transnational labor process and gender relations: women in fruit and vegetable production in chile, brazil and mexico

jane l. collins
university of wisconsin, madison

The more we understand about the development of capital itself, the more we understand that...alongside the drive to commodify everything...is another critical part of its logic which works in and through specificity. Capital has always been quite concerned with the question of the gendered nature of labor power. [Hall 1991:29]

To superimpose the categories developed by Labor Market Segmentation proponents and radical economists upon the conditions that exist in underdeveloped countries is a theoretically sterile exercise. [Fernández-Kelly 1983:99]

abstract

This paper examines labor dynamics in the export agro-industry, a workforce structured by gender, ethnicity and migratory status. Focusing on efforts to secure cheap and highly controllable labor in Chile, Brazil and Mexico, the author finds more diversity in assignments than notions of "cheap labor" suggest. She argues that theories of labor market segmentation and the new international division of labor must attend to existing structures of inequality at the local level when analyzing expansion of the labor pool, reduction of returns to skilled labor, and emergence of a differentiated workforce.

resumen

La autora examina las dinámicas del trabajo en la agro-industria de exportación, una fuerza de trabajo estructurada por género, etnicidad y estatus migratorio. Enfocando en los esfuerzos para garantizar trabajo barato y controlable en Chile, Brazil, y México, la autora encuentra más variación en asignaciones, de lo que sugieren la noción de "trabajo barato". Ella sostiene que las teorías de segmentación del mercado de trabajo y la nueva división internacional del trabajo deben atender a las estructuras existentes de desigualdad al nivel local cuando se analiza la expansión de la fuente de labor, la reducción del regreso hacia el trabajo especializado, y el surgimiento de una fuerza de trabajo diferenciada.

In recent years, anthropologists whose research focuses on labor have faced a series of challenging questions. We have attempted to follow the changing ways in which workers are being incorporated into an increasingly complex international division of labor. We have sought to document the effects of the adoption of neoliberal economic policies on labor. And, in a more introspective and methodological vein, we have looked for new models that will help us analyze local-level changes in labor relations stemming from global economic change. For researchers working in Latin American contexts, where the strength of labor movements was undermined or destroyed by repressive regimes of the 1960s, 1970s and 1980s, and where neoliberalism has been widely embraced, these issues have been especially pressing.

The literature devoted to these questions is massive, and this article will examine only one small part of it --labor dynamics within the export fruit and vegetable industry. Yet the story of this particular sector has implications for research on Latin American labor in other contexts. In part, this is because export fruit and vegetable production tends to be extremely labor intensive. Therefore, labor in this sector faces corporate strategies aimed at wage reduction and "casualization" that parallel strategies in other labor-intensive industries, such as textiles and electronics (Collins 1995a; Pugliese 1991). In part, the broader implications are methodological, as all anthropologists working on labor issues struggle with questions of how to integrate the local and global forces that structure labor relations, and how to broaden our understanding of labor markets to take into account the "extra-economic" institutions that affect their form and function. This article will provide a brief overview of the recent growth of export fruit and vegetable production, and of labor dynamics within the industry. It will then review the ways in which research on this

journal of latin american anthropology 1(1):178- 99 copyright © 1995, american anthropological association

sector in Latin America has extended our theoretical understanding of the functioning of local labor markets harnessed to the production of exports for national and transnational capital.

the fresh fruit and vegetable industry in latin america

While the fresh fruit and vegetable industry has always been global, several recent trends have fostered its growth and transnational integration. One is the increased consumption of fresh produce in industrialized nations (Cook 1990), an increase facilitated by the development of new cold-chain technologies for long-distance distribution and marketing (Friedland 1994:174). In 1990, fruits and vegetables constituted 13% of world agricultural exports. They were exceeded in volume of international trade only by grain and oilseeds, and were a more significant proportion of total trade than either agricultural raw materials or sugar (Islam 1990). U.S. imports for all fruits and vegetables more than doubled from 1979 to 1989--from just over two billion to 4.8 billion dollars (1982 dollars). The value of Mexico's exports increased 167% during this period, while Brazil's increased 262% and Chile's 367% (FAO 1985, 1989). In addition to an overall increase in consumption, there has been a shift toward consumption of fresh--rather than processed--fruits and vegetables and toward reduced pesticide and chemical residues (Lopez 1989). These changing consumer preferences require a more labor intensive production process and often entail new modes of controlling work regimens (Collins 1995b).

Within the fruit and vegetable industry, globalization has taken a number of forms. In some cases, transnational firms have become involved in production, either on their own account, or through sub-contracting. While the industry is dominated by five large conglomerates,[1] smaller firms of diverse origins have also become involved in direct production. Even in regions where transnationals control only a small proportion of total output, their presence changes the competitive environment for all firms. In the Chilean case, Valdés has noted that the established agrarian elite of the fruit-producing zones has responded to the "wake-up call of the transnationals," becoming integrated into international circuits of finance capital and monitoring international markets (1992:71).

When *national* firms produce for export, they must frequently rely on the services of specialized brokers, jobbers and agents to locate their produce on world markets (Friedland 1994:180). Their success depends as much on their ability to obtain reliable access to these post-harvest services as it does to their competitiveness at the point of production (Jaffee 1992). Extremely specialized transport and storage facilities are required to maintain an unbroken cold chain from the packing house to the point of purchase. The timely availability of transportation and other facilities is crucial to the quality of the product. While small farmers have successfully gained access to export services in some cases, larger firms characteristically have an advantage in utilizing these channels (Carter et al. 1993). For this reason, while small farms can often produce export fruits and vegetables at a lower cost than larger operations, they are at an overall disadvantage in entering export markets (Collins 1995c).

Within neoliberal discourse, many fruits and vegetables have been characterized as "non-traditional exports." This perspective argues that "new" fruits and vegetables--often destined for upscale niche markets in Europe, the United States and Japan--can contribute to the foreign exchange earnings of debt-strapped nations. It resurrects arguments about comparative advantage to suggest that climate and cheap labor make Third World production sites particularly appropriate for these crops (Goldin 1990; Sarris 1984). Yet as several observers have noted, these crops possess many of the disadvantages of more traditional agricultural exports, including low levels of fixed capital investment, volatility in terms of trade, and high levels of competition. As Llambi notes, "For most Latin American countries, to become specialized fruit and vegetable exporters may be no more than an updated version of former divisions of labor that reduced them to raw material exporters and manufactured goods and basic food importers" (1994:211). Raynolds (1994) has emphasized the need for strong state regulation in order to stabilize investment and obtain benefits from growth in this sector.[2]

The role of labor within the fruit and vegetable industry has been less studied, though as the arguments about comparative advantage suggest, the competitiveness of these firms is premised on their ability to pay a low wage. Because the production of high quality fruits and vegetables for export is extremely labor intensive, firms in this sector are continually interested in tapping new, lower-cost pools of workers. The case studies that are available demonstrate how firms use the political and social arrangements in which labor markets are embedded to both cheapen and discipline local labor forces.

One of the major ways that the fruit and vegetable industry has "cheapened" its labor supply is through the employment of women. In almost all contexts of production, the labor force in fruit and vegetable production is predominantly female (Collins 1995a). In some places, women work

mostly in packing (Arizpe and Aranda 1981; Feder 1978; Roldán 1982), while in other places they work in the fields (Barrón 1990; Collins 1993; Venegas 1992). In some cases, firms employ women almost exclusively as temporary workers (Rodríguez and Venegas 1989; Valdés 1992) while in others they hire them on a quasi-permanent basis (Collins 1993). Firms may employ older women with families for some tasks and young unmarried women for others (Roldán 1982; Venegas 1992). Gender never operates simply, or in isolation, in these labor markets, but in connection with a host of other factors, including race, ethnicity, citizenship status and migrancy (Krippner n.d.; Thomas 1985). These factors intersect in determining the economic vulnerability of workers, and the value that will be attributed to their labor, as well as their susceptibility to regulation by state institutions and to control by household and family structures.

theories of workforce structure: the failure to account for heterogeneous outcomes

Fruit and vegetable firms clearly attempt to design labor regimes that accommodate the high labor requirements of the production process, as well as the need for labor that is disciplined enough to meet the stringent quality standards set for fruit and vegetable import. Labor costs are often the single most important element of a firm's cost structure. Research conducted by the author in the São Francisco Valley of Northeastern Brazil revealed that labor could account for as much as 60% of production costs for export grapes (Collins 1995c). The importance to firms of strategies to obtain cheap labor is revealed in the following quote from a document prepared for the Chilean fruit industry:

> *A final element, of no less relevance, is the availability of cheap labor, given the importance of this item in the cost structure of producing and commercializing the fruit. The advantages derived from this factor have accentuated in the last few years, to the degree that high rates of unemployment have tended to discourage migration to the large centers. There has thus been generated a contingent of surplus labor, which has permitted us to achieve higher levels of production...without any significant degree of pressure for salary increases.* [Gana and Romaguera 1987:50, translation by author]

A Brazilian brochure designed to attract foreign investment echoes these strategic concerns:

> *The Northeast of Brazil, where most of the São Francisco River Valley lies, is considered a poor region, afflicted with periodic droughts, and with a large number of under- or unemployed. It has become a tradition, during the droughts, for the population to migrate to the Mid-South of the country in search of employment. The irrigation projects now underway have attracted part of this contingent. Thus, the labor force that is found right in the region has helped reduce production costs.* [CODEVASF, n.d., translation by author]

While cheap labor is obviously of tremendous concern, firms do not obtain it in the relatively straightforward way that existing theories would predict. One body of theory that should have something to say about the structure of the workforce in the fruit and vegetable industry focuses on the "new international division of labor." Beginning with the work of Fröbel, Heinrichs and Kreye (1980), this research has focused on the internationalization of the circuits of productive capital, particularly recent shifts of industrial production from core to peripheral nations in the world economy. These arrangements are held to differ from more traditional international trading arrangements in the degree of functional integration they involve, with the increasing fragmentation of many production processes and their relocation on a global scale (Dicken 1992). Theories of the new international division of labor have emphasized the search by transnational corporations for cheap, controllable labor with the goal of minimizing labor costs. Proponents have discussed the way this search has been facilitated by developments in production technologies that permit fragmentation and standardization of processes (Henderson and Castells 1987). Some researchers have also pointed to the impact of falling rates of profit and labor mobilization in the industrialized countries (Jenkins 1984). If the theory of comparative advantage says that Third World nations *ought* to be producing labor intensive crops and manufactures, proponents of the new international division of labor say that transnational corporations have recognized the advantages of cheap labor and are globalizing their production operations in response to this fact.

Another body of theory which should have implications for the study of a globalizing fruit and vegetable industry is labor force segmentation theory. Researchers working within this tradition have emphasized the distinction between a primary sector of relatively high waged, secure jobs with benefits and a secondary sector of lower-waged jobs requiring less skill and education

and offering less security, fewer benefits and little opportunity for advancement (Reich, Gordon and Edwards 1973). While originally devised to explain the structure of the labor force in the U.S. and Western Europe, some researchers have argued that by transferring unskilled and semi-skilled operations abroad, "multinational corporations transform foreign labor markets into an extension of the secondary sector in core countries; that is they transfer abroad certain features present in the secondary sector of the U.S. labor market in order to embrace foreign workers" (Fernández-Kelly 1983:100).

Feminist researchers who have sought to revise theories of the new international division of labor and labor force segmentation have argued that if Third World labor is "cheap" in the international context Third World women's labor is cheaper (Chapkis and Enloe 1983; Fuentes and Ehrenreich 1983). This body of work has shown that rates of female employment have increased with the shift from import-substitution industrialization in the Third World to export-oriented approaches (Chinchilla 1977; Safa 1981). It has shown how the constraints of home responsibilities, as well as cultural constructions of domesticity and motherhood, have shaped women's entrance into labor markets as well as the recruitment strategies of firms (Stichter and Parpart 1990). Many authors have emphasized the importance of employer demand in structuring the positions that women occupy in the workforce (Scott 1990) and have noted the concentration of women in certain labor-intensive branches of industry (Elson and Pearson 1981; Lim 1978; Milkman 1983).

These bodies of theory point to the fact that firms involved in labor intensive production seek ways to reduce the cost of that labor. They suggest that relocation to Third World production sites and hiring women are important ways of accomplishing that reduction. As previously indicated, this is clearly an important factor impelling the globalization of the fruit and vegetable industry. But none of these theories explains the specificity of workforce outcomes within Third World settings. As Fernández-Kelly has pointed out for the manufacturing sector, they fall short of explaining why, within the secondary segment of the labor market, and even within particular sectors, women are hired by particular industries and concentrated in certain occupations (1983:96). In the specific context of fruit and vegetable production, they do not explain why women form a semi-permanent labor elite in some regions, while they are among the most disenfranchised temporary workers in others. They do not explain why women of particular ages are preferred for particular jobs. And they are silent on the ways that workers whose ethnicity, migrancy and citizenship status make them especially vulnerable are incorporated into the workforce (Krippner n.d.).

Fernández-Kelly suggests that in order to obtain a more fine-grained analysis of workforce outcomes we need a framework which identifies the ways that local labor markets are inserted into a broader economic and political context--that is, that looks at both local and global forces as they come together in a concrete institutional setting. In her research on the *maquiladora* industry on the U.S.-Mexican border, Fernández-Kelly notes an important difference in the recruitment patterns of apparel and electronics firms. Garment manufacturers tend to employ women who are older and less educated, many of whom are single mothers or have unemployed spouses. Electronics firms tend to hire younger, more educated women, who are often still living as daughters in their parental homes. These "demographic" differences subdivide the local labor market in subtle but important ways, creating a more elite sector (in electronics) with jobs that are generally of short duration (averaging three years) and a less privileged sector with longer term jobs. While both types of jobs fall within the secondary sector, their differential hiring practices operate to reduce wage rates and prevent the emergence of entitled workers.

Fernández-Kelly sees local and global forces as intersecting in local labor markets. It is in these labor markets that the needs of firms for a particular kind of labor at a particular price intersect with the needs of a local population for jobs. Just as the firms' needs are conditioned by aspects of the competitive environment within the industry, the form and scale of capital investment, supply and demand fluctuations and available technology (1983:3), the local population's need for jobs is conditioned by prevailing wages, unemployment rates for men and women, and unwaged opportunities to contribute to family income. In addition, local labor markets are the sites where a particular community's understandings of gender, ethnicity and work interact with the understandings held by capitalist firms.

The interplay between local and global forces in local labor markets can have a range of outcomes. As Hall (1993), Appadurai (1990) and others have noted, the impact of global investment patterns is not inevitably "homogenization" of local patterns to some dominant western norm. While a restructuring of local economies results from foreign investment and export production, local populations have often played an important role in shaping and/or resisting the new social forms that result. At times, Fernández-Kelly notes, multinational corporations can "benefit from and accentuate preexisting imbalances in labor markets" (1983:101). In these cases, they appropriate and deepen existing gender and ethnic divisions and enhance the illusion of their naturalness. In other cases, they may contradict prevailing notions of social order, "employing sectors of the population who were not previously part of the work force [such as most women] while excluding

those who were [such as men]" (Fernández-Kelly 1983:101). Ong's research on employment in the export processing zones of Malaysia demonstrates the resistance that may arise when the gender norms imposed by firms in the work environment contradict those held by workers (1987). In an example from the agricultural sector, Stolcke has shown how the employment of women under new wage labor regimes in coffee-producing zones of southern Brazil cracked the structure of the patriarchal families that had formerly sharecropped together in that region (1984).

The variability in the structure of the workforce in export fruit and vegetable production attests to the need for a framework like that used by Fernández-Kelly. It reveals the need to understand the strategies of firms as more than a search for undifferentiated cheap labor, and to look at the ways that firms mobilize local institutions and patterns of ethnic and gender discrimination to "cheapen" an already low-cost labor pool. It shows the power of local institutions in facilitating the entry of capital. Finally, it reveals the importance of attending to the power and agency of workers as they seek new ways of mobilizing to protect their interests, in contexts where syndical traditions have been eroded by authoritarian rule, and where ethnic and gender divisions are salient in the workplace.

recent studies

chilean fruit workers: *las temporeras*

All analysts of Chilean fruit production have commented on the prevalence of temporary workers in the industry (cf. Gómez and Echenique 1982). Generally this pattern is held to be technically determined by the seasonality of the enterprise (Gana and Romaguera 1987:12-13). A 1986 study of grape production in Chile's Aconcagua Valley reveals a more complex pattern, however. While women provide over 40% of all work-days in the region, only 6% of the permanent workers hired by fruit firms are female (Rodríguez 1987: 260, 177). Among semi-permanent workers (workers legally contracted as temporaries, but whose contracts are systematically renewed so that they work most of the year) only 2% are female (Rodríguez and Venegas 1989:159). The vast majority of women working within the industry are thus employed for the six month period of the harvest in field work and in packing houses.

In a study of seven grape firms in the Aconcagua Valley, Rodríguez (1987), Rodríguez and Venegas (1989), and Venegas (1992) have documented the gender and age composition of the workforce involved in various tasks associated with fruit production and post-harvest handling.

The majority of women employed as temporary fruit workers are married; a large proportion (around 30%) are also heads of households (Venegas 1992:102). Many women who work in fruit see advantages in the "flexibility" of temporary contracts and feel that they could not continue working at the intense pace of the harvest throughout the year (Medel et al. 1989:52-56). Others, classified by Venegas as "multi-occupational" women, move from fruit packing during the harvest to a range of other temporary jobs during the rest of the year. These women are predominantly heads of household, or come from families where men are unemployed or underemployed[3] (see also Valdés 1987:39-41 and 1988:419). In fact, a major focus of women's organizing within the fruit and vegetable sector in Chile has been the establishment of community kitchens to assist those who are without food during the period when work is not available (Valdés 1992:134-35).

Competition between men and women for temporary jobs in fruit production is allayed somewhat by the allocation of different positions in a highly specific technical division of labor. The 82% of men who work in the fields are assigned tasks such as maintenance of vines, cleaning, tying and planting. The 45% of women who work in the fields are generally only involved in harvest activities. In packing, women predominate. The 55% of women who work in the packing houses are assigned tasks in cleaning and packing, while the 13% of men who work in this context mainly construct boxes and move fruit into refrigerated spaces (Valdés 1992:102-106).

Valdés describes how this technical division of labor--which is highly arbitrary--acquires the characteristics of a sexual division of labor over time. Much of the literature on women's work in labor-intensive production systems argues that they possess unique capacities (whether innate or socialized) for painstaking work. Valdés' distinction between these two concepts makes it possible to see how a rather arbitrary assignment of tasks (with only tenuous links to real physical differences) becomes rationalized in terms of prevailing gender norms. For example, women's jobs are held to be repetitive, manual tasks that require delicacy and efficiency. Where employers require women to monitor and make judgements about the quality of the fruit, this is held to be akin to "'cosmetology' demanded by the consumer in the external market" (Valdés 1992:109, translation by author). Men's tasks, in contrast, are said to require "qualification"--they perform a "job" while women perform "tasks."

In addition to the gendered ways in which work is divided, Valdés shows that "every task carried out by men or women has distinct prestige, a different salary, different forms of payment and distinct working conditions (1992:110, translation by author). Men's jobs involve greater spatial

mobility, greater use of tools of all sorts, and their positions are more likely to offer opportunities for advancement. While women who work in packing may earn more than men during their months of employment, Valdés reminds us that they are paid at piece rates, are often working 12 hour days, and that they only receive this income five to six months per year. Perhaps most importantly, men are allocated 100% of positions involving control and monitoring of other workers (Valdés 1992:109-111). This highly gendered division of labor within the firm, when combined with men's and women's distinct responsibilities in the home, lead Valdés to conclude that men and women in the fruit sector must mobilize through independent unions in order to represent their very different interests and to prevent men's greater public power from eclipsing women's agendas (1988:423).

The Chilean case is perhaps the most "classical" of the three to be reviewed here, in the sense that it fits best with prevailing theory. In an overall context of low wages, women have been tapped as a "new" source of labor[4] whose entry into the labor market creates a surplus of workers. As Fernández-Kelly notes, this kind of increase in the number of potential laborers "tends to diminish the bargaining power of the local working class" (1983:101), lowering wages for everyone. Lago (1987) has suggested that Chilean fruit firms have strategically shifted from employing male workers to employing women (often from the same households) at a lower wage. The "increases in production" without "pressure for salary increases," which Gana and Romaguera (1987:50) described as characteristic of the 1980s and 1990s, have resulted as much from the incorporation of women into the agricultural labor force as from any downturn in rural-urban migration in recent years.

Women have not been incorporated into the workforce randomly, however, but in accordance with cultural patterns that devalue women's labor. Fruit firms hire women in the most unstable and lowest paid positions. These positions, which in a technical sense require careful work and some skill, are gendered according to cultural norms largely shared by employers and employees. These norms draw a connection between women's tasks and their unremunerated and unvalued work in the home, thus justifying lower rates of pay and poorer working conditions. In addition, women are excluded from positions of power in the social division of labor of the firm--that is, from positions involving control or monitoring, and those with possibilities of upward mobility.

northeastern brazil: elite grape workers

If one believed that fruit firms assign tasks to women in accordance with the technical demands of the production process or women's innate propensities and abilities, one would only have to compare the Chilean and Brazilian cases in order to be dissuaded from this view. Research conducted in newly irrigated zones of Brazil's São Francisco Valley has revealed an extremely complex pattern of labor recruitment to the wide range of crops grown there (Collins 1993). Among the most surprising findings is the fact that women who work in grapes are among the most stably employed agricultural workers in the region.[5] Because climatic conditions are stable throughout the year, and because of the availability of irrigation, grape producers in the São Francisco Valley can obtain two harvests annually. Jobs in vineyards run for approximately 11 months of the year, and are thus among the most highly sought after jobs in the region. Unlike in Chile, women hold 65% of these jobs.

Grape exporters in the São Francisco Valley see the employment of women as helping them to resolve a contradiction between two important goals--producing a high quality product that can meet export standards and reducing the cost of labor. They argue that women are more willing to work under the heavy supervision required to insure consistent levels of quality,[6] and that they are socialized to perform tasks with "high interactive labor intensity"--that is, tasks involving the constant monitoring of plant health and growth, including careful weeding, pruning and irrigation and harvesting based on assessment of when individual pieces of fruit are ripe.[7] Unlike the Chilean case, on Brazilian grape farms women performed the entire range of tasks involved in caring for grapes over the productive cycle, as well as harvesting grapes and working in the packing houses. As in Chile, however, women did not operate machinery or work with irrigation technology and they did not perform tasks involving the monitoring or supervision of other workers.[8]

The arguments of firm managers that women are "better suited" to these production tasks in grapes do not seem to tell the whole story, however, given that managers in Chile found women workers to be inappropriate for many of these same jobs. Clues to some possible alternative explanations can be drawn from case studies of workforce segmentation in the United States. Oppenheimer (1970), Baran (1990) and others have shown that women are frequently recruited into new skilled jobs in order to establish low wage levels with the new skilled area. Baran, in particular, has shown how, in the U.S. insurance industry, women were recruited to jobs at the same time that those jobs were undergoing a process of "responsibilitization"--that is, as certain aspects of decision-making and quality control were shifted onto those jobs. In this way, employers gained access to a segment of the workforce that was both skilled and cheap. The literature on clerical work in the United States has shown a pattern of women and machinery being introduced into the labor process simultaneously, in order to retain a low valuation and low wage

levels for jobs that have become more skilled and technical (Baran 1990; Crompton and Jones 1984).

If women were employed for a similar purpose in the São Francisco Valley, then one would expect the wage rate of permanent women to be less than that of permanent men. This is indeed the case. Women are routinely paid the minimum monthly wage--the same wage received by seasonal laborers. Men who work as permanent employees are paid one-and-a-half times the monthly minimum wage. The explanation that managers give for this differential is that permanent male employees are performing more responsible tasks, such as managing and monitoring irrigation equipment. Women's tasks--pruning and tying grape vines, even occasionally grafting them, and most quality control operations--are considered less skilled. That is, skill--for these women--is recast as dexterity. Thus, a position in the workforce that might otherwise be construed as "elite" due to the skill levels required and the year-round nature of the work, is devalued by its classification as "women's work" and is remunerated accordingly.[9]

Another very important aspect of the structure of the workforce in the Brazilian case is the presence of large numbers of migrants from other drought-stricken areas of the Northeast in the irrigation zones. Firms hire these workers in temporary positions in a range of crops, usually on a day-by-day basis. They work without signed work cards, and therefore receive no benefits from the employer or the state. They are the "reserve army" of workers who flood the labor market, lower wages, and undermine the bargaining power of labor in the region. One could argue that it is in part because of their availability that women can be recruited to perform other functions within the workforce.

mexican tomatoes: gender and ethnicity

Evidence from tomato-producing regions of Mexico reveals an even more complex structuring of the workforce than that described for grapes in Chile or Brazil. Roldán's (1982) early account of women's work in tomatoes noted the heterogeneity of the workforce. She observed that firms hired both younger women living in their parental households and older women who were partially or fully responsible for the support of their families. Her survey results did not indicate a clear pattern, however, in how these women were distributed among various tasks in tomato production.

More recent work on export tomato production in Sinaloa has related the structure of the workforce to changing competitive pressures as the Mexican tomato industry seeks to retain a position in U.S. markets. Krippner (n.d.:10-16) has shown that, because of high marketing costs (commissions, transport and tariffs), low labor costs are critical in allowing Sinaloan producers to compete with their counterparts in Florida. A series of strikes among tomato workers in the 1970s threatened to undermine the cost competitiveness of Sinaloan firms, and led these firms to experiment with a range of ways for lowering their wage bills.

Krippner describes a three-tiered system of labor recruitment which began to emerge in the late 1970s. The lowest tier of the system is field labor. To fill these jobs, firms recruit and transport indigenous families from other regions of Mexico. Field labor represents the largest portion of labor costs for firms, thus a reduction of wages in this area is significant. Importing labor artificially creates the "labor surplus" that was described in the Brazilian and Chilean cases. The use of family labor means that children can be employed at a lower wage (or in some cases, no wage) and that the activity is marked as "unskilled" by the presence of women and children. In addition, the ethnicity of workers and their dislocation render them especially vulnerable to the control of the firm in the regions where they are working (Krippner n.d.: 22-24). Krippner disagrees with accounts that have argued that workers are imported in order to deal with a labor shortage in zones of tomato production (Thompson 1987:206). She argues instead that this "is not so much a question of absolute labor shortages, but rather *labor at what cost*....local workers from Culiacan and surrounding communities have been priced out of the market by migrants. Moreover, what is really in short supply is not labor in general but labor which is politically vulnerable and without alternatives" (Krippner n.d.: 24).

The second tier of the labor system described by Krippner entails packing jobs, which are largely filled by young, unmarried women who are transported from production site to production site, following the tomato harvest. Because of this migratory pattern, these women are employed over a large portion of the year (ten months). The tasks involved in packing are highly specialized, and are paid at a piece rate. Barrón (1990, 1992) has described these women as "professionals" because of their skill and specialization. Krippner notes that cultural constructions of gender which portray these young women's income as "supplementary" prevent them from translating specialization and skill into claims on higher salaries, job security or benefits. In addition, continual migration between production sites also erodes their attempts to exercise the claims of more permanent workers (Krippner n.d.: 24-25).

A third group of tomato workers are the selectors, or sorters, who must accurately distinguish between grades of tomatoes based on criteria such as color, shape, firmness, blemishes and presence of disease. This is a complex task which requires significant experience to perform quickly and

accurately. Tomato firms hire local women in the areas of production for this task. These women are hired for relatively short periods each year, but because of their experience, are rehired on a regular basis. Selectors are unable to parlay their significant skills into higher wages or benefits, however. This is due to the seasonality of their employment, their status as married or female household heads having limited labor market experience, and less propensity to migrate in search of employment (Barrón 1990:160; Krippner n.d.:27).

The case of tomato production in Sinaloa, Mexico reveals a strategy that combines elements of the Chilean and Brazilian cases. Women, within indigenous families, form part of a surplus labor force imported into the region in order to reduce wages for field labor. At the same time, because of the existence of this surplus labor, local women can be employed--as they are in Brazil--to devalue positions that would otherwise be marked as "elite" due to the regularity of employment or the skill required. As Krippner notes, "what emerges from this analysis is a picture of a highly differentiated and complex labor system in which gender plays a critical role in *articulation* with other worker characteristics" (n.d.: 6).

conclusions

A recent (1991) advertisement run by Del Monte in *The Packer* (the trade magazine for fruit and vegetable growers and packers) showed two Hawaiian women standing in a pineapple field. The accompanying text referred to the women as "our secret ingredient" and explained that good labor (shown in the photograph to be female) allows Del Monte to meet its high quality standards for produce. Similarly, illustrations in a promotional brochure meant to lure foreign agribusiness to Brazil's newly irrigated São Francisco Valley (CODEVASF n.d.) juxtapose pictures of sophisticated irrigation technology with images of women working side-by-side with their children in the fields. These instances reveal the corporate rationale for the trends that are visible in agricultural and employment records throughout Latin America. Like other labor-intensive export industries, the viability of export fruit and vegetable production is premised on women's labor.

The case studies recounted here show clearly, however, that it is not *simply* women's labor that is at issue. Women who have formerly been relatively excluded from waged work form a "reserve army of labor" that can be tapped by fruit and vegetable firms if there are no other vulnerable populations (such as migrants or non-citizens) available. They can be hired for the most skilled and responsible positions in the workforce in order to mark those positions as low status and low waged. Cultural constructions of gender lend a sense of "naturalness" and inevitability to these arrangements. These constructions also "naturalize" the social division of labor within firms, in which men hold positions of power, monitoring and control. They provide a rationale for a technical division of labor in which certain tasks are defined as women's work, and therefore are paid less. To say that women provide "cheaper" labor to these firms, is to miss the multiple ways in which firms make flexible and strategic use of gender to lower their wage bills in a highly competitive industry.

Any labor regime carries its own contradictions, and the mobilization of women within the fruit and vegetable sector, particularly in Chile, has begun to expose some of these. Chilean women have organized to demand child care. They have also established their own child care facilities through the *Casa del Temporero* (Valdés 1992:139-142). The contradiction addressed here is a simple one: if women are a "surplus" labor force by virtue of their location within the home, they cannot be extracted from the home without relieving them of some of the responsibilities they bear in that location. The *Casa del Temporero* in Chile has also organized communal kitchens during the "off" season to support workers who have no alternative means of support during that period (Valdés:1992). This action speaks to the fact that firms can only employ workers on a temporary basis if other forms of work are available to assure their survival through the rest of the year. In most cases, Chilean fruit workers are no longer semi-proletarians who have their own land in other locations, but are fully dependent on the wage. Additionally, male unemployment has rendered women's income from their work in fruit production central to family income.

As the opening quote from Hall (1991:29) suggests, capital operates in and through the specificity/inequality it finds in local settings. Capitalist firms may lay hold of, use and deepen those inequalities (Fernández-Kelly 1983:101). An adequate analysis of labor force outcomes requires attention to those non-market processes and institutions that create the disadvantaged statuses on which workforce segmentation is based (Thomas 1985:20).The cases presented in this paper reveal the utility of a focus on local labor markets as a way of integrating concerns with the global imperatives that drive the employment practices of firms and the local social processes that make labor available. They reveal that firms rarely seek labor that is simply cheap; even within the agricultural sector, firms require workers with varying degrees of skills and experience. They are able to work within existing structures of inequality at the local level in order to expand the labor pool and reduce wages, to reduce the returns to skill, and to tap workers whose social characteristics render them especially vulnerable and subject to

control. What this implies is that theories of labor market segmentation and the international division of labor, as currently constructed, can only provide part of the picture. The description of the needs of capital, or the needs of specific sectors and firms, must be combined with a description of those social institutions that operate at the local level to produce a differentiated workforce.

notes

1. These firms are Dole, Chiquita, Albert Fisher, Polly Peck and Del Monte. See Burbach and Flynn (1980) and Friedland (1994) for an account of the history and functioning of these firms.

2. See Sanderson (1985, 1986) for a critique of broader trends toward new forms of agricultural export dependence.

3. See Safa (1990) for a discussion of the effect of male unemployment on women's employment in other sectors.

4. In fact as Garrett (1978) and Valdés (1992) have noted, women worked in Chilean agriculture in large numbers during the period of *inquilinaje*. Their rates of participation dropped sharply during the period of agricultural modernization (1960s and 1970s), only to rise again with the growth of the fruit sector in the 1980s and 1990s.

5. This account of grape production in Brazil's São Francisco Valley is based on research conducted by the author in the region in 1991 and 1993, in collaboration with Dr. Jose Ferreira Irmão and Andrea Melo of the Department of Economics of the Universidade Federal de Pernambuco. Research was funded by the National Science Foundation.

6. See Milkman (1983) for a similar point in industrial settings.

7. See Carter et al. (1993) and Collins (1995c) for discussions of how a demand for highly interactive labor differentially affects the competitiveness of small and large firms.

8. This refers only to working class women employed in production. Women who were trained in agronomy or other technical specialties sometimes performed such tasks.

9. Thomas (1985) has described a similar situation in California lettuce production. Firms targeted the most vulnerable segment of the population–illegal immigrants–to fill the most "elite" positions in the lettuce fields. Thomas argues that firms appropriated a "difference" among workers that made little sense in terms of matching skill to task, but that allowed them to place controllable employees (who were subject to deportation, and had no legal rights) in jobs which would have ordinarily wielded the greatest bargaining power.

references cited

Appadurai, Arjun
1990 Disjuncture and Difference in the Global Cultural Economy. Public Culture 2(2):1-24.

Arizpe, Lourdes, and Josefina Aranda
1981 The 'Comparative Advantages' of Women's Disadvantages: Women Workers in the Strawberry Export Agribusiness in Mexico. Signs 7(2):453-473.

Baran, Barbara
1990 The New Economy: Female Labor and the Office of the Future. *In* Women, Class and the Feminist Imagination: A Socialist-Feminist Reader. Karen V. Hansen and Ilene J. Philipson, eds. Philadelphia: Temple University Press.

Barron, Antonieta
1990 Jornaleras Agrícolas en Hidalgo, Guanajuato y Morelos. *En* Trabajo Femenino y Crisis en Mexico: Transformaciones y Tendencias Actuales. Elia Ramirez and Hilda Davila, eds. México: Universidad Autónoma Metropolitana.
1992 Características y Tendencias de los Salarios entre los Trabajadores de las Hortalizas. Problemas del Desarrollo 23(91):213-232.

Burbach, Roger, and Patricia Flynn
1980 Agribusiness in the Americas. New York: Monthly Review Press.

Carter, Michael R., Bradford B. Barham, Dina Mesbah, and Denise Stanley
1993 Agro-exports and the Rural Resource Poor in Latin America: Policy Options for Achieving Broadly-Based Growth. Agricultural Economics Staff Paper Series No. 364, University of Wisconsin, Madison.

Chapkis, Wendy, and Cynthia Enloe
1983 Of Common Cloth. Washington, D.C.: Transnational Institute.

Chinchilla, Norma
1977 Industrialization, Monopoly Capitalism and Women's Work in Guatemala. *In* Women and National Development. Wellesley Editorial Committee, ed. Pp. 38-56. Chicago: University of Chicago Press.

CODEVASF (Companhia de Desenvolvimento do Vale do São Francisco)
Untitled and undated brochure.

Collins, Jane L.
1993 Gender, Contracts and Wage Work: Agricultural Restructuring in Brazil's São Francisco Valley. Development and Change 24: 53-82.
1995a Gender and Cheap Labor in Agriculture. *In* Food and Agrarian Orders in the World Economy. Philip McMichael, ed. Westport: Praeger Press.
1995b Tracing Social Relations in Commodity Chains: The Case of Grapes. Paper presented to the Society for Economic Anthropology, Santa Fe, New Mexico.
n.d. Farm Size and Non-Traditional Exports: Determinants of Participation in World Markets. Forthcoming in World Development.

Crompton, Rosemary and Gareth Jones
1984 White Collar Proletariat: Deskilling and Gender in Clerical Work. Philadelphia: Temple University Press.

Cook, Roberta L.
1990 Challenges and Opportunities in the U.S. Fresh Produce Industry. Journal of Food Distribution Research. February: 31-45.

Dicken, Peter
1992 Global Shift: The Internationalization of Economic Activity, second edition. New York: Guilford Press.
Elson, Diane, and Ruth Pearson
1981 Nimble Fingers Make Cheap Workers: An Analysis of Women's Employment in Third World Export Manufacturing. Feminist Review 7:87-107.
FAO (Food and Agricultural Organization)
1985 Trade Yearbook, Vol. 39.
1989 Trade Yearbook, Vol. 43.
Feder, Ernst
1978 Strawberry Imperialism. Mexico City: Editorial Campesina.
Fernández-Kelly, Maria Patricia
1983 For We Are Sold, I and My People: Women and Industry in Mexico's Frontier. Albany: SUNY Press.
Friedland, William
1994 The Global Fresh Fruit and Vegetable System: An Industrial Organizational Analysis. *In* The Global Restructuring of Agro-Food Systems. Philip McMichael, ed. Pp. 173-189. Ithaca: Cornell University Press.
Fröbel, Folker, Jurgen Heinrichs, and Otto Kreye
1980 The New International Division of Labor. New York: Cambridge University Press.
Fuentes, Annette, and Barbara Ehrenreich
1983 Women in the Global Factory. Boston: South End Press.
Gana, Juanita, and Pilar Romaguera
1987 Desarrollo y Perspectivas del Sector Fruticola en Chile. Santiago: Centro de Estudios del Desarrollo, Materiales para Discusión no. 155.
Garrett, Patricia
1978 Growing Apart: The Experiences of Rural Men and Women in the Central Valley of Chile. Ph.D. dissertation, University of Wisconsin, Madison.
Goldin, Ian
1990 Comparative Advantage: Theory and Application to Developing Country Agriculture. Paris: Organization of Economic Cooperation and Development, Development Centre Technical Papers 16.
Gómez, Sergio, and Jorge Echenique
1982 Trabajadores temporeros de la agricultura moderna de Chile Central. Santiago: FLACSO, Documento de Trabajo no. 3.
Hall, Stuart
1991 The Local and the Global: Globalization and Ethnicity. *In* Culture, Globalization and the World System, Anthony King, ed. Pp. 19-39. London: Macmillan.
1993 Culture, Community and Nation. Cultural Studies 7(3):349-363.
Henderson, J., and M. Castells, eds.
1987 Global Restructuring and Territorial Development. London: Sage.
Islam, Nurul
1990 Horticultural Exports of Developing Countries: Past Performances, Future Prospects and Policy Issues. Washington, D.C.: International Food Policy Research Institute, Research Report no. 80.
Jaffee, Stephen
1992 Marketing Africa's Horticultural Exports: A Transaction Cost Perspective. Fresh Fruit and Vegetables Globalization Network (University of California, Santa Cruz), Working Paper #3.
Jenkins, Rhys
1984 Divisions Over the International Division of Labor. Capital and Class 22:28-57.
Krippner, Greta R.
n.d. Agricultural Restructuring and Changing Labor Recruitment Strategies in Mexico's Export Tomato Industry. Unpublished paper, Department of Sociology, University of Wisconsin, Madison.
Lago, Maria Soledad
1987 Rural Women and the Neo-Liberal Model in Chile. *In* Rural Women and State Policy: Feminist Perspectives on Latin American Agricultural Development. Carmen Diana Deere and Magdalena Leon, eds. Pp. 21-34. Boulder: Westview Press.
Lim, Linda
1978 Women Workers in Multinational Corporations: The Case of the Electronics Industry in Malaysia and Singapore. Ann Arbor: University of Michigan, Michigan Occasional Paper no. 9.
Llambi, Luis
1994 Comparative Advantages and Disadvantages in Latin American Nontraditional Fruit and Vegetable Exports. *In* The Global Restructuring of Agro-Food Systems. Philip McMichael, ed. Pp. 190-213. Ithaca: Cornell University Press.
Lopez, Rigoberto A.
1989 Constraints and Opportunities in Vegetable Trade. Journal of Food Distribution Research. March: 63-74.
Medel, Julia, Olivos M. Soledad Olivos, and Veronica G. Riquelme
1989 Las Temporeras y Su Visión del Trabajo. Santiago: Centro de Estudios de la Mujer.
Milkman, Ruth
1983 Female Factory Labor and Industrial Structure: Control and Conflict over "Women's Place" in Auto and Electrical Manufacturing. Politics and Society 12(2).
Ong, Aihwa
1987 Spirits of Resistance and Capitalist Discipline: Factory Women in Malaysia. Albany: SUNY Press.

Oppenheimer, Valerie
1970 The Female Labor Force in the United States. Berkeley: Institute of International Studies, University of California.
The Packer
1991

Pugliese, Enrico
1991 Agriculture and the New Division of Labor. *In* Towards a New Political Economy of Agriculture. William H. Friedland, Lawrence Busch, Frederick H. Buttel, and Alan P. Rudy, eds. Pp. 137-150. Boulder: Westview.
Raynolds, Laura
1994 The Restructuring of Third World Agro-Exports: Changing Production Relations in the Dominican Republic. *In* The Global Restructuring of Agro-Food Systems. Philip McMichael, ed. Pp. 214-238. Ithaca: Cornell University Press.
Reich, Michael, David M. Gordon, and Richard C. Edwards
1973 A Theory of Labor Market Segmentation. American Economics Review 63(2):359-365.
Rodríguez, Daniel O.
1987 Agricultural Modernization and Labor Markets in Latin America: The Case of Fruit Production in Central Chile. Ph.D. dissertation, University of Texas, Austin.
Rodríguez, Daniel O., and Sylvia L. Venegas
1989 De Praderas a Parronales: Un Estudio Sobre Estructura Agraria y Mercado Laboral en el Valle de Aconcagua. Santiago: Grupo de Estudios Agro-regionales.
Roldán, Marta
1982 Subordinación generica y proletarización rural: Un estudio de caso en el Noroeste Mexicano. *En* Debate sobre la mujer en América Latina y el Caribe: Las trabajadoras del agro, Magdalena León, ed. Pp. 75-102. Bogota: Asociación Colombiana para el Estudio de la Población.
Safa, Helen
1981 Runaway Shops and Female Employment: The Search for Cheap Labor. Signs 7(2):418-433.
1990 Women and Industrialization in the Caribbean. *In* Women, Employment and the Family in the International Division of Labor. Sharon Stichter and Jane L. Parpart, eds. Pp. 72-97. Philadelphia: Temple University Press.
Sanderson, Steven
1985 The "New" Internationalization of Agriculture in the Americas. *In* The Americas in the New International Division of Labor, Steven Sanderson, ed. Pp. 46-68. New York: Holmes and Meier.
1986 The Transformation of Mexican Agriculture. Princeton: Princeton University Press.

Sarris, Alexander H.
1984 World Trade in Fruits and Vegetables: Projections for an Enlarged European Community. U. S. Department of Agriculture, Foreign Agricultural Economics Report #202.
Scott, Alison
1990 Patterns of Patriarchy in the Peruvian Working Class. *In* Women, Employment and the Family in the International Division of Labor. Sharon Stichter and Jane L. Parpart, eds. Pp. 198-220. Philadelphia: Temple University Press.
Stichter, Sharon and Jane L. Parpart, eds.
1990 Women, Employment and the Family in the International Division of Labor. Philadelphia: Temple University Press.
Stolcke, Verena
1984 The Exploitation of Family Morality: Labor Systems and Family Structure on Sao Paulo Coffee Plantations, 1850-1979. *In* Kinship Ideology and Practice in Latin America. Raymond T. Smith, ed. Chapel Hill: University of North Carolina Press.
Thomas, Robert J.
1985 Citizenship, Gender and Work: Social Organization of Industrial Agriculture. Berkeley: University of California Press.
Thompson, Gary David
1987 International Commodity Trade and Illegal Migration: The U.S. Fresh Winter Vegetable Market and Undocumented Emigration from Mexico. Ph.D. Dissertation, University of California, Davis.
Valdés, Ximena
1987 Los Procesos de Incorporación y Exclusión de las Mujeres del Mercado de Trabajo Agrícola. *En* Sinopsis de Una Realidad Ocultada: Las Trabajadoras del Campo. Pp. 23-50. Santiago: Centro de Estudios de la Mujer.
1988 Feminización del Mercado de Trabajo Agrícola: Las Temporeras. *En* Mundo de Mujer: Continuidad y Cambio. Pp. 389-432. Santiago: Centro de Estudios de la Mujer.
1992 Mujer, Trabajo y Medio Ambiente: Los Nudos de la Modernización Agraria. Santiago: Centro de Estudios para el Desarrollo de la Mujer.
Venegas Leiva, Sylvia
1992 Una Gota al Día...Un Chorro al Año...El impacto Social de la Expansión Fruticola. Santiago: Grupo de Estudios Agro-regionales.