suits and were dressed up real nice and stuff.

Chandra also expressed an aversion to working in the Valley. While she felt that her skill set was inadequate, she also suggested that her soft skills – that is, her ability to sell her herself in an interview setting, were lacking.

Chandra: Yeah, um, I had an interview at Kelly Services as an admin and um... Yeah, yeah. And they sent me out on an interview. I guess I didn't sell myself. I forgot what color I had on I had dark blue on. Yeah. I had a dark suit on, a skirt suit, and some black pumps. And I had my hair the way it is now. I thought I was very professional, you know what I'm saying, but I probably couldn't done that job because it got to do with this damn computer. I aint trying to download nothing. No files, or no no. So I probably couldn't do that but anyway I went for it.

Chandra and Dawn's impressions are interesting because they both speak to the impression that the Silicon Valley is a highly professional work environment. They associate this professionalism with modes of dress, ironic in light of the fact that most of the Valley has adopted business casual as its daily dress code. The important suggestion made by these two women though is their sense that they would not fit into a professional work environment.

As Dawn suggests, there is also significant concern about having the requisite skills: having already been left behind most Valley workers, both educationally and in terms of work

experience, it would take a lot to catch up. Leticia, who said she was not motivated to work in the Valley, describes her reticence to look for work there:

Yeah, there's so much competition. I might just do it for something, just to have the knowledge because I feel like it's something that you're gonna need, but maybe not to work. Because I don't feel like there's no way that I can catch up and do that. Not everyday. My eyes would be crossed looking at the computer screen.

Leticia and Chandra's comments also point up a central concern among low-skill workers about the Silicon Valley: that all high tech jobs in the Valley involve computers.

Because the Silicon Valley has such a strong identification with highly skilled workers, those on the low end of the labor market assume there are no positions for which they would be qualified. This discourages them from pursuing work in the high tech industry at all.

Residents of the Mayfair neighborhood had vastly different perceptions about the Valley. In San Jose, there was a keen awareness that the high tech industry surrounds them. Most residents had a much more textured understanding of the advantages and disadvantages of being in the Silicon Valley. When asked their impressions of the Silicon Valley, immediately the cost of living and the price of housing were mentioned, as evidenced by Brenda and Ken.

Brenda: ...expensive the rents are incredible. There's one-bedroom apartments for \$1500, and people are making that for months, so they can afford to live here. So that's the only part I don't like about it.

Ken: Traffic jams, housing prices. Housing doesn't affect, me cause I've been homeless for about five years now, so I'm not even. I hear about these 30% increases and "Ok. Sorry you're upset about it." I mean I'm sort of agreeing but I don't have a room. But still, there's the down side there. Downsides? There's been a lot of downsides. When Lockheed was laying off big time I have several friends who were just laid off.

The consequences of high housing costs are in some cases homelessness, or, less than ideal housing arrangements. One example is Michael, 34, who works for a tech company where he makes \$18.50 an hour. Housing prices being what they are, Michael was still living at home with his parents.

No. [laugh] I'm living — see, I'm lucky, I'm at home still with my parents, but it's hard. San Jose's not cheap at all. It's very hard. The price of rents going up more and more, but it's like the salary's not going up. And I hear friends at work, and I just feel for what they're going through. Because this one friend, he and his girlfriend just had a baby, he's __ \$20, and his rent's \$1450 a month. I was like, that's crazy. There's no way I could do that. ... If I have to pay that kind of rent, I'd have to move out of San Jose.

However, San Jose residents also recognized the benefits of living amidst a fast growing economy. LaRaye and Brenda both sensed that economic growth and expensive housing have come hand in hand.

LaRaye: When I was growing up it was — it's more — you see way more companies now compared to when I was growing up. Because I know I could go by some places where it was like a dirt lot, and now it's a big ole — like a company. It's a company now. So they've expanded a lot.

LA: Do you think that's good for the area, or bad?

LaRaye: It's good, but it's bad for us, because it's so expensive on the rent.

LA: Mm hm. What are the good parts of it?

LaRaye: It's good because it's more jobs for more people. But now everyone's coming down, and the rents getting — it's mainly the rent. It's ridiculous.

Brenda: Yeah. Because we have a lot more jobs. I can't find a good job because I'm not educating. I finished high school and started making a bunch of babies. I didn't go to college or anything. For someone that was able to do trainings or school, there's tons of jobs. Even jobs for people who finish high school. There's a lot of waitressing jobs, a lot of janitorial jobs. A lot of cashiers, receptions. There's a lot of work. It goes so fast, because we have all those jobs. It makes the housing so expensive.

The new economy of the Silicon Valley has demanded changes of everyone, and these changes are especially evident in the workplace. As new forms of work associated with the new economy take hold, firms are increasingly asking more of their employees in the job search process and in their commitment once employed. For low-skill job seekers to be successfully employed in the Silicon Valley, they not only need social ties to get information about jobs, they not only need the right “hard skills” to get a job, but they also need appropriate soft skills to be successful in their job. Julie's impression of working in Silicon Valley firms sums it up nicely.

Julie: It's fast. It's fast. My number one impression is if you don't continue to learn and keep on the edge, if you're not the type of person to be open-minded and want to learn, you will die in this industry. And you need to actually be self-promoting. You can't just get your job and just sit there — because people give you your job, and they expect you to run with it, and you to create it and take care of it. It's not a job like what I had been used to with employees where you have an 8 to 5, you do your job, and you go home. You're customer service, you just do that over and over and you go home. I think if somebody saw you doing that, they would think that you're not motivated, that you're probably not the kind of employee that they want. They want people that are thinking out of the box, and people that are going to create new ways, think of new ways of doing things. That's what I find in this industry.

On balance, most low-skill workers are ill equipped to manage the demands of work in the Silicon Valley. To do so requires earnings, access and opportunity. First, sufficient earnings are an important factor in enabling people to make the trade-off between work and providing for their responsibilities at home that must be addressed in their absence, such as childcare or eldercare. Workers must also determine how to get access to the right types of jobs. Intermediary organizations play a significant role in this, and as we shall learn later in this chapter, enable workers to keep pace with the rapid changes in demand for labor and emerging labor market opportunities. Finally, success in the Valley is measured by understanding how networks can increase one's understanding of the opportunity structure, and how to parlay these networks and a skill or trait into a labor market opportunity. The character sketch provides some context for understanding both of these dynamics more fully.

Narrative Sketch: Eugenio

In the Jimenez family, birth order appears to be the barometer of one's success.⁵² For Eugenio, the second oldest of four brothers, he is the role model for his two younger brothers, in large part because of his successes, but also because of what he preaches. An immigrant from Mexico who has been in the United States for over 20 years, he has figured out how to make it, and stands ready to show his siblings how to make it too.

⁵² Surname has been changed to maintain confidentiality.

From the perspective of his younger two brothers, he has made it. He came to the United States with a high school education. In that period of time he has married, had two kids, purchased a house and now sends his children to private school. He has always worked, primarily in the high tech industry, to provide for himself and his family. Equally important, Eugenio has provided the vision for his brothers to do the same. He is the one gifted with the ability to see opportunities on the employment landscape, and to direct his siblings towards those opportunities. He encourages them to go to school, pursue vocational training in certificate programs, get good job experience, and improve their English speaking skills. He boasts of his own academic training at De Anza College, Evergreen College, and San Jose City College.

But behind this veneer of unbridled success is a man whose labor market position is more tenuous. Despite the number of academic institutions that line his resume, he has yet to earn a degree from any of them. And despite his familiarity with network administration, he has yet to earn a credential that reflects his knowledge. Recognizing the need to have a credential that reflects his knowledge, he is currently pursuing training to be a Certified Cisco Network Administrator.

Eugenio grew up in Mexico where he completed high school and moved to the United States at the age of 20. He immediately moved in with his older brother Eufrazio who had preceded him to the United States and had settled in the Mayfair neighborhood. In following his brother to the US and settling with him in Mayfair, Eugenio demonstrates the classic pattern of immigrant network use in which the first family member provides transition assistance for those who follow. However, Eugenio speaks solemnly of his residence in Mayfair neighborhood. Stricken with poverty and gangs in the 1970s and 1980s, Mayfair did not represent the land of opportunity for which he came to the United States.

The main thing on this neighborhood that counts we used to have low-riders gangs and all that. All of that is generally speaking gone and not completely gone but—largely is about eighty to ninety percent got gone. That means that about twenty years ago we have low riders gangsters all over here. This street used to be— this house used to be owned by— not owned but lived by drug dealer. Drug dealer own the court in the front of the house, drug dealers on this side of the house, drug dealers on that side of the house. And everywhere was only people with problems. Gangs and all that stuff.

Nevertheless, depressed housing prices in the neighborhood enabled him to buy his house from his older brother. In the ten years he has owned his house, and the 20 years he has been around and about the neighborhood, he has seen improvements.

Eugenio: I wouldn't come back when I left for my brother's house. I wait long time ago but then I end up buying a house here. Cause he had this house before and I bought it from him. Only once I wouldn't buy it. You know of course um if I would have thought about it before just go to a better neighborhood a better house before then coming over here. If I end up coming up to this neighborhood this house and that's kinda of drawback in my case. It's not a big deal, because I learned to survive with all the problems I have. I have to call police everyday two three in the morning three or four times a day. Sometimes they don't show up, sometimes they show up. Sometimes there are people shooting guns out there you know I have to call the police. Gangs are fighting gangs are running around.

LA: Is that now or before?

Eugenio: Before. This is about ten years ago eight years ago five years ago. Its only become calm within three or four years ago. So three years ago things got a lot better. Police work better a little bit better with the community. We request that to many times until we were heard about it you know the whole community meetings and all that. Then also a lot of religious organizations had helped to diminish the amount of people that have been aggressive on this area, from gangsters to regular people.

Eugenio's work history in the United States began as a computer technician, a field he has been in ever since despite fluctuations in the market. As a technician he has made good money over the years, though he feels his wages have stagnated.

LA: So mostly you've been doing computer operations?

Eugenio: Computer operations yeah basically. Yeah computer electronics — as far as when I started I started as a technician. And instead of making more money I'm making less money. [Laugh] Everywhere I go I making less money. That's how deterioration happens on the job market. That's the truth.

LA: Tell me more about that.

Eugenio: Well, if you go back twenty years ago doing electronics you make from ten to fifteen dollars an hour. That was good money. And if you make twenty dollars it was even better, but I was doing it between fifteen dollars before. As time goes on I keep making only twenty dollars. You know until I got to Quantum I still only making twenty dollars. Twenty one dollars one dollar – it was to make an extra dollar it was a lot of effort that need to be made. Right now I'm moving into the networking end- industry I been making a ten dollar difference already thirty dollar, and I'm making forty dollars. Right now within 2001 I'm expecting to make fifty dollars an hour easy. That's the target right now. So if I were to stay in the same environment before I would be losing money already. Going from twenty going to eighteen to fifteen or to maybe less. That's how bad it is in the industry now. That instead of making more money in some areas you just going to end up losing more money there. That's how bad it is.

Eugenio's perception of his eroding wages provided him the impetus to increase his knowledge base and pursue more vocational education and training. This wage stagnation was also concurrent with broader shifts in the local labor market. For two years he worked as a field engineer for Egghead Software, which consolidated many of its operations and moved much of its technical work to Vancouver. As Egghead was closing and opportunities appeared to dry up for computer technicians, Eugenio shifted his work focus to network administration. He enrolled in the CCNA program in the Mayfair neighborhood and concurrently had been hired as a contractor by a new company Exodus, to learn Solaris and work as a Unix administrator.

Eugenio got his job at Exodus through a temporary agency called Unitek that specializes in IT consulting, contracting and training. When asked about his experiences working with temp agencies he cryptically states, "I can not give you a description, that's a whole ballgame itself. I can give you a couple of things on that is that most of them, they're lousy." His disdain for temporary agencies is born from the ways in which temp agencies undermine the direct relationship with the employer, thus skimming away advantages from the workers. He says:

They rip you off. And you get no benefits. Means just that a temp agency normally you know that your going to sell you services to that temp agency then you have to sell the services to the employer and then after that you have to kiss everything after that.

Nevertheless, temporary agencies are a permanent part of the employment landscape because they are able to provide job seekers with better access to available jobs. Eugenio

reported that his friends and associates were able to give him information about different types of companies that do the type of work he is interested in, and possibly even about position openings. However, temporary agencies were in a better position to give him more reliable information about openings and to actually put him in a position to interview for these positions. His current position with Exodus, as well as his previous employment with Egghead, both emerged through a temp agency.

Technology has changed how people find out about temporary agencies. Eugenio claimed that the internet was the most efficient way to reach out to temp agencies. Rather than spending his time scouring the newspaper or going door to door, the internet enabled him to post his resume with agencies, research the agencies themselves as well as the companies that he might be interested in.

LA: How did you find the job at Exodus do you recall?

Eugenio: Through a temp agency. E-mails through the Internet. That's where I get most of my contacts. And even though I don't do much of very light work they just send only a few do them and I only touched one web site I getting responses all the time. So in this case I got a good job I was lucky and I'm making the most out of that, but if I want a job I just go to the web sites and I get all that. I don't have to go to companies and apply like I used to before.

The prevalence of temporary agencies as a means to find work has meant that Eugenio has had to develop knowledge about how to manage temp agencies as a part of his job search strategy. In many ways, searching for agencies with which to work is like looking for a job, only there are fewer agencies to manage. Furthermore, as agencies continue to develop specialties in certain industries and develop reputations for having good placements, managing the agency relationships themselves becomes a more streamlined process.

Eugenio's story shows how shifts in labor market institutions have shaped the job search process for low-skill workers. While many low-skill workers do not yet use the internet, many of the next tier of low-skill jobs (beyond those at the lowest level) are advertised through the

internet, either directly by employers through means such as the Monsterboard.com or Dice.com or through agencies.

Eugenio's employment experiences also point up the need for low-skill workers to be more connected to labor market institutions because of the ways it enables them to obtain greater skill. In the next section I will discuss the role of labor market institutions in improving the relative positions of workers in the labor market.

PATHS TO MOBILITY: THE ROLE OF LABOR MARKET INTERMEDIARIES

When job seekers are unable to use their own social networks to identify employment prospects, they often turn to various labor market institutions to provide them with the information and other resources they need to find work. Termed labor market intermediaries, these organizations take on the job of matching the labor market needs of both employers and job seekers. Labor market intermediaries are among a plethora of "second chance" institutions (Kazis 2002) that exist to pick up the individuals who fall through the cracks of "first chance" institutions, namely the public education system. Labor market intermediaries serve employers by reducing the costs associated with hiring, and serve job seekers by providing a bridging tie and sometimes a reference tie to jobs. Beyond merely being a clearinghouse for information exchange, these organizations also intervene in the labor market by providing training to would-be workers for both specific employment opportunities as well as providing general occupational or vocational training.

Seeking out training poses a challenge for low-income, low-skill workers because they must complete training in addition to their existing responsibilities. Because they have very few resources, some feel unable to make the sacrifices required in order to participate in a program. While many employment training centers offer courses at night and on weekends, these training

programs present conflicts in terms of how job seekers allocate two of their scarcest resources: time and money.

In addition to vocational training programs offered by four local community colleges, numerous organizations provide employment and training to low-skill workers in the Silicon Valley. Here I note the three largest and most established: Occupational Center Industrial West (OICW) in East Menlo Park, the NOVA Private Industry Council in Sunnyvale, and the Center for Employment and Training in San Jose.

OICW is a nonprofit employment and training center located at the edge of East Palo Alto in an unincorporated part of San Mateo County. Funded by both public and private dollars, OICW serves job seekers from the entire mid-Peninsula, though 40% of its clients are from East Palo Alto. Training is provided for welfare recipients, displaced workers, youth and the working poor who are looking to upgrade their skills. Through a variety of courses including ESL, vocational training, GED preparation and job search skills, OICW serves roughly 3,500 people annually. OICW also has a one-stop career center.

OICW provides vocational training in a variety of fields – clerical skills, certified nursing assistant, culinary arts and the construction trades among others. However its most innovative programs are the corporate career academies it began offering in 2000. Sponsored by Sun, Cisco, and soon Oracle, these six-month full-time training programs prepare low-skill workers to be network administrators, UNIX administrators, customer service technicians and other occupations. Furthermore, the training is structured so that after a participant is certified and has had a certain number of years of experience working, they can take another module of training and receive a significant salary increase. In 2000 it was estimated that Cisco Network Administrators could earn \$50,000 upon completion of the first training module, \$75,000 after

three years of experience and completion of the second module, and over \$100,000 after more experience and completion of the third module. Because OICW maintains active relationships with local employers, including those sponsoring the programs, these career academies are among the most promising to date to provide low-skill workers with the bridging networks to occupations in the high tech economy. Equally important, these corporate career programs are a promising component of a broader strategy that advocates career pathways as a means towards upward mobility.

NOVA was established in 1983 by a consortium of North Valley cities in response to the Job Training Partnership Act (JTPA). In accordance with JTPA's replacement legislation, the Workforce Investment Act (WIA) of 2000, a 40-member board comprised of representatives from government, educational institutions, labor, business, and social service agencies, provides oversight for NOVA.

NOVA differs from OICW in two significant ways. First as a workforce investment board, its funding is largely provided by state and federal agencies. As a result they are bound to various regulations governing how funds are disbursed. Thus, while NOVA would be restricted from serving undocumented workers, OICW would have more flexibility. Secondly, while NOVA considers its clients to be both job seekers and employers, the lion share of its resources are really targeted toward employers. Unlike OICW, NOVA does not provide vocational training. Instead, job seekers can take vocational assessment tests and self-paced educational courses, prepare for the GED and CBEST and receive instruction on job search skills and where to obtain vocational training.⁵³ Employers are provided with regional labor market information and reports, downsizing assistance, outplacement services, staffing for employer-based career

⁵³ The CBEST is the California Basic Educational Skills Test. The tests assesses and verifies that all teachers have the necessary basic reading, writing and mathematics skills to teach. Any teacher applying for a teaching credential or emergency teaching permit must take this test in order to be credentialed.

transition centers, on the job training for employees and various forms of recruitment and job matching.

Finally, CET has emerged as a national model for employment and training programs. Like OICW, CET is funded by government and private sources and offers basic skills training, job readiness preparation, and vocational skills training in over twenty-five different occupations. Their job seekers are classified as the hard to employ: 31% receive public assistance, 41% are migrants or seasonal farm workers, and 51% are elementary or secondary school dropouts.⁵⁴ Training is provided in occupations ranging from bookkeepers to child care providers and electronics technicians to medical assistants.

Where CET stands head and shoulders above OICW and NOVA is in the proven effectiveness of its' programs. CET has withstood several rigorous national evaluations that have proven over the long term CET's effectiveness in raising the individual earnings of program participants. In addition to increasing wages, CET places significant emphasis on developing relationships with employers. Each vocational training segment has an advisory board of employers who help to keep the curriculum current, and many of these advisors represent the very firms who hire program graduates.

CET and OICW as community-based organizations and NOVA as a quasi-public agency represent two types of labor market intermediaries. Beyond their funding sources, they differ with respect to whom they view as their primary client. For community-based organizations, the primary client tends to be the job seekers, while the secondary client is the employers. Often with a workforce investment board the situation is reversed. Because WIBs are responsible for providing employers with labor market data and the WIB board is comprised of local business people, they often see the employer community as their primary client, and job seekers as their

⁵⁴ Data provided by the CET website. Characteristics describe those enrolled from July 1995 through June 1996.

secondary client. It is in the capacity of coordinating the one-stop centers that WIBs serve their secondary clients. A final labor market intermediary is the community college. In California, most community college vocational training is provided as contract education, and in this capacity employers are perceived as the primary client since they, by and large, are the ones who arrange and pay for the contract educational services. At issue is the extent to which trainees benefit over the long term in obtaining academic credit for their training that could accumulate and eventually lead to a degree that would result in substantial wage increases.

As intermediary organizations, CET, NOVA and OICW all provide a complement of services to job seekers and employers to increase the efficiency of job search and recruitment. However, despite the existence of these varied but strong training programs, my interviews suggests that some job seekers were reluctant to enroll in vocational training courses.

Workers worry about the financial burdens accessing training program may place on them and their families. In the Silicon Valley, many of the training programs that allow access to industry specific employment opportunities with clearly articulated career paths cost money. OICW, for example, charges program participants \$12,000 to enroll in its corporate career academies. Chandra, a 39-year-old East Palo Alto resident, discussed both the burdens and the conflicts of trying to obtain additional training when she spoke of her attempts to re-enter the labor market after an absence due to a workplace injury.

And I'm just going out there and I'm really actually challenging myself, because voc rehab want to pay for 36 months of training, and they told me they'll pay \$13 a unit, and that's not very much money. I've also got a offer for CTC, no, Computer Training Academy, CTA in San Jose. They have the same networking program, computer networking program, but it's seven months. And it's \$9,000, almost ten G's to get this training. They give you a student loan, Pell grant, and financial aid. But it's all go toward, the tuition books, everything. You don't get nothing for living expenses. They guarantee you a job making like 25, 26 dollars an hour after you go through this like seven months. And I'm like damn, this sounds really good. But that 9,000, that 10,000 dollars you gotta pay back. I'll be trying to hurry up and get them they money back, for real. I aint trying to collect no more bills. One of my girlfriends that I'm staying with now she said, 'Girl that's a lot of money. Even though you gonna make a lot of money you really

need to look at that part. You don't need to get no more bills' and all that. I'm like yeah, but if I got through voc rehab they said that they would only pay for like \$13 a unit. And hell, that's gone take too damn long. 36 months? She said you can work at you own pace. I don't think so. She said I could go through the community college and get it. That's too damn long, and to still work.

Chandra has two options for pursuing additional training – go to the local community college and have her training paid for by the Vocational Rehabilitation Administration or to enroll in a significantly shorter program through CTA at a cost of nearly \$10,000. In both scenarios Chandra would still need to work in order to have money for living expenses. The major conflict for Chandra revolves around the trade-off between borrowing money versus taking time. While she could borrow the funds to cover her tuition costs at CTA, assuming \$10,000 of debt is a significant burden for a low-skill worker who, at her last job, only earned \$7.50 per hour. This situation is reinforced by the TANF legislation, which makes minimal provisions for obtaining education in place of the work requirement.

One of the benefits job seekers obtain from taking a training class is that it also provides them with a “stamp of approval” from the certifying agency. In the minds of employers this too serves to reduce transaction costs by providing additional information about a candidate in the form of a recommendation from a credible agency. Nevertheless, job seekers with certifications are not guaranteed employment opportunities. Leticia was particularly anxious to find work so that she could leave her temporary housing arrangement at the drug treatment center and find permanent housing. Still, she had trouble getting hired having completed her culinary arts training program which provided her with a certificate.

Leticia: ... Oh God it was taking me so long for me to graduate and I wanted to get a job so that I could get out of that damn house. The program. So I was looking. And nobody was calling me back, so I was discouraged.

LA: Where were you looking and how were you looking?

Leticia: I went to Safeway, I put in applications –

LA: Just signs you saw or did you use a paper or

Leticia: Signs, signs I saw. And just like on the way to work. Safeway, I put in again at Le Boulangerie or whatever. I put in there again. I put in with um, Noah's Bagels. You know. Just like little places like that ya know is shopping malls, places like that and they weren't calling back.

LA: Do you know why?

Leticia: No. Discouraged because of that I have no idea. They never called me back and I filled out the application to my best ability. Ya know.

Within the technology cluster, certifications were important as the labor market grew and the search for workers became insatiable. However, as the market has contracted some of the workers who completed technology training programs were struggling to get hired. The mass layoffs have increased the overall pool of workers, allowing employers to be choosy and to select workers with many more years of experience than recently credentialed technicians. Leticia's experiences show that training alone does not necessarily compensate for the difficulties that workers have in finding employment in the labor market. Training must be linked with information ties to point job seekers in the direction of an available position. Eventually, Leticia was hired by Mime's, the local restaurant developed, owned and operated by OICW to give their graduates hands-on restaurant experience.

To manage the inadequate networks newly minted technicians have, they turn to employment agencies. However, the rise of employment and temp agencies is explained by several factors. Beyond the changing forms of work embodied by the new economy, these institutions play a crucial role in helping to place newly minted trainees as well as unemployed and underemployed job seekers that adopt a "work-first" strategy and use employment agencies as a means to both find employment and upgrade skills. A 1999 report by Center for Law and Social Policy (CLASP) notes that this strategy may in fact pay off in the short term: low-wage

employers do not value increases in basic skills or a GED as much as they do actual work experience or a vocational credential. However, CLASP also notes that in the long term wages are strongly linked to basic skills as well as occupational and educational credentials.

The growth of the business services sector and the increased use of employment agencies has been well documented in recent years (Benner et al. 1997). These reports document the rise in the “contingent workforce.” However, while the overall number of contingent workers has increased, they still do not represent a significant portion of the US workforce (Osterman 1999). Nevertheless, the forms of work in the Silicon Valley require local firms to rely on contingent workers for both their immediate and long-term needs.

Contingent worker is the term to describe all of those who are not permanently attached to an employer or place of work, thus lacking a certain job security. However, contingent work is in some ways an imprecise term when referring to this group since the reason for their lack of attachment varies. While there are several variations on contingent work, the four main types of contingent workers can be classified as independent contractors, on-call workers, temporary help agency workers, and contract workers.⁵⁵ Most of the people in my sample are either agency temporaries or contract workers.

Those on the supply side of the labor market are well aware that the new game in town for securing immediate employment is through temporary employment agencies. Temporary agencies have become an important labor market institution as the social contract for work has shifted from a model where workers had corporate loyalty and would spend their entire career with a single employer to one where workers are expected to manage their careers by working for multiple employers over the course of their careers (Osterman 1999).

⁵⁵ Here I use Osterman’s classification for the main types of contingent workers.

As one of a few labor market institutions in a transitioning economy, temporary agencies can assume the role of providing occupational bridging ties because they serve as an information clearinghouse. Furthermore, in addition to providing information and access, they also assume multiple other roles, including screening, training and placement. Many of the respondents in my sample had at some point used a temp agency. Pamela approached a temporary agency to help her change careers from law enforcement to administration within the high tech industry.

Pamela: I needed to get into a work environment where I can also update my skills at the same time. So I went to Robert Half and uh, you know they tested me and I aced 'em.

LA: And is that just a, it's just an employment agency?

Pamela: Yes. They do specialized office staffing. Basically um, paralegals, you know, executive secretaries, um, administrative assistants, book keeping and stuff like that.

LA: And where are they located?

Pamela: Their headquarters is in Menlo Park, on Sand Hill Road. But I applied at the office in San Jose. And they give you a clerical test and a computer test, ya know, background the whole nine yards. So, the clerical exam, just one out of four sections you know just one, basically aced it, and they were really impressed with that. The computer test, I couldn't even do it. I couldn't even get enough of it done to get a score. It was that bad. But, I'm not intimidated by the computer and it was like, just give [me a] chance, I'm sure I'll be fine. I learn fast. So they say "Well, we can send you out on some answering phones or whatever just to kind of get you back into the work mode and familiar with the computer." And they happen to get a job in while I was there that was at a company that only wanted someone that could answer a phone and greet people. But it was one of these high tech companies in America that was a Japanese company, that needed someone that was gonna be willing to be a scrutiny person as well. And here I walk in the door, 23 years in law enforcement, and can answer a phone and don't know nothing hardly on a computer. And they were like "Oh thank you God" that I fell in their laps. They sent me out for the interview before starting on the assignment. They wanted to send me out for a pre-interview. And it ended up being a Japanese company. And almost everyone spoke Japanese [laughing]. And it was like oh my God. But you know they were impressed enough to tell me that we want you to come on in for 'em – it was a temp to perm kinda situation. So I went on and started there. And it actually turned out to be a real good experience because I was able to get back into the work mode. And they gave me a computer and told me I had all the time I need to do and learn as I chose. And the temp agency had a tutorial program online for their temporaries. And I was using it all the time.

Pamela's experience shows how a temp agency plays the traditional role of a training center by assessing her skills and providing her with the training that she needed to find a desirable position. In this particular scenario, the agency was also able to provide her with an employment

opportunity that capitalized on her prior work experiences. The ability to provide training online by allowing temp workers access to tutorials through the internet represents improvement over traditional employment and training because in this case Pamela could both work and obtain skills, and thus not face Chandra's dilemma. While not every job could do this, moving to an apprentice-based model of ET could incorporate both skills development, works experience and provide some funds for cost of living. A greater discussion of apprentice-based models will be taken up in the next chapter.

While temporary agencies might be helpful in securing immediate employment and can connect workers to vastly different pools of employment information, they raise serious questions when it comes to providing social equity to low-skill residents. Paul Osterman (1999) notes that fully two thirds of contingent workers in temporary help firms would prefer some other kind of work. Furthermore, these workers are more likely to earn lower wages, work fewer hours and have health insurance.

Recall Eugenio, the freelance field engineer who secured many employment opportunities through agencies. He describes the drawbacks of relying on agencies as a source of job information.

LA: So what temp agencies are good agencies?

Eugenio: I cannot give you a description – that's a whole ballgame itself. I can give you a couple things on – that is that most of them they're lousy. ... You know it is very hard to work for a temp agency. So... In other words it takes away. The ability for you to negotiate takes away the ability for you to do things better, and they always want to manage you. Then you go to the job, they manage you on the job and then they manage you down to the last employee that wants to manage you is the temp employee. And I don't think that's only to my own feeling that that's happening. I've seen that in a lot of people for the last few years.

Eugenio's comments point up some of the reasons for shying away from using temporary agencies. Pragmatically, using a temporary agency lowers individual earnings compared with being a direct hire. Because temporary help agencies are compensated through the income of the

worker by taking a differential of the hourly wage paid to the employee, using an agency diminishes wages. Very few agencies provide their workers with benefits, unless you are a contract worker.⁵⁶ For contract workers who have worked freelance in the past, temporary agency may also mean less job satisfaction. Eugenio also reported that he had less workplace autonomy and found the environment too controlling. For these reasons and many others, temporary agencies are rarely considered a long-term solution for most low-skill workers.

Job seekers in my study reported other negative experiences with agencies. In particular, some perceived agencies as inefficient mechanisms for finding work, primarily because they did not like all of the procedural aspects of dealing with an agency. Michael, a self-described serial user of agencies, discusses his experiences.

LA: How did you hear about Apple One agency?

Michael: I just happened to be on the bus, and I was just like driving by. Actually no, I was looking in the yellow pages. And I was like “hm” and started reading about that. They told me to fax my resume. Then they called me in, I took the tests and stuff. Then like the next day, I got a job.

LA: So was Apple One the one that hooked you up with Cisco, also?

Michael: Mm hm [yes] No. It was another agency, and I can’t remember the name of it now, because I was real frustrated with them. I can’t remember the name of the agency. [thinking] It’s on First Street. I really blocked it out, because I was so frustrated with them. I can’t remember the name of the agency.

The frustration with agencies is often linked to the assessment and screening process they employ when job seekers first enter agencies. Some job seekers are so put off by this process that it prevents them from using agencies at all. Larry, who relocated to East Palo Alto after a

⁵⁶ Contract workers still earn less than their colleagues who are independent contactors, but are entitled to a benefits package from the agency. However, conflicts have arisen when contract employees are on a site for long periods of time because the total compensation packages for employees with identical job functions differ. In particular, contract employees miss out on the benefit of stock options. To get around this problem, large firms have taken to hiring those employees who they like. And the government has instituted a rule that contact employees are only allowed to be on site for 90 days. (Interview with Karen Schmidt, Cisco Systems)

twenty-year absence, is reticent to go to an agency because he feels that the screening and testing process may be more time consuming than if he were to find work on his own.

LA: Have you thought about using an employment agency?

Larry: Yeah, up in Michigan I used the – it's been a few years ago, I forgot the company office up there – it was alright up there but I don't know about out here. I find employment agencies, as far as the employment office is concerned like, if you going in to look for a job the only thing they can do is refer your. And I think if I go ahead and do my own thing I can work a little faster.

Intermediary agencies of all types – community colleges, vocational training centers and even temporary agencies – are best positioned to extend the occupational and industrial ties of low-skill job seekers, but the extent to which they provide bridging ties to the growth sector of the economy varies by each organization. At one end of the spectrum is CET, which, even with its strong evaluation data, provides training for very few occupations with strong career ladders into the high tech cluster. At the other end is the NOVA Private Industry Council, which caters significantly more to employers' workforce needs than those of job seekers. And temporary agencies, while providing access to jobs and some limited training, are not a long-term solution for workers who are looking for permanent work with both stability and benefits. My assessment of the intermediary institutions discussed here suggests that OICW, with the implementation of its career academies, is well positioned to provide for the long-term employment needs of job seekers. They provide bridging ties to the regional economy, and because the programs are partly sponsored by the companies, they also provide the credibility or bonding to make finding work easier for job seekers once the program is completed. However, career academies will be most successful if offered within the context of an overall career development system which is focused on skill development and lifelong learning. The supports required to make this kind of training successful will be discussed in Chapter 6.

SUMMARY

This chapter has demonstrated that despite the labor market disadvantages of many lesser skilled workers in the Silicon Valley, there are some who are able to identify employment opportunities in the region's cluster industries. While none of my successful respondents had a college degree, all of them were able to find meaningful employment during the boom years in the Valley by leveraging their networks and a desirable labor market attribute. Julie did not have a college degree, but she did have thirty years of solid work experience and solid networks. Claudia did not have a college degree but she did have a specialized skill, a decent work history because of the firms where she had worked in the past, and decent networks. Eugenio did not have a degree, but he did have a skill specialized set, signified by training certificates, and connections to labor market institutions that could serve as a proxy for personal ties. In each of these three cases, networks alone would not have helped these individuals to land their jobs. Instead, they needed a combination of the right networks and an improved or specialized skill set to obtain some measure of upward mobility. And certainly the strength of the economy was an important factor in contributing to their labor market success. If the economy of 1999 looked more like the economy of 2001, they would have had a much harder time becoming employed.

These stories also underscore that getting a job is often not enough to help workers with low educational attainment prevail in the Silicon Valley's new economy. Despite their good fortune, the workers in my study who became employed faced challenges in both navigating the job search process and balancing the demands of their jobs with the demands of their lives. Furthermore, in order to remain a competitive job candidate, they need to continue to both do their jobs and sharpen their skills. In the next chapter, I discuss the labor market system in the

policy context and how an effective system would function to support these workers – as well as those who have been less successful – over time.

CHAPTER 6
MAKING POLICY WORK:
A TURN TO REGIONAL INSTITUTIONS AS A SOLUTION FOR BLOCKED
OPPORTUNITY

In this final chapter, I consider what policy responses might be instituted to address the problems associated with low-skill workers looking for employment in the new economy. In particular, I offer recommendations for how policy might change the sets of social resources that workers have at their disposal, and how to encourage job seekers to more aggressively activate and utilize their networks.

This chapter is guided by the following questions:

1. How can the labor market and/or workforce development system compensate for the inadequate networks and limited network activation among low-skill workers?
2. What types of policies should be in place to support and strengthen opportunities for upward mobility through the use of social networks?
3. How can low-skill workers get better information about training and employment with career advancement in the “new” regional economy?

This chapter is organized as follows. I begin with a summary of the main arguments of this study, laying out my rationale for looking at both policy and institutions as the locus of authority for executing policy responses. In the following section I present a brief historical overview of the major policy initiatives to combat joblessness, in order to understand how the government has treated unemployment. I use this discussion to develop an argument that supports a turn to regions as the appropriate point of policy intervention for economic development policy initiatives, of which job search would be an integral component. Finally, I present recommendations to address issues of networks, activation and skills as they pertain to employment in the new economy.

SUMMARY OF THE ARGUMENT

The idea that regional economies influence both labor market opportunities for job seekers and the methods for seeking out those opportunities, frames the central argument of this study. As a regional economy, the Silicon Valley reflects a larger story of increased income inequality and labor market bifurcation exacerbated by the new economy. The bifurcation in the labor market is not only limited to employment opportunities, but also to the way in which labor market information is disseminated.

Saxenian has documented how in the Silicon Valley's new economy, workers depend heavily on social networks to learn of opportunities for job advancement. Yet it appears that the use of social networks for the purposes of employment serves to reinforce class status. Among low-skill workers, network use perpetuates income inequality and prevents economic mobility. While class status is *transmitted* by virtue of educational attainment, class status is *maintained* by virtue of the personal contacts one associates with and depends upon. Moreover, since lesser skilled workers do not activate their high status networks as readily as skilled workers do, their chances of transcending their class status is further diminished.

The narrators in my study represented the range of experiences low-skill workers encounter when trying to negotiate the complexities of a new economy labor market. They showed that they were not bereft of employed bridging ties who could provide them with information about potential higher status jobs, though most of their ties were to people similar status bonding ties. However, though job seekers had some connections to workers in the new economy, rarely did these bridging ties actually provide them with information about employment opportunities. Instead, job seekers were much more likely to get their employment information from their bonding ties who were in a similar labor market position to their own.

Furthermore, job seekers that obtained labor market information passively, using low-intensity networking, were more likely to get low-quality jobs. Job seekers were unlikely to activate their bridging ties using high-intensity networking in part because using friends and associates in this way carried a stigma. Rather than being seen as getting a “hand up,” asking for this type of assistance was considered by job seekers as a “hand out.” For fear of compromising one’s relationships or risking moral judgment, job seekers would not look to these ties for assistance.

Bridging ties alone do not provide an accurate indicator of access to opportunity.

Bridging ties say very little about whether and how these ties are instrumentally used; thus while they may be necessary for employment mobility they are not sufficient. Bridging ties only speak to the composition of one’s social resources. But upward mobility is contingent not only on appropriate contacts, but also on increasing levels of skill to capitalize upon these contacts when and if they are activated. Differences in class status – between a job seeker and an information tie – may have a bearing on how one activates personal contacts. As noted in Chapters 4 and 5, job seekers are circumspect to use these ties to find out about skill-enhancing opportunities since utilizing social ties, particularly higher status ties, can have harmful consequences on that relationship. Thus, if class position is maintained in part by the preponderance of one’s social ties, then low-income, low-skill job seekers are also less likely to experience mobility based on their social ties – to the extent they extend upward – because of lesser take up rates in activation.

The reluctance to seek assistance was also fueled by class-based norms governing attitudes and behavior about work and belonging to a community of workers in the Silicon Valley. For low-skill workers, asking for help was not acceptable, while for high-skill workers using one’s social networks to find employment is both an acceptable and a savvy form of job searching.

Respondents' perceptions of available job opportunities were also shaped by place – both the regional economy of the Silicon Valley as well as the local communities in which they live. Many job seekers in East Palo Alto had limited knowledge of the type and range of jobs within the new economy and assumed, perhaps justifiably, that extremely high levels of skill were required to perform any job in a high tech cluster industry. Their perception was that workers who were a part of the new economy were “suits” with extensive computer skills. In San Jose, job seekers were more aware of the Silicon Valley, its industrial sectors and the range of employment opportunities within it. They were also more likely to be employed in low-skill jobs that are a part of the high tech industry, such as customer service and assembly. However, these workers rarely found themselves in line for promotions and greater responsibility, in part because they were not in the information loops about jobs, and in part because they lacked the requisite skills to actively seek out these opportunities.

Successful low-skill workers in high tech industries have found ways to tap into bridging ties, by using either personal or institutional resources. Some successful job seekers were able to use their personal resources to provide them with access to intermediary organizations. Eugenio, for example, developed institutional relationships with employment and temporary agencies to get access to companies and employment opportunities that provide both compensation and training. Others, like Julie, were able to leverage their professional relationships into employment opportunities. And others still, such as Claudia, were able to capitalize upon their work experiences at previous places of employment to secure a position at other high tech firms.

Each of these types of successes requires job seekers to do two things: understand the scope of their resources, and know how to use those resources proactively. My “successful” narrators each had their own method for acquiring and utilizing bridging ties, but the extent to

which they were able to use their contacts, to be assertive and have the “right” attitude in the workplace or in a job search, varied dramatically. Their ability to make strategic use of their networks was shaped by intangible factors such as self-confidence, culture, past exposure to opportunity, family values and for some by sheer force of will.

These processes, of course, speak to the job search experiences of low-skill workers. But what of the role of employers in labor market matching? How does employer-hiring behavior affect the chances of upward mobility for lesser skilled workers? For entry-level jobs, employers assume that “hard” skills are not an issue, and thus soft skills such as reliability and teamwork factor significantly into the employment search. However, as these workers seek jobs with better wages that require greater skill requirements, networks alone are not sufficient. Workers must demonstrate that they have enough skill, possess information about job opportunities, and have a contact that can serve as a reference. Absent each of these criteria, upward mobility is limited.

The question remains about what to do about improving network use. My research on the role of social networks and the importance of activation begs the question of how to move people into situations in which they can forge relationships with others who have resources. Is there a role for policy to support the creation and expansion of networks and to improve the activation of networks to benefit job seekers upward mobility? If policy is to be effective it must deal with two interrelated concepts: institutions and how they function and individuals and how they behave.

In order to think about how such policies might be structured, a brief examination of the history of labor market policy is useful.

FEDERAL VERSUS REGIONAL POLICY

Historically, most employment policies have been initiated at the federal level in response to mass levels of unemployment and underemployment. Concentrating labor market policy at the federal level enabled states to address their labor market issues without worrying about job loss to other states (O’Leary and Straits 2000). This was best exemplified during the Great Depression with the establishment of an alphabet soup of programs such as the Works Progress Administration (WPA), the Public Works Administration (PWA), and the Civil Works Administration (CWA), as well as initiatives such as Social Security, Unemployment Insurance and Aid to Dependent Children. Together, these New Deal policies marked the beginning of modern interventionist efforts to develop a national social safety net. However, these labor market policies – and by this I mean policies specifically designed with the intent of helping people to get jobs – have primarily been an outgrowth of a social policy agenda which have marginalized them as a policy issues (Mucciaroni 1990). Furthermore, very few of these national efforts have made any serious attempt teaching job seekers effective search strategies.

The most significant New Deal program to address labor market imbalances was U.S. Employment Service (ES), the oldest and largest institution with responsibility for labor market matching. Established by the Wagner-Peyser Act of 1933, the Employment Service was originally charged with moving unemployed workers into the many New Deal public employment programs. In doing so it was also charged with the task of administering the unemployment insurance (UI) test validating that everyone receiving UI was indeed able to work, a responsibility it retains today. As a joint federal and state controlled system, ES is still the main public effort to smooth labor market transitions by operating as a clearinghouse of information between workers and employers. However, the activities it conducts are primarily

targeted at job seekers: job referral, counseling, skill and aptitude testing, job development, job clubs, job search skills and workshops, and job fairs.

As the labor market has grown more complex, ES has become increasingly perceived as a somewhat ineffective institution. The reasons for this vary. Those who advocate reforming ES maintain that the system is too rigid and bureaucratic, while supporters argue that ES operates as well as can be expected given chronic under funding and multiple missions (Osterman 1999). Furthermore, the ES was originally created to place unskilled workers into jobs requiring manual labor – developing the nation’s infrastructure of roads, bridges schools and dams (Maynard 1995). With the proliferation of jobs requiring greater and more refined levels of skill, ES has not been able to keep pace. Over time fewer job seekers and employers have utilized ES, resulting in the largest part of its caseload being the hardest to serve.

Few rigorous evaluations have been conducted to measure the effectiveness of ES. The one component of its many responsibilities that has been evaluated is the job interview referral, which several studies have shown to be cost effective (O’Leary and Straits 2000). But data is limited about its effectiveness in teaching job search skills. The focus on employment programs as social welfare continued in the 1960s with the emergence of the Manpower Development and Training Act (MDTA) in 1962. While MDTA was designed as a program that could escape the social policy moniker, its implementation at the dawn of the War on Poverty meant that the target population shifted from that of experienced, married, unemployed men – who had a lower unemployment rate anyway – to a categorical program that assisted the “disadvantaged.” With this, any notion that the MDTA “elevated manpower policy to a position nearly equal with fiscal and monetary policy, as both a response to and a reflection of changing economic conditions”

dissipated.⁵⁷ By the end of the decade, MDTAs targeted approach to poverty eradication was perceived as a liability because of its piecemeal approach. The Comprehensive Employment and Training Act (CETA) was the federal government's answer to MDTA.

CETA emerged as a way to decategorize and consolidate the multitude of small, pork-barrel training programs that cropped up during the 1960s and were administered at the federal level. Now with Nixon's imprimatur, CETA was both a demand and supply side program. It sought to deal with structural unemployment by providing employment and training to the "hard to employ," and cyclical unemployment by expanding employment opportunities during economic downturns through transitional employment. CETA also aimed to assist localities in expanding their public service programs. This multitude of goals subsequently made it difficult to evaluate CETA and to measure its success.

Eventually, the structural economic dislocations of the 1970s turned CETA into an urban policy program, and CETA soon become a tool of the Congress to allocate and spend resources at the local level. Over the course of its existence, from 1973 to 1982, CETA was amended eight times, and by 1978 the CETA budget had ballooned to \$12 billion with \$7 billion allocated to public service employment in response to the 1975 recession. The Job Training Partnership Act (JTPA) responded to CETA's failures by providing large sums of money designated for the purpose of employment and training to states. Under JTPA, the size and scope of CETA's employment training programs diminished, and public service employment was eliminated altogether. The specific employment and training services included in the JTPA legislation included basic education, English as a Second Language, on-the-job training and job search training. Administrative authority was shifted to the states, which were responsible for

⁵⁷ Mucciaroni finds this quote in Gladys Kremen's "The Origins of the Manpower Development and Training Act of 1962," 13, Historian's Office, Department of Labor.

designating geographic areas for employment assistance. Each designated area was to have a Private Industry Council (PIC) that would leverage the expertise of local businesses in designing and developing training programs. Ostensibly these employers would also be in a position to hire workers once they had completed their training program.

Administering JTPA at the local level had both positive and negative consequences. On the one hand, PICs were able to be much more responsive to local labor market conditions than a statewide agency and certainly more so than the federal government. Because PICs were primarily comprised of employers, they largely focused on three goals: 1) addressing specific firms' demand for workers, 2) providing training for either dislocated workers or 3) providing upgrade training for the employed. In short, the workforce development strategy was largely dictated by the labor market demands of employers, and not by the training and employment needs by unskilled workers. To the extent PICs were concerned with providing the poor with jobs, it came from individuals with a personal commitment to poverty abatement or firms with a sense of a corporate responsibility. But "seldom did advisory board members themselves recruit employees from among those enrolled in the program (O'Leary and Strait 2000, p. 15)."

The localized administration of JTPA also meant there had been high variability between programs regarding services offered, since this largely depended upon the demands of the local labor market. Thus, even though some job search assistance had been provided, there is little substantial research or evaluation on the scope of job search assistance, particularly the extent to which job search training included teaching dislocated and unemployed workers to find jobs and to leverage their social ties to do so. In fact, the success of job search strategies, as they relate to major policy initiatives, has largely not been evaluated as a discrete component of evaluations of JTPA and other federal workforce development policies. Instead, the bulk of policy evaluations

have looked at the extent to which providing unemployment benefits to job seekers actually serve as a disincentive to finding work (St. Louis et. al. 1986; Johnson 1991).

Studies on the effectiveness of various job search strategies vary in their agreement on the success of using personal networks to find jobs. A 1983 study found that informal search methods, such as using personal networks or contacting employers directly, led to greater employment success (Bishop et al. 1983). However, a subsequent study by the Bureau of Labor Statistics using CPS data found that while contacting employers directly was the most common method of looking for work, using a private employment agency was the most successful means to find jobs (Bortnick and Ports 1992). Many studies evaluate the use of such informal strategies by the employment status of the job seekers. However, job seekers who are employed have greater success in finding jobs than those who are unemployed (Lindeboom et al, 1994).

During the 1990s workforce development policy was again shaped by the social policy agenda. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was passed in 1996 to overhaul the welfare system, while the Workforce Investment Act (WIA) of 1998 replaced JTPA. While technically different legislative efforts, the two acts together have reshaped the employment and training system. PRWORA placed a greater emphasis on engaging in work as a condition for receiving benefits, and as a result in many ways has become a cornerstone of the workforce development system. Through PRWORA, Temporary Assistance for Needy Families (TANF) replaced Aid to Families with Dependent Children (AFDC), establishing a maximum lifetime benefit for receiving public assistance and mandating work participation in order to receive those benefits. Administered at the state level, in theory the work participation requirement would provide low-skill workers with skills to enter the labor market. However, in practice these public assistance jobs often focus on employment

opportunities that do not provide job seekers any transferable skills, and thus have not resulted in upgrading the skills set of the most disadvantaged workers or helping them transition into stable, well-paying jobs.

The Workforce Investment Act was the federal government's effort to overhaul the employment and training system and making it more responsive to the demands of the new economy. Unlike its predecessor, WIA provides universal access to workforce development services and focuses on the integration of multiple agencies through a one-stop system to deliver career development services in a clear and cohesive manner. In practical terms, One-Stop Centers have been established in localities nationwide to provide job search services such as assessment, search assistance, information and referral. However, anecdotal reports suggest the effectiveness of one-stops at achieving this mission varies considerably.

The impulse over the last three decades to devolve responsibility for executing workforce development programs to the local level is positive. However, one area in which these programs have failed is in gathering together the right constellation of players to shape labor market policy implementation in a way that is both responsive to both local community needs as well as employer demands. I believe a turn to regional institutions can provide meaningful policy solutions to labor market imbalances.

The turn to regional institutions as a means for solving metropolitan problems is part of a growing movement within the state of California and throughout the nation.⁵⁸ This "new regionalism" is constituted of several self-defined jurisdictions that range in size but do not correspond to existing political jurisdictions. Instead, common environmental, economic and social issues define these regions (Pastor et al. 2000). The institutions that make up the new

⁵⁸ In California, the California Center for Regional Leadership (CCRL) supports a network of regional organizations throughout the state and provides them with technical assistance. CCRL is a member of the Alliance for Regional Stewardship, a national organization representing the regional governance organizations of 18 states.

regionalism are also significant in that they rely on participation from the public, private and nonprofit sectors, and in that they promote dialogue about crosscutting issues significant to, and defined by, the region.

The rest of this chapter lays out my approach for considering labor market policy within the context of the new regionalism to improve the employment prospects of low-skill workers and strengthen their social networks.

A TURN TO REGIONAL INSTITUTIONS

The public policy challenge ahead is to determine how to create more links for those locked in secondary labor markets so that as opportunities arise, low-income workers are positioned to take advantage of them. Creating connections that enable individuals to hear about labor market opportunities is difficult to legislate, made clear by the largely failed attempts of the Employment Service. The challenge is even greater when those individuals have poor job histories or labor market barriers that prevent them from having even “mainstream” information channels. However, despite the widely perceived failures of ES, one can use institutions to make connections between employers and workers, job seekers and educators/training providers, and neighborhoods and regional resources. The issue is identifying the appropriate institutional scale for policy intervention.

Regions are well positioned as the right level of intervention because they balance the needs of a complex labor market scale against the need for individual level connection to those institutions. Furthermore, the region makes political sense as the point of intervention. As Osterman (1999) notes, no plausible activity around labor market reform will take place at the national level because there is no constituency of support. Regions can galvanize support around an issue specifically because they have no legal authority or political accountability to existing

government jurisdictions. Regional intervention makes sense because local policy initiatives often shape the politics of policy, by helping to develop that constituency and raise public awareness (Osterman 1999). This is particularly true in California, which often serves as a bellwether for the nation.⁵⁹

The imperatives of the new economy call for different institutional structures to be responsible for executing labor market policy. Such a structure must be regionally-based, responsive to dynamic labor market conditions, and credible to multiple stakeholders. Linking low-skill workers to meaningful opportunities in the regional economy calls for institutions that are able to connect the resources of regional employers to the needs of a multitude of communities and job seekers. One institution capable of creating such connections is the Collaborative Regional Initiative (CRI).

CRIs are civic organizations that have emerged in 21 distinct regions around California with the specific intent of convening stakeholders within an integrated geographic region to solve common problems. CRIs embody the kind of civic associations that perpetuate and sustain social capital within communities and that have, once again in recent years, both complemented and nurtured the government's social policy agenda (Putnam 1993; Skocpol 2000; Henton et al. 1997).

While the specific organizational structure of CRIs is dependent upon the region, CRIs are united by programmatic work that strives to enhance regional performance through the three "E's": increasing *economic* vitality, enhancing social *equity*, and improving *environmental* sustainability.

⁵⁹ Recent examples include Propositions 187 and 209, placed on the ballot through California's liberal ballot initiative process which enables the electorate to circumvent the legislature and bring populist ideas to public attention.

At the core of all CRIs are their collaborative structures. Governed by a board comprised of multiple stakeholders, CRIs are uniquely positioned to address local problems because they assemble key constituencies to engage in problem solving. In theory, CRIs might be comprised of banks and neighborhood associations, developers and environmentalists, landowners and tax assessors. However, CRIs largely represent private sector interests and thus, while CRIs are incorporated as not-for-profit organizations, they bear greater similarities to business associations. An artifact of this structure is that they focus largely on identifying market driven solutions to regional problems. Nevertheless, because their composition spans a breadth of sectors, these organizations bring significant resources to bear upon solving regional problems.

CRIs are largely defined by their commitment to an economically and environmentally integrated geographic region. These regions vary in size. For example, Los Angeles County contains five CRIs, while neighboring San Bernardino County, which is five times larger, only has one. There are also regions of California where there are no CRIs. The number and form of CRIs underscores that their common economic and environmental features, rather than the boundaries of political and administrative jurisdictions define them.⁶⁰

All CRIs take on projects that are related to their economic, environmental or equity concerns. These projects include land use planning, infrastructure investment, workforce development, economic development and educational reform. These projects are determined once the CRI has undertaken a strategic plan to reach consensus on the appropriate focus of its effort. At the current time, eleven of the 21 CRIs focus on some dimension of workforce development. The regions represented by CRIs, and the issues they choose to work on, also

⁶⁰However, the lack of a relationship to political and administrative structures also puts CRIs at risk as an institution. They have no steady funding stream and thus depend on grants from the government and private sources for on-going support. In the long run, this may impede their ability to survive as an institutional form.

allow CRIs to shape statewide policy around issue areas and the shift toward greater regional thinking within the state.

The greatest potential for CRIs is their scale. Their purview over the region enables them to understand the complexities of a significant economy, yet they are also close enough to local communities that they can still be responsive to sub-regional issues. However, CRIs have yet to demonstrate their ability to establish connections and create links with communities and neighborhoods. Unfortunately, many CRIs are evolving into organizations that provide a meeting place for civic leaders and elite interests, rather than one that includes broad representation. Because they work collaboratively, CRIs often reach out to other sources for assistance in implementing programs. However, their collaborations around these issues rarely include low-income communities. Once again, these communities and neighborhoods are left out of the information loop.

An example of a CRI not reaching its full capacity is the Joint Venture Silicon Valley Network (JVSV), the CRI that serves the Silicon Valley region. JVSV was established in 1992 in response to California's recession and the devastating effects of the economic slow down on local businesses. Launched by the local chamber of commerce, the initiative began as a two-phase strategy. Phase One focused on diagnosing the problems in the Silicon Valley that were contributing to the inability of the region to compete economically. Phase Two was conceived as an implementation phase in which leaders from industry, government and the community pooled their abilities and resources to solve local problems.

The Phase One report, which was written by Stanford Research Institute, pointed to the inability of both the government and business sectors to engage in regional problem solving, as well as their reluctance to interact with one another (Collaborative Economics 1995). There was

little discussion of the role that low-income communities played in the regional economy's ability to be competitive. Furthermore, as Joint Venture began to meet and discuss ways to improve regional performance, low-income communities were not included. While the call for broad community involvement was made to advance the agenda of JSV, the community was narrowly defined as business interests and government representation. Ironically, while the establishment of JSV was a place-based strategy, the organization itself gave short shrift to the localities which comprised it as a whole, and as result to those communities most in need.

In 1995 JSV sought to rectify growing criticism that it was an exclusive organization by establishing a Diversity Task Force. The task force set aside funding for staff to conduct outreach to diversify the board and the advisory groups of JSV's main initiatives, several subject-focused initiatives that tackled specific local problems. In a six-month period 40 new women and minorities were appointed to a governance or advisory body. Yet and still, these individuals represented significant Silicon Valley institutions with vast resources, rather than neighborhoods or communities that also had a stake in the future of the region as a whole. Instead, the "28-member Board of Directors composed of civic leaders [was] drawn from four groups: Executives of leading Silicon Valley firms; Elected officials from local and state government; Executive directors of business associations; [and] Leaders of JSV initiatives." (Collaborative Economics 1995 iv/16)

In the subsequent years, JSV has been credited for the success of Silicon Valley organizations to work together to solve problems. During the economic boom they turned their attention to the pressures that success as a region was having on quality of life issues. This attention led to a subsequent report which noted that there was an increasing "economic" divide in the Valley. An initiative has been developed around how to address the increasing income

inequality in the Silicon Valley, including a specific focus on workforce development as a key to the Valley's future. In addition, JVS's board is also changing – albeit slowly – with two representatives from community-based organizations serving on the board.

Collaborative regional initiatives have the potential to connect low-income communities, and the people who live there, with the resources and opportunities that exist at the regional level. However, in order to do so their structure needs to change so that the CRIs themselves recognize that they need to be more place-based *in order* to be more people-based. The ability of low-income neighborhoods like East Palo Alto and Mayfair to forge meaningful connections with regional resources creates the potential for greater access to information and consequently to opportunity. CRIs are poised to be the regional institution that facilitates these connections.

In particular, CRIs could spearhead the effort to coordinate among the regions many labor market entities, business and civic leaders, and community-based organizations to ensure that channels for exchanging labor market information are open. This would result in greater resources, better labor market trends and better employment information being shared. Such broad based civic engagement can significantly expand the opportunity structure for the poor (Friedmann 1992).

An example of how this might work at an institutional level is taken from the experiences of the neighborhood improvement initiatives underway in both East Palo Alto and East San Jose. These ongoing community development initiatives engage residents in problem solving about community-based issues. The residents who participate in these efforts range from the unemployed to community leaders. In addition to holding large community meetings, both OEPA and MNII have economic development subcommittees that concerned with the issue of employing local residents. In San Jose, the committee included representatives from

government, politics, community-based organizations, etc. The confluence of these resources resulted in the establishment of a community-based Cisco Networking Academy for local residents.⁶¹ By contrast, East Palo Alto's efforts have occurred in a vacuum without any participation from bridging resources. Nearly three years into their effort, East Palo Alto has made little progress in informing residents of opportunities, assisting local employers or stimulating economic development. CRIs could play an important role in such an effort by participating in local planning activities. This would ensure that the activities and trends taking place at the regional effort (such as lay offs) could, at a minimum, inform local decision-making or, in the best-case scenario, ensure that local residents were less affected by these trends.

This study has demonstrated that the use of networks for job search is necessary but not sufficient for labor market success. Increasing the efficacy of job search and network use also means paying attention to the labor market system itself, transitioning it from a fragmented system into a more cohesive one, and rethinking its relationship to regional economies. This type of system change calls for considering the role of institutions, particularly at the local and regional level.

POLICIES TO ENCOURAGE GREATER NETWORK USE

Policy recommendations to encourage network use should have two objectives. First, they should provide low-skill workers with better means and opportunities to get information about employment and training opportunities. That is, it should change the mix of occupational and industrial ties in a job seeker's network and improve their information sources about employment opportunities. Second, policy should also begin to address some of the class-based reticence surrounding network use and activation. As my research suggests, despite the presence

⁶¹ Noticeably absent from this group was any representation from employers. MNII realized the disadvantage of this when their first cohort of training was completed and they had few connections to tangible labor market opportunities.

of different pools of information job seekers were reluctant to seek out information. One objective of policy should be to educate job seekers about the use of information in the job search process. The recommendations I consider below are not new ideas, but they all have particular relevance for how to support network use and activation.

Before proceeding, a special note is warranted here about the relationship between public policy and network activation. Policies on activation would address formal means of educating job seekers about how to use networks, and which networks might be used most effectively for upward mobility. However, public policy can not address issues related to the stigma of using well-placed contacts or the real risks those contacts face in recommending someone who has had labor market barriers. As a result, I believe the policy prospects are slim to support direct activation, particularly for those with the greatest labor market barriers and most in need of upward mobility.

In light of the reasons given for why people do not feel comfortable activating their well-heeled networks, activation as a reasonable policy goal would require a cultural shift in which mutual aid is encouraged, failure is tolerated and repercussions for a poor labor market match are minimized. These goals are difficult to legislate. As a result, my policy recommendations focus on what can be done to broaden the range of personal ties for low-skill workers. Overall, policies are needed that address the mix of networks over the short-term and over the long-term.

Long-Term Policies

Long-term policies address network composition changing the make-up of existing networks. These policies can be broadly categorized as economic development initiatives attentive to place, the composition of those places, and the effects of that composition. Networks are structurally induced by place, often reflect the class status of particular neighborhoods and of

economic opportunity. Two types of economic development strategies have value for broadening networks: place-based strategies and mobility strategies. Regional institutions, such as CRIs, are well positioned to bring the resources to bear in order to address these long-term issues.

Place Based: One solution for improving networks is changing the makeup of the places themselves. For example, East Palo Alto's gentrification could be more beneficial if it were carefully regulated. Rather than a strategy of displacement, such an approach could be thought of as a strategy of integration. To support the goal of greater social integration, mixed-income developments should be considered. This could be particularly effective in places like East Palo Alto where housing is such a hot button issues. It could also be effective in other high tech regions like the Silicon Valley that have a higher cost of living, much of which is driven by housing prices.

Recommendation 1: *Increase the number of mixed-income housing developments in traditionally low-income communities.*

Mixed-income housing has the potential to increase the density of high status social networks for residents of traditionally low-income communities. Particularly in regions such as the Silicon Valley, there is a scarcity of housing, particularly for the young, and often single, engineers and web designers who populate Silicon Valley firms. The demographic profile of these workers suggests that they are likely to be renters than owners. Thus, new developments that provide housing would be an attractive option for them.

For the lesser skilled, mixed-income housing developments creates an environment in which they have a greater likelihood of interacting with the highly skilled Silicon Valley workers. This is especially important since the research suggests that many of the social ties of

low -income people are neighbors and others who live nearby. However, proximity alone will not create the desired interaction between residents. A mixed-income development should also be linked to a community building strategy in which residents are encouraged to interact and get to know one another and mitigate their class differences.

Mobility Strategies: An alternative to changing the make up of the neighborhood itself is to facilitate greater connections between residents in poor communities and resources in other parts of the region. These strategies have emerged in response to the structural changes in the economy that have resulted in many jobs moving to suburban office parks and other locations not easily accessible unless one has his or her own car. Mobility strategies go beyond simply providing access to these jobs: they are also focused on building networks between residents and employers (Blank 1997).

Recommendation 2: *Improve transportation links to major employers.*

In order to make labor market attachment to Silicon Valley cluster industries a feasible alternative for residents in low-income communities, it is important to develop the physical infrastructure that will enable them to travel from home to work. In particular, recognizing the fluid parameters of what is called the Silicon Valley, it is important to develop better transportation links to the region. This would include increasing the number of buses, vans and other transportation options within the low-income communities, and connecting those transportation modes with larger nodes such as Caltrain, the Valley's commuter train system. Furthermore, increasing transit connections helps to transform communities by facilitating greater connections with social resources beyond the neighborhood.

Improving transportation options would also complement a mixed-income residential housing plan by providing transit for those already working in high tech firms. It also has the desirable side effect of reducing traffic congestion.

Ideally, a program that would allow residents to meet the region's major employers and hear about employment opportunities – and enable employers to screen potential applicants – would complement a mobility strategy. These kinds of programs could take the form of a company or intermediary sponsored job fair, or subsidized internships or apprenticeships.

Short-Term Policies

Short-term policies and programs to improve network use and smooth out labor market transitions would build on the fluid and flexible labor market that currently exists, while providing a slightly more articulated system. Short-term policies generally fall into three categories: those that attempt to use institution based career pathways, craft-based unions, and apprenticeship models as switching stations for information transfer.

Institutionally-Based Career Pathways: The existing labor market system is comprised of several kinds of intermediary organizations, many of which overlap in the functions they provide. Establishing institutionally-based career pathways would build on the existing core competency of these labor market intermediaries, but would provide a better signal to employers as to an employee's skill set. It would also increase job search efficiency among job seekers by enabling them to take advantage of the institution that best matches their current stage in their career development.

Recommendation 3: *Reorganize intermediary organizations to be strongly associated with each step in a career pathways system.*

Career pathways can be conceived of as a three-part system: entry-level jobs training opportunities; upgrade training; and advanced training and employment opportunities. I propose reorganizing the labor market system so that different intermediary organizations are associated with each of these three stages. The result would be an information switching station at each level with deep knowledge and information about its niche in the labor market. The systems would look something like this:

- (1) Temporary agencies would serve those searching for entry-level jobs. Firms would continue to have the types of relationships they currently have with temporary agencies, using them to screen entry-level applicants and as a pipeline for permanent entry-level jobs. Entry-level job seekers would go to temp agencies as their first source for hiring.
- (2) Employment agencies would assist applicants with significant labor market experience or who had been recently completed upgrade training in a particular field. These positions would be full-time, permanent positions. The employment agency would be akin to a headhunter for professionals. Agencies could continue to specialize in placing workers in a particular set of occupations or industry. Workers with experience would know that an employment agency would connect them with regional labor market opportunities.
- (3) Firms would continue to hire much in the same way they do now – focusing primarily on the most skilled labor pools.

Stronger association of these institutions with specific levels of a career pathway would signal to an employer where a worker is in their career development and would build a much more reliable system of referrals and references downstream. Job seekers would also have greater knowledge about where to go to look for work based upon where they are in their own career development.

Craft-based Unions: Another institutional form that could facilitate the transfer of information would be craft-based unions or occupational guilds. As Osterman notes, “craft

unions are based on occupational identity and do not rest on the tie between the worker and any particular employer. Hence the idea of mobility is presumed, and craft unions have historically also provided training and portable benefits to their members (Osterman 1999, p. 171).” While craft unions have gained favor as a means of supporting contingent workers, they also have relevance for any worker who expects to frequently transition in and out of the labor market, as is the case with those working in the new economy.

Craft guilds have their greatest potential in their ability to develop occupational standards while simultaneously currying favor with employers. They would operate like a professional membership association for people who do project-based work or are expected to transition in and out of the labor market. A web developer, for example, would look to the guild to establish wage floors, provide training opportunities and share information about potential jobs.

Crafts guilds have particular relevance to the new economy because they are organized around well-defined occupations, and as such provide a refined level of information for job seekers. Furthermore, they are well positioned to help articulate the career pathway within an occupation and support upgrade training.

Recommendation 4: *Promote the development of craft guilds as an alternative to traditional labor unions.*

A craft guild for the new economy would need to position itself as intermediary organization that served both the employer as well as the worker. In serving employers, craft unions could help to externalize traditional workplace benefits, and work with employers to develop credible training programs accepted by firms as an industry standard. In serving workers, guilds would provide wage floors, labor market information, job search assistance,

training and benefits. Since craft unions would support workers in a particular occupation, the would have four main activities:

- (1) Provide entry-level, upgrade and advanced skill and training certification.

Because the guilds would be in the position to help define and articulate the career path for the particular occupation, they would also be well positioned to provide training for workers in that occupation. In addition to hard skills training, instruction would include an intensive job search skills component emphasizing how to maximize friends and associates to find jobs, and to teach workers about the job search process. Members would also learn about the career advancement opportunities through their guild membership. Furthermore, because training would be developed in partnership with firms, these training programs would carry the industry “seal of approval.”

- (2) Facilitate information sharing. The union itself might act as an intermediary to share information about job openings. In addition, the union could sponsor both formal and informal mechanisms for members to share labor market information with one another, thereby facilitating information exchange.

- (3) Guarantee minimum wages and benefits. Crafts unions would assure that occupations had wage floors, but would not engage in collective bargaining with individual firms. Furthermore, recognizing that workers in the new economy are frequent job changers, craft unions would provide the options of portable benefits for all members so that workers would never be without benefits such as healthcare insurance.

(4) Coordinate apprenticeships. Finally, because the union would have relationships with employers, they could identify and coordinate apprenticeship opportunities for who have recently completed training or are those early in the their career.

The apprenticeship concept is developed further below.

Apprenticeships: Apprenticeships allow workers to get practical, hands-on experience as a component of workforce training. In the US, apprenticeships have largely been used as a school- to-work strategy for youth. However, apprenticeships need to be considered as a policy option for adults who need better transitions into the labor market and better networks once in the labor market (Blank 1997). Their applicability for promoting network use occurs because they allow workers to develop relationships with others in their occupation or industry of choice. These networks can both provide access to labor market information and, because they have and the opportunity to observe job seekers “on the job,” can also provide the reference tie which is often critical in actually becoming employed.

Recommendation 5: *Promote apprenticeships as a means of exposing workers to the culture of work in new economy firms, including the culture of instrumental information sharing.*

Many new entrants to the high tech industry do not know that it is acceptable to use networks as a means to get labor market information. In order to get information about jobs as well as potential career trajectories, they need to be in an environment that both 1) supports the use of networks as a means to get information and 2) exposes them to increasingly better information sources. Apprenticeships in a career of their choice, or in one offering long-term employment opportunities because of it’s relationship to the growth engines of the regional economy, would provide job seekers with the opportunity to practice their newly acquired

classroom skills. In addition, it would provide trainees with an opportunity to develop relationships with peers who might have information about job opportunities or other strategies for getting jobs in the field, and who could share the wisdom of their own experience looking for and obtaining work in the field. A state-of-the-art, well-executed apprenticeship program also would include mentor for each apprentice that could act as a role model and provide a link to a significantly different pool of information.

CONCLUSION

This study began questioning what could be done to abate poverty. My stance that poverty is fundamentally a problem of inadequate income led me to consider how the new economy might present opportunities for upward mobility for lesser skilled workers. The mythology of the new economy is both strong and contradictory – it is a place where credentials do not necessarily matter, but skills do, and where both meritocracy and personal contacts are highly valued.

In considering the advantages of regions built on new economy industries – such the Silicon Valley – we must also consider how these labor market trends may affect those with fewer skills, fewer resources and fewer options. The danger we are trying to mitigate of course is developing and promoting an economy that benefits only “the haves,” while unknowingly inducing other structural outcomes that resign certain groups to a life of poverty.

The benefits brought about by technological advancements are unparalleled. They have resulted in increased efficiency, higher productivity and greater conveniences for the society at large. But what benefits the society at large may not benefit particular subgroups. There may in fact be a social cost to pay.

Technological innovation cannot be decelerated, but there are ways to manage its deleterious effects. We must redouble our efforts to ensure that all segments of society have access to opportunities to engage fully in economic and civic life. As this study argues, both policy and regional institutions play a special role in bringing this about.

The rising tide of the new economy can lift all boats, but in order to do so we must make sure to patch the holes in the boats of some.

**APPENDIX A:
INTERVIEWS WITH KEY INFORMANTS AND RESPONDENTS**

KEY INFORMANTS

EDUCATION

Steve Barley, Department of Industrial Engineering, Stanford University
Martin Carnoy, Professor of Education, Stanford University
Karen Chapple, UC Berkeley/University of Minnesota
Luis Fraga, Professor of Political Science, Stanford University
William Miller, Professor Emeritus, School of Business, Stanford University
Annalee Saxenian, Associate Professor, DCRP, UC Berkeley

NONPROFIT

Jaime Alvarado, Mayfair Neighborhood Improvement Initiative
Chris Benner, Working Partnerships
Kathleen Boggs, Human Resources Manager, Public Policy Institute of California
Joe Brooks, San Francisco Foundation
Ruth Brousseau, California Wellness Foundation
David Buckmaster, Silicon Valley Manufacturers Group
Craig Howard, The James Irvine Foundation
Eleanor Jacobs, United Way of Santa Clara County
Faye McNair Knox, Start Up
Steve Levy, Center for the Continuing Study of the California Economy
Kay Mascoli, Joint Venture Silicon Valley
John Melville, Collaborative Economics
Paul Poston, Enterprise Foundation
Hermalinda Sapien, Center for Employment and Training
Omowale Satterwhite, Community Development Institute
Chui Tsang, President, San Jose City College
Dee Uhila, Pacific Islander Outreach
Kim Walesh, Collaborative Economics
Sharon Williams, Executive Director, OICW

FOR PROFIT

Bob Bauer, Xerox PARC
Vicki Deiwert, Human Relations, Xilinx Corporation
Katherine Gehring, Human Resources, Sun Microsystems
Jay Harris, Editor in Chief, San Jose Mercury News
Jack Lawrence, SGC
Sue Lord-Peters, Human Resources, Andersen Consulting
Karen Schmidt, Cisco Systems
Jesse Singh, BJS Electronics
Paul Swartz, Xilinx Corporation

GOVERNMENT

Eric Alexander, Employment Development Department, State of California

Duane Bey, City Council Member, City of East Palo Alto

Grantland Johnson, US Department of Health and Human Services, Region IX

Jean McCown, former Mayor of Palo Alto

LABOR

John Neece, CEO, Santa Clara & San Benito Counties Building & Construction Trades Council

OICW INTERVIEWS (SPRING 1999)

Carl Brown

Agustin Gutierrez

Refugio Huizar

Destiny Knox

Johnnie Price

Mario Pulido

Karla Reyna

Donna Robinson

Caprice Stern

Luis Torres

EPA RESIDENTS (SUMMER 1999)

Jeffrey Cole

Paul Seaton

Eric

Mike Uhila

QUESTIONNAIRE RESPONDENTS AND STUDY NARRATORS

Name	City	Date of Interview	Gender	Race/Eth	Age	Employed
Dawn	East Palo Alto	July 6, 2000	F	Af-Am	31	No
Chandra	East Palo Alto	July 6, 2000	F	Af-Am	39	No
Rozee	East Palo Alto	July 6, 2000	M	Af-Am	42	No
James	East Palo Alto	July 6, 2000	M	Af-Am	43	No
Murphy	East Palo Alto	July 6, 2000	M	Af-Am	42	No
Larry	East Palo Alto	July 6, 2000	M	Af-Am	50	No
Philomena	East Palo Alto	July 7, 2000	F	Af-Am	34	No
Serena	East Palo Alto	July 7, 2000	F	Af-Am	33	Yes
Arby	East Palo Alto	July 20, 2000	M	Af-Am	36	No
Rachel	East Palo Alto	July 20, 2000	F	As/PI	26	Yes
Tommie	Fremont	July 20, 2000	M	Af-Am	51	No
Teresita	East Palo Alto	July 21, 2000	F	As/PI	34	No
Rafael	East Palo Alto	July 21, 2000	M	L	33	Yes
Sabrina	East Palo Alto	July 21, 2000	F	Af-Am	27	No
Lavall	East Palo Alto	July 22, 2000	F	Af-Am	31	Yes
Jeri	East Palo Alto	July 27, 2000	F	Af-Am	52	No
Hilda	San Jose	August 7, 2000	F	L	40	Yes
Gerardo	East Palo Alto	August 18, 2000	M	L		Yes
Irma	East Palo Alto	August 18, 2000	F	L	38	Yes
Laura	East Palo Alto	August 18, 2000	F	L	49	Yes
Claudia	East Menlo Park	August 29, 2000	F	L	28	Yes
Dana	East Palo Alto	August, 2000	F	Af-Am	25	Yes
Michelle	East Palo Alto	August, 2000	F	Af-Am	45	No
Ta'Marra	East Palo Alto	August, 2000	F	Af-Am	37	Yes
Connie	East Palo Alto	September 12, 2000	F	Af-Am	40	Yes
Mavis	East Palo Alto	August, 2000	F	Af-Am	43	Yes
LaVita	East Palo Alto	September 7, 2000	F	Af-Am	31	No
Adrianna	East Palo Alto	August, 2000	F	Af-Am	31	No
Leticia	East Palo Alto	September 12, 2000	F	Af-Am	29	Yes
Maria	East Palo Alto	August, 2000	F	L	35	No
Josefina	East Palo Alto	August, 2000	F	L	34	Yes
Leticia	East Palo Alto	August, 2000	F	L	29	Yes
La Raye	San Jose	September 8, 2000	F	Af-Am	34	No
Elizabeth	San Jose	September 8, 2000	F	L	42	Yes
Irene	San Jose	September 8, 2000	F	L	21	No
Irma	San Jose	September 8, 2000	F	L	25	Yes
Michelle	San Jose	September 12, 2000	F	As/PI	18	Yes
Debra	Santa Clara	September 14, 2000	F	As/PI	32	No
Ken	Santa Clara	September 14, 2000	M	Wh	41	No
Hector	San Jose	November 11, 2000	M	L	40	Yes
Julie	Pleasanton	November 11, 2000	F	L	48	Yes
Marci	San Jose	November 11, 2000	F	As/PI	45	Yes
Brenda	San Jose	November 11, 2000	F	L	34	Yes
Michael	San Jose	December 16, 2000	M	Af-Am	34	Yes
Eugenio	San Jose	December 16, 2000	M	L	42	Yes

APPENDIX B:
Interview Instructions
SECTIONS ONE AND TWO

Section One: Occupational Ties in the Silicon Valley

Occupations refer to the type of job someone has, regardless of where they work. For example, someone can be a secretary in a law firm or at in insurance agency, and one is still a secretary.

1. Page One shows a list of the top 20 occupations in Santa Clara County. Please review this list. Do you know any one who works in any of these occupations? If so, please check that job title in the column provided.
2. For each of the occupations you selected, please indicate the relationship that person has to you by classifying them into one of the following categories:

Family	FAM
Friend	FRD
Acquaintance*	ACQ
Other.	OTH

Please write that category in one the space provided. You may list as many as three people using the spaces on that line.

*An acquaintance is defined as someone with whom you have either frequent or infrequent interaction but would not rely upon to help you if you needed assistance.

Section Two: Industrial Ties in the Silicon Valley

Industries refer to the types of business that someone works in, regardless of what they do.

1. Page Two lists the top 20 industries in the Silicon Valley. Please look over this list. Do you know anyone who works at any of these types of places? If so, please check that industry.
2. For each of the industrial sectors you selected, please tell me the relationship that person has to you by classifying them as FAM (Family), FRD (Friend), ACQ (Acquaintance) or OTH (Other). If you know more than one person in that industry, please use one of the additional spaces to note your relationship to that individual.
3. Are there individuals who appear on both lists? If so, please write the first name of that person next to the category. Be sure to write the name on both lists!

Top 20 Local Occupations

?	Occupation	Relationship			?
		Contact 1	Contact 2	Contact 3	
	Computer Engineers				
	Electrical and Electronic Engineers				
	General Managers, Top Executives				
	Computer Programmers				
	Systems Analysts – Electronic Data Processors				
	Secretaries, General				
	Salesperson, Retail				
	Cashiers				
	Electrical and Electronic Engineering Technicians				
	Receptionists, Information Clerks				
	Engineers, Math and Natural Science Managers				
	General Office Clerks				
	Janitors, Cleaners -- Except Maids				
	Registered Nurses				
	Guards and Watch Guards				
	Waiters and Waitresses				
	Hand Packers and Packagers				
	Sales Reps, Non-Scientific except retail				
	Marketing, Advertising and Public Relations Managers				
	Electrical and Electronics Assemblers				

Top 20 Local Industries

?	Industry	Relationship			?
		Contact 1	Contact 2	Contact 3	
	Business Services – Temporary Agencies, Computer Programming Firms, Advertising, and Security Guard Firms				
	Manufacturing -- Computer and Electronics				
	Retail – Restaurants and Bars, Clothing Stores				
	Wholesale Trade -- Computer and Electronics Equipment				
	Health -- Hospitals, Clinics and Nursing Care Facilities				
	Social Services and Day Care				
	Engineering & Management – Consulting, Public Relations, Engineering and Accounting				
	Special Trades -- Plumbing, Carpentry and Electrical Work				
	Police and Fire Protection, the Courts, Correctional Institutions				
	Transportation -- Airlines, Trucking, and Travel Agencies				
	Private Education				
	Insurance and Real Estate				
	Communications - Cell phones and Paging Services				
	Amusement -- Movies, Sports Stadiums and Gyms				
	Finance -- Banks, Credit Unions, Investment Firms				
	Hotels and Other Lodging Places				
	Non-durable Goods -- Food Production, Rubber and Plastic Products				
	General Building Contractors				
	Heavy Construction -- Highways, Tunnels, and Sewers				
	Federal Government				

Part I: Job Search and Networks

1. Let's begin by discussing each of the people who you jotted down in the exercise. (Probe: For each of friends and acquaintances mentioned, ask: How do you know them? Did you meet through work? School? Church? Neighborhood? How long have you known them? How often do you see them?)
2. Tell me a little bit about your previous work experiences. What kinds of jobs have you had in the past? (Probe: When did you have that job? How long did you stay? Why did you leave?)
3. Please describe your most recent experiences looking for work. How long did you look? How many places did you apply?
4. Did you talk to friends and family about job openings they knew of when you were looking for a job? Why or why not? How were they able to be helpful (told you about job; gave a reference; hired you directly)? How did you decide whom to contact for help in searching for a job?
5. Did you use an employment agency to find your most recent job? If so, what type of agency (private, public, school)?
6. When you were last searching for work, how many interviews did you do? How did you ultimately find out about the job you took?
7. Some people have a hard time looking for jobs because they get discouraged? Have you ever had trouble searching for work? In the past, what have been the biggest barriers to finding work? Do these barriers still cause you problems?
8. There's a lot of talk about working in the Silicon Valley these days. Have you ever looked for work in the Silicon Valley? Why or why not? If so, what prompted you to look? What kinds of jobs were you looking at? If not, what does working in the Silicon Valley mean to you? Do you know people who work in the Silicon Valley? If so, what do they do?

Part II: Current Employment

1. Are you currently employed? (If no, skip to next section)
2. What is your occupation/job title? How long have you been employed in this job? What kind of business or industry do you work for?
3. How many hours did you work at this job last week? Was this a typical work week for you? Would you like to work more or fewer hours each week? Is this temporary or permanent job?

4. Where is your job located? How do you get to work? How long does it usually take? Do you ever have trouble getting to work?
5. What is/was your hourly salary? Do you receive benefits (Prompt: health care, life insurance, retirement)? What about child care assistance? Do you feel as if you are making enough to live on?
6. Are there opportunities for career advancement where you work now? What would be the next job in the career ladder that you could get? Would you like to have this job? Why or why not?
7. Ideally, what kind of work would you like to do? Are you optimistic about your ability to do this work? Why or why not? Where do you see yourself in 12 months? Where do you see yourself 5 years from now?

Part III: Unemployment and Previous Employment

1. What is/was your most recent job?
2. Would you describe this as your occupation? If not, what is your occupation?
3. How long were you employed in this job? Why did you leave this job?
 4. What was the cause of your recent unemployment? How long have you been unemployed? What do you do in the mean time to make ends meet (prompt: under the table jobs, welfare; spouse or partner works)? Have you been able to receive public assistance (welfare)? Have you ever received public assistance

Part IV: Education and Training

1. Tell me about your educational background. What was the highest year of school you completed? (Did you graduate from high school or receive a GED?)
2. Have you ever attended college? If so, what did you study? What prevented you from finishing your program and getting your degree? Do you have plans to pursue a college degree in the future? In the same field, or another field?
3. Have you ever participated in technical or vocational training? In what field(s)? Did you complete the program? Do you have plans to participate in a training program in the future?
4. In your most recent job, did you receive any formal training from your employer to help you do your job?

APPENDIX C: MOVING FROM TAPE TO TYPE

All of the respondent interviews that were conducted for this study were audio taped. I chose to audio tape these conversations to enable me to give my full attention to my narrator during the interview. I subsequently augmented the interview by developing a set of detailed notes after each was completed. Transcribing interviews is a time consuming activity and, in order to give my full attention to the data collection process, I waited until after all the interviews were completed – a six-month timeframe – before turning my attention to this task.

The process of transcribing is tedious at best. I transcribed slightly more than half of the interviews myself – each taking between six and eight hours – before I turned to other means to expedite the process. I paid two typists to develop interview transcripts, and even attempted to use an online transcription service, a method that was largely unsuccessful. Once the external transcribers developed draft copy, I listened to each tape as I read the written record, making corrections along the way. Still, occasionally it was difficult to capture the entirety of the interviews, usually due to audio quality or the accents of the narrators.

In the text of this study I use portions of those transcripts when they elucidated the theories developed during the fieldwork. At times I used a passage in which a word or phrase is missing. When a word could not be deciphered, I indicated that by using the letters “xxx” in the text. Ellipses are only used to convey that the author has edited the quote for brevity.

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