



Workers riding home from Tan Thuan Export Processing Zone (EPZ) in HCMC.

Photograph by Trần Ngọc Angie, 2002

Transnational Assembly Work:

Vietnamese American Electronic
and Vietnamese Garment Workers

Trần Ngọc Angie

What does it mean for Vietnamese Americans to work at home in the high-tech electronic industry? To what extent are the sweatshop conditions in electronic home-working in San Jose, dubbed the Silicon Valley, shared with the oft-cited garment industry in Viet Nam? To what extent do female and male workers have different “expected” roles to fulfill in each industry, and how do they get paid for doing the same tasks/jobs? What factors lead to their participation in electronic home-working? The focus of this article is on assembly home-working, part of the temporary work force of the electronic industry in San Jose, California, in comparison with the garment industry in Viet Nam. This article identifies transnational connections in assembly work, pay, and gender expectations of these two industries.¹

While the electronic and garment industries are very different in terms of capital and skills intensity, they share similarities in global production, pay structure, gender expectations, division of labor, and working conditions. First, the multi-level subcontracting structure of the garment industry also prevails in the high-tech electronic industry. There are manual stages, which lead to low-waged workers working at home to fuse components on electronic boards, as well as to repair and modify older boards. These low-tech and manual tasks occur at home alongside the highly automated assembly work on the job floor in companies. Second, unequal

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power relations between workers and employers are similar in both industries when work is done at home under the prevailing piece-rate remuneration system. However, in factories electronic workers earn hourly rates compared to piece-rates in Vietnamese garment factories. Third, this global production system subversively prevents the implementation of labor policies to protect workers' rights in both industries. The existing U.S. Department of Labor and Occupational Safety and Health Administration (OSHA) in 2002 has devoted much more attention to the well-publicized home-working in the U.S. garment industry, while giving inadequate attention to electronic home-workers for basic labor protection on pay, health standards, and many severe toxic-related consequences.

The issue of gender deserves special attention, especially in labor-intensive industries such as the garment industry and the assembly stage of the electronic industry. Many workers and employers, both male and female, share deeply ingrained patriarchal, socially constructed expectations of gender roles in both industries. These gender expectations result in gendered division of labor and income gaps between female and male workers. Moreover, impacts of multi-level subcontracting on working conditions and health of workers in these two industries turn out to be rather similar upon closer examination. In both industries women workers tend to suffer more since they bear the double burden of child-bearing and rearing. This is especially acute when they convert their homes to work sites for assembly work in the electronic industry in Silicon Valley. Pregnant workers are especially adversely affected by working in close proximity with flux and other toxic chemicals.

Finally, preliminary analysis on home-working in the electronic industry in San Jose sheds light on transnational activities of the Vietnamese American community there. Reasons for their participation in home-working are complex and result in the weakening of their bargaining positions with subcontractors and employers. Major reasons include the desire to maintain close (financial, emotional) ties with their loved ones still in Viet Nam, the need to supplement their income to pay the high rent (sometimes having to work two jobs: factory during the day and home-assembly in the evening), and the last resort for people who are categorized into marginalized groups.

Methodology

I synthesized narrative analysis with print sources to bring out the meaning and nuances from workers' own voices. For the garment industry, I conducted in-depth interviews with garment workers and employers during my fieldwork in Viet Nam between 1997 and 2000.² For the electronic industry, in 2001 I conducted both face-to-face and phone interviews with seven Vietnamese American electronic workers in San Jose. This small sample attempts to bring out gender, skill, and intergenerational differences: four females (three assemblers and one technician), and three males (one assembler, one technician, and one engineer). Their ages ranged from late twenties to early fifties. To protect their confidentiality, all of the names mentioned herein are pseudonyms.

All three female assemblers did not have advanced vocational training and worked on the assembly lines. Ms. An loaded capacitors onto PC boards; Ms. Binh fused electronic components onto the boards; and Ms. Duong did touch-up work such as re-fusing PC boards on which lead was not melted completely. They all have children: Ms. An, a fifty-three-year-old mother of five children; Ms. Binh, an early thirties-year-old mother of a six-month-old baby; and Ms. Duong, a thirty-eight-year-old mother of two sons.

The four skilled workers (one female, three males) started off as assemblers, then obtained advanced vocational training and engineering degrees and moved up the career ladder. Ms. Chau and Mr. Huynh were electronic technicians; Mr. Dinh was an electronic engineer; and Mr. Khanh was a machine shop technician.³ Ms. Chau graduated from a private vocational college in San Jose in July 2000 and works at a San Jose company which builds wafer-cutting machines. Being the only woman in this higher-skilled group, Ms. Chau is the epitome of an independent woman with a cell phone always in hand and a brand-new luxurious sedan. Mr. Huynh first worked as an assembler when he arrived in the U.S. in 1991, then moved up to being a technician in computer testing for three San Jose computer companies between 1994 and 2000, before moving to his high-paying job making network components and wireless links. Mr. Dinh started off with an assembly job for six months in 1994, obtained his technician degree in 1996, and then an engineering degree from San

Jose State University in 1997; he was promoted to a supervisory position in 2000. Mr. Khanh worked as a cable assembler in a company during the day and assembled at home in the evenings when he first arrived in the U.S. in 1995; at the time of the interview, he was a technician in a machine shop company during the day and a silversmith assistant in the evening.

Global Subcontracting and Income Distribution

The multilevel subcontracting for global production and its associated piece-rate remuneration system has a similar impact on the Vietnamese garment industry and electronic home-working in the Silicon Valley.⁴ This system creates unequal power relations between workers and owners, by providing flexibility for subcontractors and owners while requiring workers to bear the burdens of production fluctuations and the loss of control over their own labor. Assembly workers in both industries learn and practice to assemble products in their own time, and they often work overnight to finish rush jobs for timely deliveries without overtime pay. But there are more health risks in the electronic industry: home-workers liberally absorb all the fumes and toxic materials, as well as job-related accidents in their homes.

Unequal power relationships characterize this process: foreign corporations with their finance capabilities and technical expertise determine how resources are allocated and final products distributed. The resulting income distribution between workers and owners is grossly unequal in each industry in which employers maximize profits by cutting labor costs, and in electronic home-working, not always paying the minimum wage, and no overtime pay, health insurance, and other benefits to home workers.

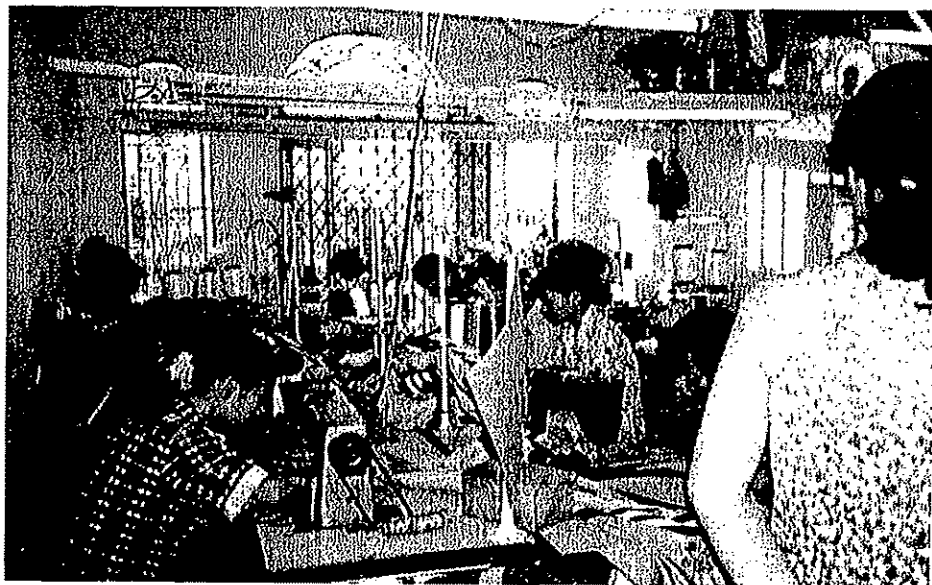
The Garment Industry

The concept of triangle manufacturing provides a static analytical framework to explain the resulting division of labor and the power relationships between the key actors in the garment industry.⁵ But it does not explain the dynamic changes in the roles of these main players and offers no gender analysis. The three main actors forming the triangle manufacturing static model include the Vietnamese garment producers and workers, the middlemen, and the corporate buyers. I found, however, that the triangle model has become flattened over time as more foreign firms deal directly with

Vietnamese producers to cut out middlemen's costs. The East Asian middlemen also have increasingly become corporate buyers themselves and placed their own orders directly with Vietnamese firms to capture even higher value-added, defined as income or profits accumulated at each stage of production. Many East and Southeast Asian firms even set up factories (fiber, fabrics, accessories, etc.) in Viet Nam to take advantage of cheap labor and other Viet Nam state incentive programs directly. These direct working relationships developed as Viet Nam has further integrated into the global capitalist economy since the late 1980s.

Over 80 percent of workers (of about half a million) who assemble garment products for the world market are women. Most corporate buyers come from developed countries such as the EU, Japan, Canada, Norway, and the U.S. They either set up offshore production networks in developing countries directly (many have buying offices/headquarters in Hong Kong and Taiwan such as The Gap and Liz Claiborne), or place their orders via middlemen. Most middlemen are from East Asian Newly-Industrializing-Countries (NICs)—such as Taiwan, South Korea, Hong Kong, and Singapore—who assure competitive inputs pricing, quality and delivery schedules, as well managing the production process and quality control. For instance, huge mass-merchandise stores such as JC Penney, K-Mart, Target, and Wal-Mart place orders with some contract manufacturers who subcontract to East Asian middlemen from South Korea, Taiwan, or Singapore, who then supply fabrics, clothing patterns (based on those foreign corporate buyers' designs), and other accessories to the Vietnamese garment (state or private) factories.

But the story does not end there as work orders are subcontracted to Vietnamese workers at many levels based on this logic: the more rushed the delivery date, the more levels of subcontracting. When large state firms cannot produce all garment orders "in house," they subcontract the remaining to local state firms (most often smaller) or to private firms. Depending on the urgency of the delivery dates, smaller firms, in turn, either fulfill the contracts themselves or further subcontract out simpler assembly tasks to household units. Most of these networks are small and involve mostly women working on their own sewing machines at home. During my fieldwork, I found these households in the suburbs of Ha Noi and other provinces throughout Viet Nam.



Assembly line in a non-state garment firm in Nam Dinh, North Viet Nam.

Photograph by Trần Ngọc Anh, 2002

Most Vietnamese garment workers earned about 2 percent of the total retail price of a garment product; East Asian middlemen garnered 16 percent for inputs, accessories, and management; and foreign corporate buyers reaped the remaining lion share of 80 percent for designs, marketing, retail mark-up, etc.⁶ On average workers earned about \$1 per day for a job that did not even guarantee full-time employment throughout the year.

The Electronic Industry

Similar to the garment industry, multi-level subcontracting also characterizes the production structure of the high-tech electronic industry. At the low-tech end of this high-tech industry, piecework continues to take place mostly within a close-knit, word-of-mouth community in the same manner as the age-old putting-out system. While most designs in the electronic industry and other upstream stages of production (such as R & D) are performed in the laboratory or on the factory floor, there remain manual stages involving placement and soldering of various components on new boards and repairing or modifying older boards, often performed at home. The age-old putting out system is alive and well in the U.S.

where subcontractors drive their trucks or cars to drop off electronic components or unfinished computer printed circuit boards to be assembled and fused by home-workers. They then pick up the finished products several days later, or in rush cases, the following morning before they head to their day jobs.⁷ Most products assembled by home-working activities in San Jose are for the higher-end U.S. market, whereas products for the world market are assembled in developing countries such as China and the Philippines whose workers receive even lower wages. Higher skilled and higher-paid tasks such as R & D design and quality control continue to be done in the U.S.⁸

There are at least four levels of employment above the electronic home-workers who are employed at the low-tech end of this high-tech industry. At the highest level are the huge computer and server giants such as IBM, Hewlett-Packard Co., Sun Microsystems Inc., and Cisco Systems Inc. The second level includes dozens of local electronic contract manufacturers from small firms like Compass to multibillion-dollar giants such as Solectron Corporation.⁹ The third level includes assembly houses such as Top Line, one of a few factories owned by Vietnamese Americans who build parts and systems for the second- and/or first-tier companies. There are several hundred assembly houses in the Silicon Valley, the largest concentration in the U.S., occupying a critical niche in the high-tech industry. However, it is virtually impossible to estimate the exact number of people involved in home-working since they are scattered, working independently in their homes and reluctant to talk.¹⁰ (More explanation in "Why Home-Working" section.)

Finally, the fourth level consists of subcontractors or workers working in those third-tier companies who receive orders, deliver components to home-workers, and then collect these completed printed circuit boards the following morning or several days later. Mr. Khanh confirmed this multi-level structure:

My sister used to bring home cables and connectors from a Vietnamese cables company in San Jose where she works during the day. I also worked there before I switched to a machine shop position. Then at night I attached those connectors to cables with pliers. These finished cables are used in computers and in electronic equipment. I saw that there are many levels in this production process: the Vietnamese company received orders from big-

ger companies such as CISCO, which in turn received contracts from yet bigger companies.

Many worked during the day and overnight to finish urgent loads for delivery in the following morning. Mr. Khanh said:

When there were rush jobs, I stayed up late until three a.m. to finish the loads. Of course, there is no overtime pay, just piece rates from twenty to eighty cents per cable. On average, it took me two to three minutes to complete one cable, so I earned about \$20-30 for four hours, which was about \$5.00 to \$6.00 per hour.

Large income disparity is one of the key characteristics of Silicon Valley. According to 1996 statistics, almost a third of Silicon Valley's workforce earned less than \$15,000 per year. In other words, the bottom 20 percent earned only 3.6 percent of the area's total income.¹¹ Also while white men dominate the corporate boards in Silicon Valley,¹² workers, especially women, held a disproportionate share of unskilled and low-wage jobs: between 75 percent and 95 percent of the assembly jobs were done by women who immigrated from developing countries.¹³

Piece-rates are compressed as one moves down the subcontracting ladder. Home-workers at the bottom of the ladder receive the lowest rates since the assembly houses (the immediate level above the workers) themselves receive these orders at very low piece-rates so they end up not paying overtime, health insurance, and other benefits to home-workers. Statistics in 1999 showed that with piece-rates as low as a one to twenty-five cents per piece, the equivalent hourly rates ranged from \$2.50 to \$5.00 per hour, less than California minimum wage rate of \$6.25 per hour (as of 2002).¹⁴ Interestingly, as a share of retail price, electronic home-workers earned almost as low as garment workers in Viet Nam: 4.25 percent of the retail price (or \$4.25 per board), for building tiny boards to go inside a trackball (a standard personal computer accessory) sold at local electronic stores for about \$100.¹⁵

Forms of Control:

Speed, Piece-Rates, and Job Insecurity

Within the structure of global production, speed of the assembly line, low piece-rates and group pressure play a vital role in minimizing costs and maximizing efficiency benefiting the employ-

ers at the expense of workers in both industries. Minimum daily quotas are either stated explicitly on signage in Vietnamese garment factories or enforced by group pressure on the assembly line. On the other hand, the speed of the assembly line in the electronic industry and group pressure determines the minimum productivity that assemblers are expected to perform per minute. The implicit implication is that when things go wrong on the assembly line, workers assume that it is *their* mistake (hence bearing the burden to rectify it), not the production error.

Under group pressure to deliver the company's productivity and/or production quotas, most workers unconsciously internalize such perception. Ms. An, paid by the hour on the shop floor, had to attach capacitors onto the PC boards, and was expected to attach eight to nine capacitors onto the board per minute. Ms. An said: "If I mis-aligned them or missed the ninth capacitor since the assembly line moved continuously, then the other workers down the line must correct my mistake by re-aligning these capacitors or adding the one that I missed." The implicit group pressure to fulfill group productivity goals directly affects her performance. While there is no overt penalty against her when she makes a mistake on the line, she is obliged to perform her tasks correctly and swiftly since "her mistakes" could result in a lower number of completed boards and negatively affect the whole group productivity.

The control with piece-rates is more insidious and less costly for the employers, as it requires minimal supervision. It forces workers to increase speed and flexibility—two critical conditions for rush job orders—which become more acute with the Internet popularity in the electronic industry and the constant fashion changes in the garment industry. Workers only get paid after their completed pieces of products (be they electronic boards or shirts) are checked and approved by the quality-control line leaders and managers.¹⁶ With very low piece-rates, workers often exploit themselves to assemble as many pieces as humanly possible to make ends meet.

Job insecurity, another facet of unequal power relations between workers and management in global production, perpetuates docility and flexibility. Furthermore, it weakens labor solidarity as workers are pitted amongst themselves for jobs. The mobility of capital vis-à-vis the relative *immobility* of labor cre-

ates a credible threat to workers, very similar to the insecurity of Vietnamese garment workers. Electronic workers in California have a constant fear of losing their jobs, especially when there is an omnipresent and credible threat of plants being relocated to across-the-border Mexican export processing zones with cheaper labor and non-stringent labor and environmental laws.

Ms. An said that all workers in her workplace received a letter from the management in February 2001 which simply informed them that there will be another wave of layoffs in June 2001 and that there might be a possibility that some workers will be transferred to different buildings or functions of that company. The letter did not indicate who would be on the "chopping board." However, she said, "Rumors have it that they will relocate this assembly line to Mexico to save labor costs." No doubt this management practice aimed at preventing the moral hazard, which refers to the potentially destructive and damaging behaviors of disgruntled laid-off workers (to the company operations), if firm owners were to announce in advance who will be laid off. From the workers' perspective, this uncertainty leaves them with very few chances to change jobs (at least in the short term); most worked in anticipation of losing their jobs. Ms. Chau echoed this fear: "One often finds out that s/he no longer has a job in a matter of one morning, with a pink slip given in the afternoon. There is absolutely no advanced notice to workers." Efforts to find similar jobs in other companies have been challenging, especially during the difficult time of the high-tech industries (at the time of writing, 2002).

This constant fear of losing one's job, more pronounced during the economic downturn, led to competition among the workers themselves in order to survive the then imminent waves of layoffs. Ms. Chau expressed her disdain for these degrading bribery practices:

Many assemblers tried to please their supervisors by buying them gifts and/or meals so they would be spared during lay-off periods. It happened in my previous job in which many workers wanted me to contribute money to buy lunches and gifts for our immediate boss; their intention was to gain some favors from the bosses so they won't be on the list of the next wave of layoffs. But I refused to participate in this corruptive process since I believe it is one's own skills that matter, not personal connections with the bosses. As a result, this made me a very unpopular person!

Labor Policies, Work Conditions and Health

Job insecurity contributes to workers' "willingness" to endure substandard working conditions and the loss of control over their own labor. First, let us examine how labor policies are mitigated in the garment industry and are full of loopholes in the electronic industry. The need to attract foreign investment in the garment industry (leading to job creation) results in contradictions between export-oriented policies (promoting cheap, compliant and docile labor) and the implementation of labor policies (intending to protect workers' rights).¹⁷ Vietnamese labor laws are quite progressive with stipulations on behalf of women workers; in reality, however, due to very low piece-rates, garment workers tend to exploit themselves by skipping their entitled breaks (which are no longer paid under piece-rate system) to assemble as many pieces as possible to make a living.¹⁸ Between a rock and a hard place, Vietnamese workers have very few choices: either being underemployed in the countryside between harvests, or doing subcontracting jobs for non-livable wages.

In the electronic industry piecework is not illegal per se. However, it must be subjected to labor laws on minimum wage, overtime pay, child labor, and basic working conditions.¹⁹ Electronic home-workers must be paid the federal minimum wage rate (which was \$5.50 per hour in 2002) regardless of whether the worker is being paid by the hour, by the piece, by the job, or any other basis. The U.S. Department of Labor (DOL) also recognizes that many states have different minimum wage laws and that the employee is entitled to the *higher* of the two minimum wages.²⁰ Since California's minimum wage rate was \$6.25 per hour in 2002, home-workers in California should have received this amount.²¹ Moreover, according to Michael Mason, chief counsel for the enforcement arm of the state's OSHA program, "If work is taking place at the kitchen table then the kitchen table becomes that part of the house subject to the OSHA Act."

Electronic corporations and subcontractors tend to benefit from the loopholes in the Fair Labor Standards Act (FLSA) on home-workers. First, as of 2002, electronic industry is still *not* one of the seven industries that require employers' certification from the Department's Wage and Hour Division for home-working.²² This certification would have forced the corporations to recognize and provide home-workers with the basic labor rights

such as minimum wage, child labor, overtime, and hazard pay. Moreover, the high level of lead contained in these electronic activities is not monitored since OSHA does not recognize lead as a toxic substance in electronic home-working.²³ Hence, it is difficult for federal agencies to monitor and implement the U.S. labor laws when they overlook electronic home-working activity. Second, other loopholes pertain to the very nature of home-working: underestimating the work of extended family members, especially children and grandparents. One of the main reasons companies subcontract work to friends and relatives of their employees is to circumvent the U.S. labor laws which outlaw them to pay hourly rates to their employees at work and then pay them piece-rates for after-hours work at home. Moreover, there is no legal recognition of grandparents, children, and spouses who work alongside with other extended family members (including the factory employees) to finish loads for rush orders but do not get paid individually.

Exposing those illegal labor practices does bear some fruit, but without addressing the deeply rooted unequal power relations between workers and employers, these practices will continue to stay. The 1980 State investigation of home-working in San Jose came to a halt within two weeks when members of the business community met with State Labor officials and local politicians and asked that they be allowed to police themselves. This compromise on the part of local officials allowed haphazard home-working practices to continue in full force. Nevertheless, the 1999 *San Jose Mercury News* series exposed and helped push these corporations to be more cautious of these labor malpractices. While this series of articles triggered a joint state and federal investigation, which exposed a dozen Silicon Valley manufacturers who used piecework arrangements in a haphazard manner, it is unlikely that the enforcement is systematic and effective enough to protect workers.²⁴

Garment workers in Viet Nam exploited themselves by working long hours and skipping breaks because the faster one assembles, the more one makes. Such third-world working conditions do exist here in our own "backyards": in garment sweatshops in big U.S. cities and in people's homes assembling and soldering tiny lead wires, strip cables, and loading transistors onto computer printed circuit boards for a penny per component to twenty-

five cents per board.

There are a lot of health problems related to "sweatshop" conditions in both industries. Garment workers in Viet Nam, mostly women, have lower back and breathing problems due to daily inhaling of lint and dust, eye and gynecological problems for sitting long periods of time in one place on the assembly line or at home under humid and unventilated conditions to assemble garment products for the global market.²⁵ In the electronic industry, since home-working is neither adequately recognized nor protected in both U.S. DOL and OSHA stipulations, most U.S. companies and subcontractors do not have to pay attention to the home-working conditions. Female electronic assemblers tend to suffer more than men by working in close proximity with flux, lead, and other toxic chemicals, especially when they are pregnant.²⁶ While those hazardous industrial materials are monitored on the factory floor through the installation of eye-washing and hand-washing stations, such basic accommodations do not exist in these workers' homes where people work on kitchen tables, garage benches, living rooms, and sometimes even in their bathrooms. They inhale toxic acid-based flux, lead, and other harmful chemicals while bonding various components to printed circuit boards, and receive less than minimum wage and no health insurance, sick leave, vacation pay or other benefits. Many have suffered eye, back, and respiratory illnesses.²⁷

Even assemblers doing the fusing jobs in factories do not always have adequate protection. Ms. Binh, who works on the assembly line at FLEX-Electronics International to fuse various "passive electronic components" onto PC boards, was still learning on-the-job (she showed me a detailed list of these electronic components, including transistors, capacitors, resistors, wires, cables, connectors and switches). The working conditions for fusing these components are rather primitive: the employers install table fans in front of the fusing tables to vent these toxic chemicals and flux. But even with this inadequate ventilation method, not all tables have fans! Ms. Duong echoed similar working conditions: "There is only one fan for ventilation in front of each table. We have no protective gag (*khau trang*) nor any other type of protection. So while fusing, I did smell the lead and flux, but thus far I had no headache."²⁸

Gender Expectations and Division of Labor

Many workers (both male and female) share deeply ingrained patriarchal, socially constructed expectations of "proper" gender roles in both industries. These gender expectations result in gendered division of labor and income gaps between female and male workers. Ultimately, these gender expectations benefit employers (foreign buyers and subcontractors) by providing them a flexible and docile workforce.

In the garment industry female workers are expected to perform their work with docility, dexterity, passivity, and flexibility on the shop floor in order to increase productivity for global capitalist production. Most male garment workers, on the other hand, are recruited and trained for higher skilled, higher paid tasks and more opportunities for further career advancement (although there are male workers working alongside female workers at the lowest level of the subcontracting ladder).²⁹ Women workers receive less for doing the same jobs as men. On national average, low-skilled female workers in the Vietnamese garment industry earn only 92 percent of a male worker doing the same job (about \$33/month versus \$36/month).³⁰

Similarly, in the electronic industry, most male and female workers perpetuate these deeply internalized gender expectations. Most male electronic workers are employed in more technical and higher skilled positions, whereas female workers dominate the assembly lines. According to my interviewees, most assemblers are women, while over 90 percent of technicians, engineers, and high-ranking managers are men.³¹ Except for Ms. Chau, all three other female workers have lower skills and earn less than their male counterparts. Ms. Chau, clearly a success story, advanced from being a home-worker to an assembler, and at the time of the interview, to a technician working in a company making wafer-cutting machines. She made about \$40,000 annually. Her current job is demanding in terms of technical skills and at times physical labor. She works in a small group of skilled workers who build and test very expensive and high-precision machines, which cut silicon wafers (with semiconductor layout being etched onto its surface using photolithographic techniques) into electronic chips. Her daily routine deals with machinery and tools, which can be heavy. However, she did mention that there were useful tools, such as wheels and lifts, to assist her physically if she has to work with

a machine component weighing over seventy pounds. She added that these tasks are amenable even to her diminutive physical frame (she is about four feet tall).

Many workers (male and female) expected that male workers are more technically competent. When I asked Ms. Binh about the names and functions of various "passive" electronic components pertaining to her assembling job, she immediately referred me to Mr. Dinh, her younger brother, who then provided me with a comprehensive explanation about the different functions of "passive components" (such as capacitors and transistors), and "active components" (such as integrated circuits and read-only memory chips). The same scenario happened when I interviewed Ms. An: her overly eager husband sitting next to her constantly interrupted her responses to explain the technical aspects of his wife's job (he was intending to be helpful). He made constant remarks that his wife did not understand the technical aspects of her job well and did not understand or speak adequate English. When this happened, Ms. An yielded to him.³²

Even as progressive as Ms. Chau is, her view on gender differences demonstrated some ambivalence towards patriarchal gender expectations. She said: "I observe at the workplace that men are smarter and more innovative in ways of doing things than women. Women tend to be more careful and detailed in their work." But she later admitted, "Men have more time to work on these things when they were young compared to women who must learn different things for the families." When I reminded her of her own abilities to work in a male-dominated line of work and her admirable process of career advancement in the last several years, she asserted, "Women could also do these high skilled men's jobs, if they took the opportunities and worked hard."

Why Home-working in the Electronic Industry?

Many Vietnamese Americans desire to reestablish their lives in the U.S. (the host country), and to maintain close financial and emotional ties with their loved ones still in Viet Nam (the home country). One can argue that this is a form of a diaspora with the consciousness or the need to connect themselves with others who share the same "routes" and "roots."³³ Since most electronic home-workers need to earn extra income to pay high rent, mortgage, and/or to send money to relatives in Viet Nam, they are

“willing” to endure the hardships even with some inevitable health risks. Additionally, many lack vital language skills to understand in-depth U.S. labor laws on workers’ rights, compensation, and protection. Obviously, they are in a very weak bargaining position vis-à-vis the employers (similar to the Vietnamese garment industry). Moreover, the interviewees shed light on ways in which people are put into various marginalized categories, which propel them to take these jobs with associated risks. But first, let us elaborate on more obvious reasons: sending money to Viet Nam and reaching for the American dream: being homeowners.

The Housing Issue

Many workers/assemblers face an uphill battle on saving up to buy their own homes as housing prices in San Jose have risen to levels they can hardly afford. This also affects civil servants such as teachers, police officers, fire fighters, and librarians. According to the 2000 Census statistics for Santa Clara county, only 30 percent of Californians can afford the median price of a home in their local areas (the nationwide figure stood at 52 percent), and San Jose has the highest median house prices in the U.S.³⁴ The 2000 Census statistics show that for renters, almost 40 percent of households must allocate over 30 percent of their household income to pay the rent.³⁵ For homeowners, except for households with income above \$50,000, over 40 percent of homeowners must set aside 35 percent or more of their household incomes to pay monthly owner costs.³⁶

The very high rent and/or mortgage costs in San Jose necessitate the pooling of resources or even working two jobs. Ms. An, with five grown-up and financially independent children and a husband who works as an insurance agent, uses her meager income to pay for her own needs and help pay rent. They rent a four-bedroom house for \$2000 per month in a middle-income neighborhood near Milpitas, which is only about seven miles away from her workplace.³⁷ Her situation does not necessitate sending much money home, but her meager wage surely helps with the rent: “I rarely send money to Viet Nam since all of my children are here. I make money mainly for my petty cash and to help with the rent.”

Pooling in resources and even working two jobs are strategies to survive, especially for those having to do both: pay the

rent *and* send money to their loved ones in Viet Nam. The three brother and sisters—Ms. Chau, Ms. Binh and Mr. Dinh—stayed together in a two-bedroom apartment for \$1,300 per month (at the time of the interview in 2001) to save money. They continued to send money home to their brother and his family in Quy Nhon, a coastal province in south-central Viet Nam with the fishing industry as one of the most important means of earning a living. The three adults and a baby lived simply in a very small place with the living room serving several purposes: office space with a computer and a desk, entertainment (a TV was playing at full blast while we talked), and nursing the baby (who was sound asleep in her crib during the interview). The other two married men, Mr. Huynh and Mr. Khanh, did not have much money left after contributing to the monthly mortgage and rent (respectively), basic necessities, and sending money home for their families in Viet Nam. Mr. Khanh had always been working two jobs (day and night) to send money home for his wife and other siblings still in Viet Nam (at the time of the interview). He shared his feelings: “We have been married for four years now, and I’m trying to sponsor her here. We have not had any children yet.”

Marginalized Workers

As revealed in the interviews, people who are put in marginalized categories took these jobs with a sense of helplessness and lack of real choices. Ms. Chau shared her concerns about health risks faced by female home-workers, and the complexities of home-working from her own experience working in a Chinese American factory when she first arrived in the U.S.:

Most home-workers are older people, recently-arrived immigrants, VISA students or Vietnamese students who are in study-abroad programs in the U.S., ex-convicts who cannot get jobs in regular companies, and welfare recipients who want to earn more cash to send to relatives in Viet Nam. They needed these jobs despite the risks of inhaling toxic chemicals and flux when fusing electronic components onto the boards or assembling cables.

Specifically, laid-off workers faced even more difficult circumstances when they had to fulfill family obligations in *both* home and host countries. Ms. Chau added:

Actually, working at home is a last resort for those people who can no longer work in the factories such as laid-off workers. By

doing this assembly work at home, these workers can earn both layoff benefits and piece-rates. Many of them send money to their family members who are still in Viet Nam. But, if given choices, they would prefer to work in companies with a full benefits package, including health insurance, holidays, overtime, etc.

However, some workers, especially the elderly ones, did cite autonomy and independence from direct supervision as reasons why they engaged in home-working. They seemed to be satisfied with their assembly jobs at home without direct supervision. But the very "flexibility" engendered by home-working fits perfectly with the expectation that women should do *both* work and housework. Ms. An, the elder worker, considered home-working in a rather positive light. She argued that home-workers (mostly women) chose to work at home so they could have flexible time (implying that they can also do their housework), earn additional money, and not be under direct supervision. She said: "It is lucky to have work orders to complete at home where no one is watching over your shoulders and you can work at your own pace. But you must know someone to get these work orders."

On the other hand, younger workers had greater motivations in career advancement and transcended home-working jobs after obtaining further technical and language skills.³⁸ Ms. Chau and Mr. Khanh began with home-working when they first resettled in the U.S., but both had moved on and up to higher-paid jobs after obtaining greater technical and vocational degrees.

Conclusion

Under those forms of control and complex reasons underlying their participation in home-working, it is not surprising that there are many challenges to organize electronic workers. The fact that no evidence of unionization in the electronic industry in the Silicon Valley, especially the role of Vietnamese Americans in union organizing, could be found suggests further research on these topics. However, the general trends of unionization efforts that I did find present a mixed picture. The unionized proportion of labor force in the U.S. is at an all-time low: only 13.5 percent of the private non-agricultural workforce. This is a reduction from 35 percent in the 1950s.³⁹ In California unionization is more developed in the garment industry, and recently has begun developing in janitorial and other service industries, but not in other types of manufactur-

ing.⁴⁰ Los Angeles in particular has been home to vibrant community and labor coalitions. The Los Angeles strikes created the momentum for community organizations and unionization in other parts of California, starting off with an increase in membership of 74,000 homecare workers in 1999, then the widely successful janitors' strike in 2000 which received unprecedented public support. The momentum then expanded to other immigrant groups, not just Latinos/as. In the Vietnamese garment industry there is an increasing conflict of interests faced by the Vietnamese union representatives whose livelihoods very much depend on incomes (including salaries and bonuses) paid by their employers. This financial dependence weakens their autonomy and effectiveness in representing workers' interests.⁴¹ There have been an increase in labor strikes in both private and state garment/textile factories.

This article contributes some interesting findings on two seemingly different industries. When home became a work site for the global market, assembly home-working conditions in the electronic industry are strikingly similar to the Vietnamese garment industry. There is evidence of tacit "willingness" to work in sweatshop conditions in corporate America. But to understand the nuances under such "willingness," one must understand the global production structure, as well as its direct and indirect forms of control. Speed of the assembly line, piece-rates, group pressure, and job insecurity perpetuate the multi-level subcontracting, prevalent in both the U.S. and Viet Nam. Moreover, patriarchal gender expectations, the resulting gendered division of labor, and unequal income distribution found expressions in the beliefs and practices of both males and females (workers and employers) in garment and electronic industries.

Focusing on the electronic industry, there are complex reasons why workers engaged in this kind of labor. The need to support their families in *both* home and host countries provides just one explanation. Further research could focus on: ways in which people are being put into marginalized categories, and the extent to which such categorization leads to the perpetuation of home-working; the extent of unionization efforts of Vietnamese Americans and forms of resistance against unfair labor practices in this industry; and intergenerational differences on expectations toward work, gendered division of labor, and income distribution.

I believe that this comparative research, looking at transna-

tional connections between the Vietnamese lives in both the U.S. and Viet Nam, could provide a more comprehensive perspective and facilitate comparative work on diasporic activities of other cultural groups in the U.S. Furthermore, this kind of comparative research could contribute to Asian American Studies in general, as well as working toward better and more humane working conditions for workers transnationally.

Notes

I would like to thank Dr. Linda Rogers for her support and feedback on this article, and constructive comments from the participants on my presentation "Gender and Work: Transnational Linkages between Electronic Workers in San Jose and Garment Workers in Viet Nam," at the Center for Interdisciplinary Research on Asia (CIRA), University of California, Los Angeles, March 2002. This article is dedicated to all Vietnamese workers transnationally, whose insights, perseverance, and courage always inspire me.

Here is a list of interviewees for my study (all names are pseudonyms for anonymity): Nguyen Thi An (an electronic assembler); Nguyen Thi Binh (an electronic assembler); Tran Thi Duong (an electronic assembler); Nguyen Thi Chau (an electronic technician); Nguyen Van Dinh (an electronic engineer); Trinh Viet Huynh (an electronic technician); and Doan van Khanh (a machine-shop technician)

1. I do not compare the electronic industry or the garment industry in both countries. Such discussion will be the topic of other articles.
2. For more detailed analyses, see Angie Ngoc Tran, "Global Subcontracting and Women Workers in Comparative Perspective," in Claes Brundenius and John Weeks, eds., *Globalisation and Third World Socialism: Cuba and Vietnam* (London: MacMillan Publishers, 2001). See also Tran, "Gender Expectations of Vietnamese Garment Workers: Viet Nam's Re-Integration into the World Economy," in Jayne Werner and Daniele Belanger, eds., *Gender, Household, State: Doi Moi in Viet Nam* (Ithaca: Southeast Asia Program Publication Series, Cornell University Press, 2002).
3. Binh, Chau and Dinh are siblings who lived together in an apartment in San Jose.
4. As of 1997 statistics, California ranked the highest in the U.S. in terms of establishments in computer and electronic manufacturing, employees, payrolls and sales. *Industry Quick Report: Computer and Electronic Product Manufacturing*, U.S. Census Bureau, 1997.
5. Gary Gereffi, "Global Production Systems and Third World Development," in Barbara Stallings, ed., *Global Change, Regional Response: The New International Context of Development* (New York: Cambridge University Press, 1995), 118-119. The concept of global commodity chains conceptualizes the world economy in terms of commodity chains, defined as the links between successive phases of raw material supply, manufacturing, distribution, and marketing final prod-

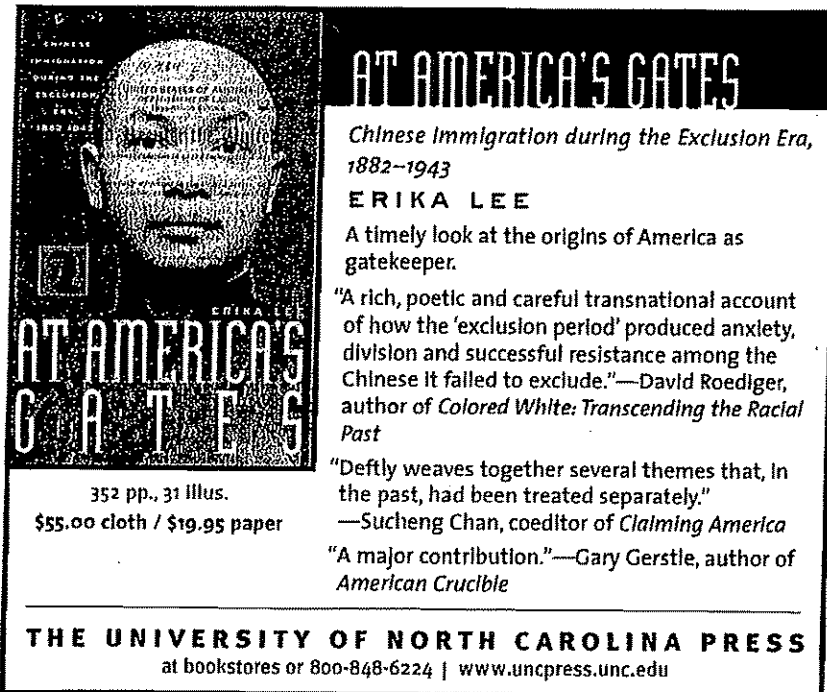
ucts. See also Gereffi, 43-44, 47.

6. For a detailed analysis, see Angie Ngoc Tran, "Through the Eye of the Needle: Vietnamese Textile and Garment Industries Rejoining the Global Economy," in *Crossroads: An Interdisciplinary Journal of Southeast Asian Studies* 10:2 (1996), Center for Southeast Asian Studies, Northern Illinois University; and Melanie Beresford and Angie Ngoc Tran, *Reaching for the Dream: Challenges of Sustainability in Vietnamese Economic Development*, NIAS Press (Nordic Institute for Asian Studies) and Routledge Curzon, forthcoming in 2003.
7. Miranda Ewell and K. Oanh Ha, "High-Tech Firms Reap Benefits of Products from Home Assembly," *San Jose Mercury News*, June 28, 1999.
8. Phone conversation with Raquel Sancho, Project Director of Worker Organizing/Health Watch, April 2000.
9. According to experts, contract manufacturers in San Jose were around 300, although there were no official tallies. *San Jose Mercury News*, "California High-Tech Firms Employ Hidden Labor," June 27, 1999.
10. *San Jose Mercury News*, "California High-Tech Firms Employ Hidden Labor," June 27, 1999.
11. Marc Cooper, "Class War @ Silicon Valley: Disposable Workers in the New Economy," *The Nation* 262:21, May 27, 1996.
12. None of the top five technology companies in the S&P 500 Index, including HP, Intel, Sun Microsystems, Cisco Systems, and Oracle, had a single Black or Latino person on their boards. There were three Asians out of fifty-two on the boards. *Business Week*, "Jesse's New Target: Silicon Valley," July 12, 1999.
13. Christian Zolnitski, "The Informal Economy in an Advanced Industrialized Society: Mexican Immigrant Labor in Silicon Valley," *Yale Law Journal* 103:8, June 1994.
14. Under the piece-rate remuneration system, one can estimate the equivalent hourly rates based on piece-rates and average productivity (number of pieces completed per hour) of each worker. Miranda Ewell and K. Oanh Ha, "Silicon Valley's High-Tech Piecework Assembly Grinds to a Halt," *San Jose Mercury News*, October 17, 1999. Also, interviews with electronic workers in 2001.
15. Miranda Ewell and K. Oanh Ha, "High-Tech Firms Reap Benefits of Products' Home Assembly"; Miranda Ewell, "California to Probe Home Assembly of Chips by Low-Paid Immigrants," *San Jose Mercury News*, July 2, 1999.
16. In the garment industry, the piece-rate form of control demands perfection to minute details of the products and cleanliness of raw materials such as fabrics. Workers must redo their pieces in their own time and only get paid after the quality-control personnel approved the completed products.
17. Tran, "Global Subcontracting and Women Workers in Comparative Perspective."

18. Those special stipulations include job creation, prioritizing the hiring of women workers if they match the qualifications for a particular position, ensuring healthy and safe working conditions, improving job skills through vocational training, providing good health care coverage, and promoting good remuneration, benefits and pay raise in order for them to work efficiently and balance between responsibilities at work and at home (Su That Publisher, 48-51, 164).
19. The U.S. DOL has specific stipulations on child labor, including age requirements (they must be at least fourteen years old), and clearly defines types of tasks that children between ages fourteen and eighteen can do.
20. U.S. Department of Labor-Employment Standards Administration-Wage and Hour Division on Minimum Wage; Homeworkers Under the Fair Labor Standards Act (FLSA).
21. This is higher than the federal minimum wage to account for higher costs of living in California, especially in San Jose where fast food chains offer around \$10/hour to accommodate much higher costs of living in the Silicon Valley area.
22. FLSA stipulations primarily aimed at the well publicized apparel and textiles industries (such as knitted outerwear, gloves and mittens, buttons and buckles, handkerchiefs and embroideries) and jewelry.
23. However, it does so for other heavy industries. OSHA, Technical Links, "Lead," <http://www.osha.gov/SLTC/lead/index.html>.
24. Miranda Ewell and K. Oanh Ha, "Silicon Valley's High-Tech Piece-work Assembly Grinds to a Halt."
25. Ministry of Labor, Invalids and Social Affairs (MOLISA), *Female Labor Force in Industry in Vietnam in Period of Renovation* (Hanoi: The Research Center for Female Labor Force, 1998).
26. Flux is a type of acid that helps fuse the lead wire. If a small number of boards are needed urgently, they can be soldered by hand using surface mount technology, an advanced method of assembly that can cost less if done by hand. Miranda Ewell and K. Oanh Ha, "Asian Immigrants Build Circuit Boards at Home in San Jose, California," *San Jose Mercury News*, June 27, 1999.
27. Testimony of Doris Y. Ng, Staff Attorney, *Equal Rights Advocates*, Senate Industrial Relations Committee Hearing, March 23, 2000.
28. This familiar sight is often observed in many electronic assembly plants and export-processing zones (EPZs) in developing countries (i.e., Mexico, Malaysia, the Philippines, Viet Nam) where the workers themselves inhale toxic chemicals and flux while fusing these electronic components. *Global Assembly Line* Film by Lorraine Gray.
29. Tran, "Gender Expectations of Vietnamese Garment Workers: Viet Nam's Re-Integration into the World Economy."
30. The Vietnamese General Confederation of Labor (VGCL), *Situation of Women Workers*, iii, 46-47. Also, the male workers whom I interviewed in Viet Nam were trained on-the-job for higher skills to operate different machines; consequently, their monthly wage increased from about \$39 to between \$54-71, compared to \$33/month, the average wage of female workers in the same work unit.
31. According to some interviewees, the total number of Vietnamese American electronic workers in the Silicon Valley during more prosperous times could reach over 50,000 people. This statistic could be lower after waves of lay-offs in the economic downturn of California high-tech industries.
32. I realized the shortcomings of this interview with the presence of both husband and wife, since her voice was silenced at various times by her domineering husband during the interview. While I tried to rectify this apparent weakness by always addressing the questions directly to her, I couldn't control his constant interjections into our conversation. However, now that I've established a certain comfort level and trust with Ms. An, future follow-up interviews will be carried out just between the two of us so I can register her own voice and concerns.
33. We can argue that this group formed a particular diaspora or social form, based on social relationships constructed and cemented by special historical events. American involvement in Viet Nam, heightened in the late 1960s and early 1970s and the fall of Saigon in 1975, led to the emigration of millions of Vietnamese into the U.S. Steven Vertovec and Robin Cohen, eds., "Introduction," in *Migration, Diasporas and Transnationalism* (United Kingdom: Elgar, 1999), i-xvii.
34. Charles Leadbeater, "This Ugly, Utilitarian Sprawl Is Sucking Up The World's Software Talent and Spewing Out Pollution," *New Statesman* 127:4380, April 10, 1998. *The Christian Science Monitor*, "Last Strains of the US Housing Crescendo," June 5, 2000.
35. U.S. Census Bureau, "Selected Monthly Owner Costs As A Percentage Of Household Income In 1999:2000," and "Gross Rent As A Percentage Of Household Income In 1999:2000," http://factfinder.census.gov/servlet/QTTable?_ts=50702095286.
36. *Ibid.* Of course there were variations in each income bracket, but the logic is that the lower the annual income, the higher the percentage of household income must be earmarked towards mortgage costs.
37. Rent of a comparable house in Marina, a small city in Monterey county, was about \$1,300 per month in 2001.
38. The lack of English verbal and comprehension capabilities creates barriers for workers in this multifaceted electronic industry. Being unable to communicate well in English and being unfamiliar with U.S. multicultural practices have severely weakened their bargaining power for basic workers' rights, such as pay, work conditions, and benefits, as well as defending themselves against injustices and misunderstandings on the job floor.
39. Samuel Estreicher, "Employee Voice in Competitive Markets," in *The American Prospect* 4:14, June 23, 1993. Also, see Kris Axtman, "Unions look to 'Enron Effect' for Growth," *Christian Science Moni-*

tor, September 19, 2002. However, the Living Wage Movement has created momentum and resulted in over sixty local governments (including Los Angeles, New York, Chicago, Santa Cruz) having passed living-wage laws which pay a wage well above the federal minimum wage. Living wage, or wage floor, is defined as the amount needed by a full-time, year-round worker to keep a family of four above the poverty line (which was \$8.40 per hour in 2001). Chris Tilly, "Next Steps for the Living Wage Movement," in *Dollars and Sense*, September 1, 2001.

40. Andrew Stern, "Progressives and the New Immigrant Movement," in *The American Prospect* 12:12, July 2, 2001. -
41. See Tran, "Global Subcontracting and Women Workers in Comparative Perspective" and "Gender Expectations of Vietnamese Garment Workers: Viet Nam's Re-Integration into the World Economy."



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Making Vietnamese Music Transnational: Sounds of Home, Resistance and Change

Kieu Linh Caroline Valverde

*Viet Kieu*¹ popular music production has evolved in interesting ways since the arrival of the largest exodus of Vietnamese to the United States in 1975. Enthusiastic members of the overseas Vietnamese population have successfully created a global music industry. Influenced by sentiments of exile and ideologies of anti-communism, *Viet Kieu* music has a special blend of nostalgia that appeals not only to members of diasporic communities but also to residents of Viet Nam. Moreover, *Viet Kieu* singers are braving the scrutiny of being labeled communists by the overseas community to return to adoring fans in Viet Nam.

In this essay I discuss how conditions in Viet Nam and abroad influenced the production, dissemination, and consumption of contemporary popular Vietnamese music. I trace the history of popular Vietnamese music since 1975 and highlight the voices of musicians, producers, and consumers in the U.S. and Viet Nam. Included in this analysis are three well-known music production companies—Paris By Night Thuy Nga Productions (PBN), Trung Tam Asia, and Kim Loi—and one network of independent *Viet Kieu* musicians, B-Flat. Taken together, the companies illustrate transnational culture flows and forms of collaboration between Vietnamese American and Vietnamese music makers.

My interests involve understanding the psychological motivations and sociological processes of those who produce and con-

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1. The first part of the paper discusses the importance of the study of the history of the United States.

2. The second part of the paper discusses the importance of the study of the history of the United States.