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Countertopographies of Agriculture Gender, Food Production, and Development in a Globalizing World

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Abstract

This paper examines the potential of geographic analysis to empower rural women through development policy. Women have remained at the margins of agricultural policy in spite of decades of research documenting their importance in maintaining food security and crop diversity, and continued national and international efforts at gender mainstreaming. Existing approaches to gender analysis are inadequate in dealing with global social and institutional structures that gender mainstreaming seeks to transform. A 'contertopgraphic' methodology, developed by geographers to trace structural similarities between different places is used to analyze the dynamic connections between gender, food production, and development. Through the juxtaposition of rural women's experiences in four distinct agricultural settings, this paper demonstrates how inequality and inequity in different locales are the result of broad-scale political and economic change. A geographic framework may be more suitable to recognize and address the disempowerment of rural women in a globalizing world.

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Keywords: Agriculture, Gender, Countertopographies

1. Introduction

Decades of interdisciplinary research has built a strong scientific consensus regarding the importance of small-scale agricultural work as a source of empowerment for women in rural communities around the world. In many countries, women are the primary producers of food for local consumption in rural communities (FAO 2010). They are key stewards of agro-biodiversity, know place-specific crops and skills necessary for sustainable food production, and are essential to local food security (FAO 2005). However, the value of rural women's work usually goes unrecognized in economic policy, and economic restructuring often functions to undermine women's agricultural practices along with the communal social and ecological benefits they generate (Howard 2003). Globalization and trade liberalization have caused the expansion of international food markets and the widespread adoption of crops and cultivation techniques that caters to them. These shifts favor large-scale agricultural producers who have more resources, access, education, and capacity to compete in global markets, meanwhile excluding poor and small-scale producers such as women (World Bank 2009).

Development policies of the 1970s and 1980s sought to address women's subordination across the world by incorporating women into existing strategies and programs. In agriculture, such interventions often focused on training women in various techniques and giving them access to the latest technology. By the 1990s, international organizations and women's organizations argued that little had been done to enhance women's equality or empowerment for two decades, and that rural women in particular were becoming increasingly vulnerable as governments in many countries retreated from rural development (Sachs and Alston 2010). As stated in one government reference manual, "the feminization of agriculture has been a trend which, unfortunately, has grown hand in hand with the feminization of poverty" (Commonwealth Secretariat 2001). Following the 1995 World Conference on Women, gender mainstreaming became the policy strategy of the future: rather than focusing on women's participation and perceived challenges, gender mainstreaming aimed to transform social and institutional structures in order to make them responsive to gender and beneficial to those who are less empowered (UNEP 2006; Sachs and Alston 2010).

Yet, this approach too has stagnated in recent years. To date, many efforts to "mainstream gender" have been limited to technical interventions that fail to challenge inequitable power structures. Gender disparities remain among the deepest and most pervasive of inequalities (UNDP 2005; UNEP 2006). Such concerns are summarized in a policy document from the International Food Policy Research Institute, which critically assesses a decade of development interventions and policies designed to increase poor female farmer's access to and control over productive resources. The review concludes that, in order to have anything more than a superficial impact on gender inequality, future interventions must rigorously consider the "context specificity" of gender relations (Quisumbing and Panfolfelli 2009).

This paper argues that bringing an explicitly geographic methodology to research on gender and agriculture may provide precisely the kind of rigorous approach to gender analysis that researchers have been calling for. Geography has regularly been described as a "science of context," an analytic approach that seeks to explain how places and spatial patterns are produced by relationships between humans and their environments at multiple, interactive scales (Knox and Marston 2010). Indeed, due to their central focus on relationships and processes, geographers were among the first to call attention to the important role that women play in traditional agricultural systems (Sauer 1952), and among the most consistent to warn of the harmful social and ecological consequences of gender-blind development policies (Rocheleau et al., 1996; Zimmerer, 1996; Momsen, 2004; Chambers and Momsen 2007).

This paper explores how geography, as a scientific method designed for the analysis of complex systems, might serve as an enabling framework for the design of effective gender mainstreaming interventions. More specifically, this paper applies a research method known as "countertopography" designed by geographer Cindi Katz (2004) as a means for examining the connections produced by a common historical process between disparate places. A topography is a map that illustrates the contours of landscape showing its shape and variance. A countertopography likewise traces such contours, but seeks to do so in counterintuitive ways. Seemingly unrelated places and livelihood struggles are brought together analytically in order to illustrate the contours of a social landscape rather than a physical one, in the process revealing

the impact of a globalized agriculture system on human lives. The goal of this approach is to show unexpected dimensions of places we thought we knew, draw connections to places we think of as distant, and look for new alternatives to entrenched inequalities. Development scholars and practitioners have long argued that gender inequalities will persist if we think of such injustices as a Third World Woman's problem and fail to consider how we (and our development projects) all contribute to the creation of unequal power structures (cf. Rocheleau et al., 1996; Sach and Alston 2010). Countertopography was designed as part of an effort to produce new "geographical imagination[s]" that "could work across and against distinctions of 'us' and 'them'" (Katz, 2011: 58). This paper thus seeks to imagine what gender mainstreaming might look like as a first step toward transformational change.

At stake in the countertopography presented here is the process of agricultural globalization, and its impact on the empowerment of rural women around the world. The paper therefore proceeds through four case studies of distinct populations of rural women whose livelihoods depend on their agricultural labor and investigates how globalization has restructured this labor and how the women have adapted to or resisted such restructuring. The first case study is of women in villages in Western Sudan who struggle to maintain household subsistence in the wake of national Structural Adjustment Programs. The second is of indigenous Kurichya women in Kerala, India, whose traditional rice paddy cultivation is being rapidly replaced by commercial banana plantations. The third focuses on women who migrate from their rural villages in Nicaragua to the Costa Rican countryside, and devote their agrarian skills to work in export-oriented yucca and pineapple processing plants. The fourth case study is of Mexican migrant women in Los Angeles, California, who established one of the largest urban farms in the United States using the traditional crops and techniques they brought from home.

The range of case studies presented is intended to slightly destabilize our conventional understandings of who a "rural woman" is and what kind of work she does, in the hopes that such a move might open up new ways of appreciating and supporting her efforts. Together, these four case studies highlight how mobile and dynamic the target populations of a given development effort can be. Rural women – understood here as women whose livelihoods depend on the skills of a rural life – may be found working on farms in the Sudanese or Indian countryside but may also be working inside a factory located in rural Costa Rica, or even on a farm in the middle of a metropolis, thousands of miles from the small villages where they were raised.

A final section reflects on all four situations together, revealing possibly surprising connections between gender, food production, and development in these different parts of the world. Following Katz (2004), this is not strictly a comparative method, but rather an analytical one that focuses on drawing out the structural similarities in rural women's lives in each of the four case studies. The countertopographic approach used here allows us to reinterpret the processes that produce unequal power relationships and to better understand the kinds of displacements that rural women can suffer in the course of broad-scale political economic change. Countertopography has proven a particularly valuable analytic tool in geographers' recent engagements with gender (see Wright 2009) and has great

potential to advance innovative efforts to change persistence patterns of gender inequality.

2. Western Sudan

As environmental degradation and civil conflict threaten local livelihoods in the predominantly-rural Western Region of Sudan, women have become responsible for an increasing share of household food security. Since the International Monetary Fund (IMF) instituted Sudan's first Structural Adjustment Policy (SAP) in 1978, which emphasized export-oriented agriculture, many men have left their small-scale agricultural and pastoral work in their home villages and migrated to seek work in urban areas or as wage laborers on large, mechanized farms (Katz 2004). The rate of male out-migration from rural areas has increased dramatically in recent years, and female-headed households now constitute a majority in many rural areas. With village men gone, and sending very little if anything in the way of remittances, women find themselves suddenly in charge of all aspects of farming and household work (Ibnouf 2011). Traditionally, Western Sudanese men have been in charge of crop selection, planting the fields, and grazing the livestock. This left some of the most arduous and time-consuming tasks, such as weeding, harvesting, post-harvest processing, water collection, and food preparation, to women (Katz 2004). However, with so many men migrating either permanently or seasonally, women find themselves responsible for every aspect of agriculture and animal husbandry in addition to household duties and raising the family's children.

Recent studies show that, when both male and female adults of a household are living in their village, women tend to work far longer: an average of 11-12 hours each day, compared to 7-8 hours for men (Ibnouf 2011). Rural development projects that have cycled through the region, typically promoting the cultivation of irrigated cash crops such as cotton and oilseeds, enroll the labor of men, leaving women to fill in the gaps left in activities for household consumption. As staple subsistence crops such as sorghum and millet are replaced by inedible cash crops, households rely to an increasing extent on home gardens, which are tended exclusively by women and feature a variety of crops such as okra (*Hibiscus esculentus*), cucumber (*Cucumis sativa*), arugula (*Eruca sativa*) and beans (*Lupinus termis*), (Ibnouf 2011). Additional calories and diverse nutrients are provided through the collection of wild plants by women and children (Katz 2004). These daily livelihood activities take place in a landscape that has been transformed and, in many ways, degraded, by agricultural development (Abdelgalil and Cohen 2001). The expansion of cash-crop cultivation reduces the areas available for grazing or forestry and requires, among other things, the use of chemical inputs. In the rural villages where development projects are sited, women and children frequently work weeding in the fields and are routinely exposed to pesticides, which are sprayed without warning. They also often come into direct contact with herbicides, which are regularly sprayed on the "weeds" that they pick as greens for family meals. The highly water-consumptive techniques of state-sponsored irrigated agriculture and the devegetation involved in clearing large fields for commercial cultivation have exacerbated the vulnerability of rural villages during periods of low rainfall or drought. (Katz 2004).

Agricultural development projects tend to undermine the stability of rural livelihoods even when they are deemed a success because rain-fed subsistence is replaced by irrigated commercial agriculture. (Ayoub 1999; Magdoff and Tokar 2010). As globalization restructures local economies in Western Sudan, only the most privileged – in this case, young men – are mobile enough to chase the (often unrealized) promises of opportunity in urban areas, leaving women to come up with creative and innovative means of survival under increasingly harsh conditions. Those who remain in rural villages support their families by continuing the traditional livelihood practices that have sustained their community for generations – rain-fed agriculture, animal husbandry, and forestry – but over a vastly expanded terrain. In one Sudanese village studied such activities took place within a 5-kilometer radius of the village before the introduction of an irrigated agricultural project. Ten years later, animals were grazed more than 100 kilometers from the village, charcoal was collected over 200 kilometers away, and agricultural laborers routinely travelled over 50 kilometers to work. In other words, this village had to draw on an area 1,600 times larger just to stay in place (Katz 2004). Within a given rural community, the restructuring of gender relations brought about by development projects offers women some opportunities for raising their social and economic status as they fill roles left vacant by male out-migration. However, these opportunities expose women to a great deal of risk in terms of livelihood, and add tremendously to the work they must complete each day. Women's labor continues to go unacknowledged in Sudan's economic analyses, and remains unrecognized in national development policies (Ibnouf 2011).

3. Kerala, India

The expansion of cash crop cultivation has been transforming Southern India in ways as dramatic as the restructuring taking place in Western Sudan, though with important distinctions. Southern India is a global hotspot of biodiversity and is home to one of the highest concentrations of indigenous peoples in the world, many of whom derive their subsistence directly from the natural resources of their local environment (Kulirani 1996). The district of Wayanad in the state of Kerala is home to many autonomous tribal communities, including the Kurichya peoples, who have long sustained rich local agrobiodiversity through the cultivation of landrace (genetically-heterogeneous, locally-adapted) varieties of rice. Through established seed exchange networks and the cultivation of landraces for subsistence use, the Kurichyas have actively maintained the cultural, medicinal, dietetic, and ecological value of different rice varieties (Pramod et al 2003). This agrobiodiversity is also closely linked to women's status and power within tribal communities. Not only do women perform the majority of cultivation activities, they also wield primary influence within the tribal institutions that govern landholdings under paddy cultivation. Though matrilineal traditions of property were officially abolished in the state of Kerala in the 1930s, the Kurichyas continue to employ informal rules of inheritance along the female line as means of organizing communal landholdings (Padmanabhan 2011). Women play a central role in managing paddy cultivation, which provides extended family networks with important sources of protein such as

crab and fish that live in the rice paddies, in addition to diverse varieties of the staple crop itself (Padmanabhan 2011).

However, this system of land management and rice paddy cultivation itself is currently threatened by the expansion and intensification of cash crop cultivation. In recent decades, the land under paddy cultivation in Wayanad has decreased severely, from a peak of 40,000 ha to 21,770 ha in 1990, to fewer than 9,000 ha in 2000 (Vishnudas 2006; Narayan et al. 2004). This land has been primarily converted to commercial banana production, a lucrative cash crop in the region, and the shift has come at the direct expense of the local environment and women's empowerment. Commercial banana cultivation in Kerala involves intensive application of the pesticide carbofuran, one of the most highly acute toxins currently in use as an insecticide. Carbofuran is highly toxic to wildlife, and a dose of the chemical as small as a quarter teaspoon (1mL) has been shown to be fatal to humans. There have been multiple widely-publicized incidents of harmful exposure to the pesticide in Wayanad, including the 2003 hospitalization of 24 children due to respiratory problems while attending school downwind from a banana farm during a chemical spraying and the 2006 death of a child after eating a pesticide-laden banana (Vishnudas 2006). Intensive cash cropping has taken a toll on the Wayanad environment in other ways as well; in addition to reducing local biodiversity through monocropping and pesticide use, banana cultivation is undermining the landscape's water storage capacity. Without the deep-seated underground pore spaces formed by rice root systems, soils are prone to compacting, rendering them unable to absorb water. The reduction in paddy cultivation area has led to a dramatic drop in groundwater levels in Wayanad and is blamed for recent drought conditions in the region (Padmanabhan 2011).

The conversion of rice paddies to banana plantations brings clear consequences to all who live and subsist in Wayanad, but the toll exacted on women is particularly violent. Cash crop cultivation imposes pressure on tribal communities to privatize their communal landholdings in order to gain access to the credit needed for expensive agricultural inputs. The gender division of labor also shifts during this conversion: though women play a central role in paddy cultivation, they are not involved in commercial banana cultivation, which is deemed socially to be a man's domain (Padmanabhan 2011). Thus, when rice paddies are converted to banana plantations, Kurichya women suddenly lose their work, their access to and control over land, and their means of subsistence and household food provision. As a result, their agricultural knowledge of traditional techniques and diverse rice varieties becomes obsolete. In Kerala, women's loss of status and power within their community is a direct consequence of agricultural modernization and shrinking agrobiodiversity .

4. Nicaraguan Migrant Women in Costa Rica

The experiences of rural women in Western Sudan and Southern India illustrate how difficult it can be to maintain an agricultural livelihood on the margins of a booming agricultural industry. This third section turns to the experiences of women who migrate from rural communities across Nicaragua in order to work in the produce processing and packing plants of Pital, Costa Rica. It examines what this

shift, from subsistence cultivation to working in export-oriented agricultural production, means for these women's livelihoods and empowerment.

The tropical countryside of Pital, Costa Rica, is ideal for agriculture, with yearlong rains and deep, well-drained soils. Since the early 1980s, when structural adjustment programs (SAPs) shifted the country's agricultural production from crops for domestic consumption (primarily maize and beans) to those for export, this rural landscape has been dominated by two crops: pineapple (*Ananas comosus*) and yucca (*Manihot esculnenta*) (Fernández 2004). This export economy has created an increased labor demand for both crop production and postharvest processing, demands which have been met by immigrants, in this case from Nicaragua. Nicaraguans, fleeing political and economic instability in their country and drawn by the promise of employment in Costa Rica, migrated by the hundreds of thousands. Between 1984, the beginning of SAPs in Costa Rica and the height of Nicaragua's civil war, and 2000, the documented Nicaraguan population in Costa Rica had grown nearly five-fold (Castro Valverde 2002). Nicaraguan labor, both documented and undocumented, currently dominates nearly all agricultural export production in Costa Rica (Lee 2010).

Despite the great demand for cheap labor in Costa Rica's expanding agricultural industry, there are few available legal means for obtaining work visas. Surveys of migrants and their families reveal that an overwhelming majority of Nicaraguan migrants from rural areas enter Costa Rica without documentation (Lee 2010). The vulnerability of these workers is intensified by industry regulation and export standards that segment labor according to documentation status and gender. Costa Rican pineapples, destined for European supermarkets, are required to comply with United Nations guidelines for farm management practices. This standard, known as GLOBALGAP (formerly EurepGAP), has requirements for the protection and welfare of agricultural workers. In contrast, Costa Rica's yucca is largely purchased by buyers in the United States and therefore subject to far less stringent requirements that set no standards at all for production methods or labor practices (Veerabadren 2005). These differentiated export standards have a direct impact on labor conditions and work, especially limiting opportunities for women seeking employment in this rural area.

Men, even undocumented migrants, occupy a privileged position in Costa Rica's agricultural workforce. They have the option to work in either the fields or the processing and packaging factories, and this flexibility gives them enough leverage to demand an hourly wage and a guaranteed eight-hour workday. Women, on the other hand, work exclusively in the factories and are paid per crate of produce that they prepare and package. They work long and unpredictable hours, beginning their day at 7:00am and ending whenever there are no more crates to pack. They have no holidays and must leave their children in the care of others, often separating from them for months at a time. A stark hierarchy exists between women – who sit on the plant floors, cleaning, scrubbing, and pruning produce – and men, who have the authority to reprimand women and to determine whether a given woman will be paid in full for her finished crates. Men are also responsible for bringing crates of unprocessed produce to the women, thus controlling women's access to the pieces for which they are paid and further exacerbating gendered power differences. In addition, female migrant workers are divided amongst themselves, between the documented, clean, higher-wage, stably employed workers processing pineapples,

and the undocumented, dirty, lower-wage, precariously employed root crop scrubbers (Lee 2010). In both the pineapple and yucca industries, Nicaraguan women workers bring skills and knowledge from their previous (and sometimes simultaneous) involvement in subsistence and small-scale production, and yet the skilled nature of their labor earns them less in wages than the unskilled work of men in the same factories (Sachs and Alston 2010). These women, without whose labor Costa Rica's export agriculture industry could not exist, left the poverty of their own country only to be impoverished in another country (Lee 2010).

Economic liberalization in Costa Rica has been lauded as an overwhelming success; macroeconomic indicators such as per capita income, education levels, foreign direct investment, and infant mortality rates have improved significantly throughout the 1980s and 1990s (Lee 2010). However, the hundreds of thousands of migrant workers in Costa Rica are not included in the country's development statistics. The visible signs of development and progress rely on an invisible and highly-exploited female migrant labor force. The social divisions of citizenship and gender intersect and work in tandem to establish a hierarchy among agricultural workers, one which functions, in this case, at the direct expense of migrant women. Not only do the efficient structures of industrialized agricultural production work to divorce migrant women from the value of their own labor, but they isolate this labor from broader social and ecological systems, thereby curtailing the rippling benefits to food security and biodiversity that such agricultural labor would otherwise accomplish.

5. Mexican Migrant Women in Los Angeles, California

This fourth and final case study examines rural women's agricultural work in a different setting entirely: a 14-acre community garden known as the South Central Farm located in the industrial core of one of the world's top global cities, Los Angeles, California. From 1994 until 2006, this urban farm, one of the largest in the United States, was cultivated and managed collectively by local community members, including families of Mixtec, Tojolobal, Triqui, Tzeltal, Yaqui, and Zapotec descent, most of whom had migrated from small rural villages in Mexico. Women were the primary cultivators in the South Central Farm; they managed the communal space, tended it daily, and produced plots of land that seemed like transplanted versions of the *huertos familiares* or home gardens they had left behind. Through the same practices of seed saving and cultivation that, over thousands of years, turned Mexico into a world center of agrobiodiversity, these farmers transformed an industrial urban lot into a vibrant site of *in situ* conservation of cultural and genetic wealth. Of the estimated 150 species of row crops, trees, shrubs, cacti, vines, and herbaceous plants cultivated in the community garden, many seeds were brought directly from household gardens in Mexico as families migrated to the United States (Peña 2006). These Mexican migrant women arrived in Los Angeles poor and facing stiff competition for the few low-paying jobs available. The South Central Farm became a resource base and source of empowerment for some 360 low-income families in the neighborhood. Using agricultural skills and knowledge developed over generations, they grew nutritious produce in what would otherwise be a vast food desert, providing some of the stability of a rural land-based livelihood amidst a volatile

urban economy. The community garden also provided a space in which to teach children the knowledge of how to grow edible and medicinal plants and how to use them, and to instill in them a pride in their native heritage (Peña 2006).

However, these 14 acres had long been a site of conflict between the local community and city developers. In 1986, well before the creation of the community garden, the City of Los Angeles acquired the land through eminent domain for the purpose of building a waste-to-energy incinerator known as the Los Angeles City Energy Recovery Project (LANCER). The project was ultimately abandoned after strong local opposition from what was, at that time, a low-income African American community led by activist Juanita Tate and the Concerned Citizens of South Central. In 1994, two years after the violent unrest of the Rodney King riots, city officials granted permit to the 14 acre site to the L.A. Regional Food Bank for use as a community garden (Chang 2006). The South Central Farm flourished for the next nine years, fueled by the activism and agricultural labor of a majority female force. It produced a lot of food and medicinal crops each year as the low-income neighborhood shifted demographically from predominantly African American to a principally Mexican-origin population. Then, in 2003, the city sold the land to a developer with plans to build a warehouse and distribution center on the site. The L.A. Regional Food Bank promptly acquiesced and withdrew, but residents formed their own organization, the South Central Farmers Feeding Families, and mounted a public campaign to save the community garden. Despite years of protests and over $16 million raised (more than three times the sale price) to buy back the land, the farm was bulldozed over in 2006. As of June 2011, no construction of the proposed warehouse had begun and the lot remained empty, guarded by a private security firm hired to keep community members from squatting on the land (South Central Farm 2011).

The United States, in contrast to countries like Sudan, India, Nicaragua, or Costa Rica, is declared a "developed" country, presumed to serve as a model for those countries classified "developing" (cf. UNDP 2011). In terms of macroeconomic growth and investment infrastructure, the United States has indeed long been a member of an elite group of wealthy countries (though recent crises in financial systems have somewhat disrupted global country rankings in this regard). However, the unequal distribution of wealth and influence accumulated in the United States is increasingly has been felt throughout its population, and has been particularly acute in the second half of the 20th century (Heathcote et al., 2009). In terms infant mortality rates and access to health care, the United States ranks below countries, such as Cuba, that are considered "less developed" (Knox and Marston 2010). The Unitied States' problems with food insecurity has also caused persistent hardship among certain populations. A USDA study found that 14.7% of households in the United States were food insecure at some point in 2009, and 5.7% had "very low food security" throughout the year; these are the highest recorded levels of food insecurity in the country since the first national food security survey was conducted in 1995 (Nord et al., 2010). Lack of available resources or technology is not an issue in the United States, and yet communities, like the residents of South Central L.A., experience similar hardships to those in extremely resource-poor countries.

The failed attempts to save the South Central Farm demonstrate that development often brings new insecurities to already vulnerable populations.

Women who arrived in Los Angeles with few resources other than some seeds and a wealth of agricultural knowledge found their efforts to grow food for their community to be in conflict with the city's idea of progressive change. In this respect, their struggles have much in common with those of the low-income rural women discussed above. Whether in Sudan, India, Costa Rica, or the United States, gender relative to other forms of social difference – such as race, class, and citizenship –produce a fundamentally unequal social landscape.

6. The Importance of Geographic Analysis

A juxtaposition of these four case studies makes visible the myriad ways that large-scale processes like agricultural globalization ricochet through and between disparate places. The strength of a geographic approach is that the diversity of rural women's experiences in different parts of the world are seen, not in isolation, but as intimately connected to one another. Using countertopographic analysis exposes the simultaneous disruptions associated with globalizing agricultural production, giving us a view of the breadth of social and institutional structures that create dirty, dangerous, and disempowering working conditions. One message comes through powerfully in these four stories: the food that most people eat every day arrives through the labor of a highly gendered and marginalized workforce. This is true for rural households in Sudan and India that rely on women's small-scale agriculture for their subsistence. It is also true for the consumers in the U.S. and U.K. who purchase pineapples and yucca from Costa Rica, as seen with the families in South Central L.A. who once lived off what women produced from their local urban farm, and now must travel miles outside of their neighborhood to the nearest grocery store to buy groceries imported from all over the world.

From this perspective, we can see what one might call the flip-side of globalization. The hallmark of globalization is that money, information, commodities, and people are travelling across greater distances at ever faster rates. From a privileged position, far-away places and ideas become more accessible and the world seems to be shrinking through a process that geographer David Harvey (1989) has termed "time-space compression." However, for those from places like the small villages of Sudan, India, Nicaragua, and Mexico –increasingly marooned by these processes – the world seems to be getting bigger all the time. Geographer Cindi Katz uses the concept of "time-space expansion" to describe "the local fallout of time-space compression at a higher scale," (2004); in a globalized world, those with the least privilege must expand their work terrain and stretch their livelihood activities over greater distances, or risk being left behind. We can see this effect clearly in Western Sudan, as rural women increasingly travel farther for water, forage a greater distance from home, and send male family members to cities and other countries to find work. In Kerala, India, rural women who try to continue with the small-scale agriculture that they are skilled in and that has supported their families and environment for generations are subsequently marginalized by agricultural systems geared for global exporting. Women who leave their villages in Nicaragua to seek opportunity in Costa Rica's booming agrarian economy find that this displacement did not ease the struggle to produce a viable world for them and their families. Women from rural Mexico sought to bring their agricultural livelihood with

them when they moved to Los Angeles, only to find that such forms of subsistence are incompatible with the city's definition of development. Even the mere idea of a productive industrial space had more political and economic value than an already established intensely productive but non-commercial community farm.

A geographical approach to understanding the role of agricultural work in rural women's empowerment not only gives us insight into the myriad consequences of agricultural restructuring, but also helps elucidate how gender itself works. In addition to the cultural prejudices and forms of discrimination that function primarily on a local scale, gender inequality works on a global scale to constrain and further disempower those who are least privileged. These power relationships that disempower, for example, poor rural women, are, in this globalizing age, fundamentally fluid and highly mobile themselves. We can see infinite examples of how women's efforts to improve their circumstances are subverted by economic systems that have so long depended on the subsidies of women's uncompensated labor. For example, on the ground in Costa Rica, and elsewhere, regulations and standards designed to protect workers have, ironically resulted in a dual-tiered system of protected and unprotected workers divided by gender and by citizenship.

Gender mainstreaming cannot effectively work to correct the inequality of existing power relationships unless its approach to identifying problems and conceiving solutions is as fluid and mobile as the global processes which generate inequality. Clearly we need a new approach to mainstreaming gender: decades of research document the critical importance of women's work in maintaining crop biodiversity and providing food security, and yet women and gender remain on the margins of agricultural policy (Sachs and Alston 2010). Geography in general, and countertopography in particular, have proven useful in lending visibility to unequal social and institutional structures that are often so common in our daily lives that we have trouble analyzing them. These methods also highlight how global patterns of gender inequality persist in spite of how hard women work each day to overcome them. Even with these methods, the restructuring of unequal power relationships will be a big struggle demanding creative collaboration across all forms of social and geographic difference. However, absent of a geographic understanding of the institutions and processes at stake, gender mainstreaming fails to make the intended transformational change.

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